# Exhibit A Reform Plan

This Exhibit A is Santee Cooper's submission to the Department, which refers to the results of the non-conforming model. Projections included herein may not match the normalized projections discussed in the Report.

Dan J. Ray Acting Chairman Board of Directors

November 25, 2019

Members of The South Carolina General Assembly:

On behalf of the Board of Directors of Santee Cooper, let me say thank you to the General Assembly for giving us the opportunity to submit this Reform Plan for your consideration. Let me also say we heard you loud and clear, and this submission is a serious effort to respond to what we heard.

Santee Cooper needed new leadership, and the Board of Santee Cooper left no stone unturned to find and hire a best-in-class CEO and Deputy CEO in July of this year. Within 60 days, the Board received and approved a new Business Forecast with dramatically improved results for Santee Cooper and its customers. The Reform Plan we submit herewith **materially improves upon the Business Forecast**, and includes:

- Seven years of price stability for customers from this point forward 7 years!
- \$2.7 billion in net present value savings from a new power supply roadmap over 20 years.
- \$1.0 billion average debt reduction every five years for the next 20 years.

The governance reforms we suggest in this plan are targeted at transparency and focus – transparency of decision-making, and intense focus on the cost to customers, the health of the economy of South Carolina, and the stewardship of this special place we all call home.

We are hopeful that the financial benefits, and the transparency and focus that are the central themes of this Reform Plan, may stay in the hands of South Carolinians.

Sincerely,

Dan J. Rav



11/25/2019

## Santee Cooper Reform Plan

Delivered to the Department of Administration



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#### i Executive Summary

Santee Cooper regrets its role in the saga of V.C. Summer Units 2 and 3, but not the action taken by the Santee Cooper Board to halt the project. The ill fate of V.C. Summer Units 2 and 3 has many parents, but most notable was the lack of a regulatory structure that places the interests of customers and the State of South Carolina first over all other objectives. Santee Cooper's focus on customers and the State first, not "rate base," is exactly what led us to stop the project. We are pleased to suggest and accept governance reforms that bring greater transparency to resource plans and the customer pricing they drive, and to have that focus perpetuated in law. We further suggest that this structural focus is a model that is appropriate for all utilities in South Carolina.

Santee Cooper engaged new management in July of this year, who then led the staff to develop a Business Forecast that was adopted and published on September 9. That Business Forecast called for substantial debt reduction, a 10% reduction in staffing, aggressive cost management efforts, a leaner, greener resource portfolio, and elimination of the previously proposed 7% price increase, replacing it with five years of price stability for customers. **This Reform Plan improves on that Business Forecast**—the period of price stability has been extended from five to seven years, use of solar has increased from 1,000 megawatts to 1,500 megawatts, and debt is reduced by an average of \$1 billion every five years for the next 20 years.

Santee Cooper deeply appreciates the opportunity the General Assembly has provided to develop this Reform Plan. A summary of its key provisions are as follows:

#### **Governance Reform**

- This Reform Plan formally adopts Resource Planning Principles and Pricing Principles that will govern Santee Cooper's decision-making.
- Santee Cooper will subject those principles to regular external oversight and review through 1) the creation
  of an Integrated Resource Planning Group (IRP Group), adjunct to the Santee Cooper Board, including General
  Assembly representation, and 2) the submission of pricing principles and plans to review by the Office of
  Regulatory Staff.
- The Santee Cooper Board will require that management hold well-noticed public hearings in relation to any proposed generation additions of 200 megawatts or more, and transmission additions at the 125 kilovolt level or above.
- To enhance transparency, Santee Cooper will seek to place into law the process it uses in setting electric
  prices, and in how it conducts operations of its Board.

#### **Transformation of Santee Cooper Resources**

- The coal-fired Winyah Generating Station will be phased out beginning in four years (2023).
- Dual-fuel turbine technology will be installed on the system to preserve reliability.
- 1,500 megawatts of solar will be purchased from the market and added to the system by 2031—an over 800% increase.
- Roughly 500 megawatts of gas-fired capacity will be added to the system by the mid-20's to provide energy
  and back up solar, with another 500 megawatts of gas-fired capacity added during the 2030's. The first
  tranche will be built, and the second tranche will be purchased from the market.
- 200 megawatts of battery storage, which may be purchased from the market, will be added to the system.
- Santee Cooper, in concert with partners, will achieve 150 megawatts of demand-side conservation by 2027 with an additional 50 megawatts by 2037.

• Carbon emissions will be reduced by 43% relative to 2005.

#### **Financial Transformation**

- This Reform Plan includes \$2.7 billion present value operating and capital savings from our Power Supply Roadmap over 20 years.
- Debt service is \$1.6 billion lower than the "ICF business as usual" case on a present value basis.
- Santee Cooper's debt leverage ratio is forecasted to be 68% by 2026—the lowest level in nearly 40 years.
- Residential customers will see a total period of <u>13 years</u> of price stability.

#### **Outreach to Central**

 This Reform Plan provides 12 years of price stability to Central, our largest customer, including, in the near term, price <u>decreases</u>. In addition, we propose modifications to the Coordination Agreement that build on the services provided thereunder and create a planning structure with greater balance. We recognize and appreciate the deep alignment of our missions.

As much as this Reform Plan accomplishes, it does <u>not</u> injure reliability, reduce emphasis on safety, reduce emphasis on economic development, remove Santee Cooper responsibilities in lake, water, and habitat management, or moderate Santee Cooper's award-winning emphasis on diversity in the workplace. In addition to low-cost power, those are the principal dividends that South Carolinians receive from their ownership of Santee Cooper.

Santee Cooper was created by the General Assembly to be a leading resource for improving the lives of all South Carolinians. This mission is best left in South Carolina's hands.

#### **Notes**

The Reform Plan is based on assumptions about future events and conditions. With the few exceptions noted in Appendix 8.2, these assumptions have been reviewed and recommended by the Department of Administration (DOA) advisors in the Act 95 Process. Where the Reform Plan deviates from the DOA assumptions, we have a sound and rational basis, verified by third parties. As with any forecast, to the extent that actual conditions or events differ from those assumed, the results can be expected to change.

One of the most significant and fundamental assumptions in the Act 95 Process is the assumption regarding the electric load that will be served. It is the starting point for all generation and resource planning. The Act 95 Process requires all process participants to use the same load forecast - the combined Santee Cooper/Central forecast, developed jointly and confirmed to the DOA by Central with respect to its member loads on August 7, 2019. The Reform Plan Power Supply Roadmap is based on serving that load. Because the Central load is such a large portion of the total, it is and must be the foundation for resource plans for all process participants. We intend to work collaboratively with Central, including adapting to changing conditions, to achieve the forecasted results and seek to improve upon them.

This Reform Plan also assumes an acceptable resolution of what is known as the "Cook" litigation described in Appendix 8.5. An adverse result in this litigation would materially and adversely affect Santee Cooper's revenues and ability to produce the results described herein and would possibly negatively impact the State as well.

#### **ii** Overview of Santee Cooper

The Great Depression was a dark time for South Carolina: in 1934, less than 3% of rural homes in the State had electricity. The General Assembly and Governor committed to a massive effort to push back that darkness, and in doing so created a public power utility interwoven with the very fabric of the State.

Santee Cooper was built by the people of South Carolina, for the people of South Carolina. The effort employed workers from every county in the State. It was the largest public works project in America, and also the largest land-clearing project in U.S. history.

Santee Cooper electricity brought indoor plumbing, water heaters and light to rural homes across the State. Electricity also delivered revolutionary changes to the State's agriculture industry, bringing in incubators for poultry, milking machines and refrigeration. All of this, delivered with the flick of a switch to parts of South Carolina that investor-owned utilities would not serve because they could not make a profit there.

Reliable power gave South Carolina new life and new industry. Since the beginning, Santee Cooper has attracted jobs and capital investment to the State. Between 1942 and 1972, over 30 new industries began operations in Berkeley, Horry and Georgetown counties thanks to Santee Cooper's ready and inexpensive electricity. This meant job opportunities were available at a rate previously unheard of.

In creating Santee Cooper, the legislature directed that we exist "for the benefit of all the people of the State of South Carolina, for the improvement of their health and welfare and material prosperity." That remains our mission.

Santee Cooper's focus on low-cost, safe, reliable electricity for its customers aligns perfectly with the customer-based focus of the State's 20 electric cooperatives, which combined constitute our largest customer.

Today, over 2 million South Carolinians, in all 46 counties of the State, benefit from our low power prices and industry-leading reliability. We serve over 185,000 residential and commercial customers directly in Berkeley, Georgetown and Horry counties and power 28 large industrial customers, including the U.S. Department of Defense's Joint Base Charleston. We deliver wholesale electricity to the State's electric cooperatives, to municipal customers in Georgetown, Bamberg and Seneca, and to Piedmont Municipal Power Agency members including Abbeville, Clinton, Easley, Gaffney, Greer, Laurens, Newberry, Rock Hill, Union and Westminster. We also provide power to the Alabama Municipal Electric Authority and the Town of Waynesville, N.C.

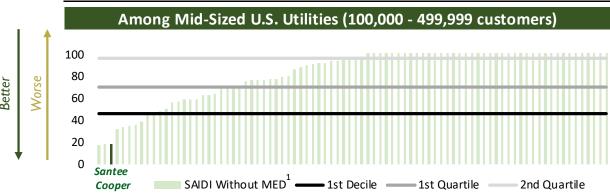
South Carolina has invested zero tax dollars in Santee Cooper, and we have delivered more than \$427 million in cash directly back to the general fund, making this utility a valuable asset for South Carolinians. Over the past 80 years, Santee Cooper has delivered many times over on our mission to improve the quality of life for the people of our great State.

#### **Low-Cost, Reliable Power with Strong Customer Satisfaction**

Because Santee Cooper is state-owned and has no shareholders, our primary focus is our customers, our communities and the State of South Carolina. Santee Cooper customers can count on us for low prices, exceptional reliability and excellent customer service, just as they have for decades. Santee Cooper leads other utilities in the State and region in these critical areas, and we continue to maintain strong customer satisfaction.

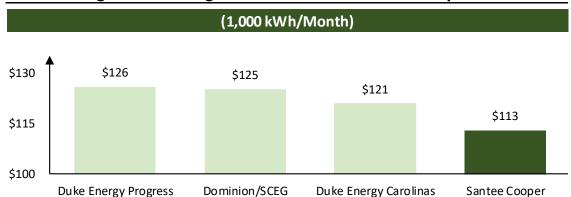
In terms of reliability, Santee Cooper ranks 1<sup>st</sup> among South Carolina utilities, 3<sup>rd</sup> among U.S. midsize utilities and 8<sup>th</sup> among 516 investor-owned utilities (IOUs) and cooperatives across the U.S., based on the most recent (2017) reliability data compiled by the Energy Information Administration (EIA). Santee Cooper posted a 99.9961% distribution reliability score in 2018, meaning the average retail customer was without electricity less than 21 minutes that year. Our transmission system had a 99.9973% reliability score, meaning transmission delivery points were without electricity less than 14 minutes for the year.

Figure 1 – Reliability: SAIDI (minutes)



Our industrial rates are roughly 30% lower than the national average. Our typical residential customer pays the lowest average monthly bill among the four large utilities generating and delivering power in South Carolina, meaning our retail customer costs are lower than those of Dominion, Duke Energy Carolinas and Duke Energy Progress. Each of these IOUs has recently requested or announced rate increases.

Figure 2 – Average Residential Customer Monthly Bill



In addition to delivering low-cost and reliable power, Santee Cooper provides a number of other services to customers. Our rebate focused energy efficiency programs have decreased energy usage by 209 million kilowatthours of electricity which is equivalent to a 5% reduction in residential and commercial energy sales. This is enough electricity to power more than 16,500 average residential customers in 2018 and has resulted in over \$250 million of customer savings since 2009.

Since 1982 Santee Cooper has offered low-interest loans and since 1997 has offered on-bill financing for these loans to help customers make energy-efficient upgrades or to purchase and install solar panels on their homes. Some 40% of our customers have used our loans and energy efficiency programs.

<sup>&</sup>lt;sup>1</sup> Average yearly duration of outages, in minutes, excluding major event days.

Low rates, reliability and customer service are the three primary reasons we have a very satisfied customer base as demonstrated in Figure 3 below:

Figure 3 – Customer Satisfaction by Customer Type

Customer Type	2018	2017	2016	2015	2014
Industrial	100%	95%	95%	95%	89%
Commercial	95%	98%	98%	99%	96%
Residential	92%	91%	97%	97%	99%
Municipal	100%	100%	100%	100%	100%
Cooperative*	53%	41%	50%	78%	95%

<sup>\*</sup>This is the only category with a significant drop in customer satisfaction. Our ideas to improve the satisfaction rating are described in Section 3.

#### Strong Economic Development Results: \$15 billion investment, 80,000+ jobs

As a state-owned electric utility, Santee Cooper performs certain economic development activities that Investor Owned Utilities (IOUs) would not typically perform. Santee Cooper has supported industrial development in all 46 counties of the State. We have been critical to several key economic development initiatives outlined below and have been essential to supporting South Carolina's high economic development (Area Development Magazine recently named South Carolina #1 in economic development incentives) and business friendliness rankings (Site Selection Magazine named South Carolina a "Top 5 State for Business Climate" last year).

Santee Cooper's strong commitment to economic development comes from the mandate given to us by the legislature and set out in our enabling legislation. It is part of our very being, and so we take a broader approach than most utilities—in terms of types of support and geographic reach. Our economic development programs include incentive rates, grants, low-interest loans and project leadership. We can purchase land (and we have) where needed, which is just one example of the power of our flexibility in economic development. In addition, working jointly with the electric cooperatives and our other wholesale customers, we can support industrial recruitment and retention in every county of South Carolina.

Santee Cooper has played a vital role in helping secure over \$15 billion in capital investment and over 80,000 new jobs for South Carolina since 1988. Since 2014 alone, Santee Cooper has helped attract \$4.1 billion in investment and helped create 16,125 jobs. We have invested approximately \$150 million since 2012 in economic development grants, loans and other incentives and since 1988 we have had projects in all 46 counties across the State. Economic development is one way Santee Cooper fulfills our mission, and it is also a specific duty identified in governing State law.

"Without Santee Cooper, there would not be Volvo," South Carolina Commerce Secretary Bobby Hitt said during a 2018 groundbreaking for Camp Hall. "Santee Cooper has been a partner to the Department of Commerce every day that I've been in the job."

Santee Cooper was a critical member of the team that courted and brought Volvo Car USA's first U.S. manufacturing facility to rural Berkeley County. The State needed a partner that could buy a 6,800-acre tract, and Santee Cooper was the only government entity that was willing to do the deal. Santee Cooper also provided incentive grants and loans to government partners to help lure Volvo. Water for the Volvo plant comes from Santee Cooper's Lake Moultrie Regional Water System through Berkeley County Water and Sanitation Authority, and Edisto Electric Cooperative delivers power generated by Santee Cooper to the plant.

Volvo is producing its S60 sedan on about 2,000 acres of the tract, with nearly 2,000 workers to date, and plans to double its investment and employment by adding production of a second model within a few years. Meanwhile, Santee Cooper is leading development of the remaining acreage at the Camp Hall commerce park, working with the S.C. Department of Commerce (Commerce), Berkeley County and others to create a first-of-its-kind space that prioritizes environmental stewardship alongside industrial development. Steps we are taking include:

- Preserving nearly 2,000 acres of wetlands across the park, including the environmentally sensitive headwaters
  of Timothy Creek, rather than pursuing offsite wetlands mitigation
- Building pollinator pathways to encourage the preservation, protection and growth of important species
- Recycling wood waste as fuel for biomass-fueled renewable electricity

We have already invested approximately \$55 million to purchase the land, including the Volvo site, and to make improvements related to the Camp Hall park. We have budgeted another \$48 million in funds to continue developing Camp Hall. As Camp Hall develops, Santee Cooper will recoup its upfront investment. We have already sold 77 acres to leading logistics developer Exeter Property Group, and construction there is underway.

#### Volvo is just one example of major industry that Santee Cooper was pivotal in landing. Here are a few others:

**Nucor Steel** in Berkeley County: Our low-cost, reliable electricity was key to Nucor locating in Berkeley County. Today, Nucor Berkeley employs more than 960 people. In the 3 years following Nucor's initial 1995 announcement, 10 companies announced facilities in Berkeley County, in addition to two Nucor expansions, with a total investment of \$787 million and 1,125 new jobs.

**Google** in Berkeley County: The Mount Holly Commerce Park, the first large-scale industrial park in the Lowcountry, reflects a partnership between Santee Cooper, Berkeley County and Alumax. Santee Cooper paid up front for the construction and has been fully repaid by Berkeley County. Alumax provided land. In 2007, Google announced plans for a data center and became Mount Holly's largest tenant. We provide Google with water from our Lake Moultrie water system through Berkeley County Water and Sanitation Authority and electricity through Berkeley Electric Cooperative.

**Samsung** in Newberry County: A \$2.75 million Santee Cooper incentive in partnership with Newberry Electric Cooperative helped secure \$380 million in investment and 954 new jobs in 2017.

*Inland Port* in Dillon County: With our financial support (a \$15 million loan) and partnership with Marlboro Electric Cooperative, the Inland Port Dillon was dedicated in 2018, handling 30,000 rail moves in its first operational year. Inland Port Dillon is seeing dramatic increases in its second year and has already brought additional industry to the area.

**Inland Port** in Greer: Our \$3.5 million loan to the Greer Commission of Public Works afforded construction of an electric substation necessary to supply power to the Spartanburg County port.

**Muffin Mam** in Laurens County: Working with Piedmont Municipal Power Agency, Santee Cooper supplied a \$3.25 million loan to Laurens County Development Corporation to build a 75,000 square foot building that now houses Muffin Mam. The company brought 114 jobs and \$18.8 million in capital expenditures.

#### **Supporting Underserved South Carolina**

In keeping with our mission to benefit all South Carolinians, Santee Cooper works especially hard to promote economic development in underserved areas of the State. The \$15 million loan supporting Inland Port Dillon is just one example, as the port has created hundreds of jobs in a county suffering from high unemployment.

Camp Hall is also delivering jobs and improved quality of life to adjacent counties battling high unemployment (Orangeburg is No. 3 in the State and Clarendon is No. 12 in terms of high unemployment rates), and available jobs will increase significantly as it grows. As part of the Camp Hall vision, we are also working with residents of neighboring, underserved communities to bring needed amenities nearby, including a fire station, gas station, convenience store, recreation, and a community meeting space.

Below are other examples of economic development support Santee Cooper has provided to counties with high unemployment rates, as ranked in August 2019:

Figure 4 – Santee Cooper Economic Development Support

Unemployment Rate	County	Santee Cooper Loans and Grants		
# 1	Bamberg	\$1,588,500		
# 3	Orangeburg	\$14,933,395		
# 6	Marlboro	\$6,380,000		
# 12	Clarendon	\$756,000		
# 15	Union	\$2,563,000		

Among other Santee Cooper programs and practices:

- The Santee Cooper Rural Economic Development (SCRED) Program offers grants of up to \$10,000 to public
  entities, totaling nearly \$350,000 in grants since January 2014 alone. The towns of St. Stephen and Moncks
  Corner and the county of Georgetown, for example, have used this program to benefit their residents through
  website development, computer hardware and software, site work, labor studies, lead generation, economic
  development personnel training, and community advertising.
- Santee Cooper supports alliances such as the North Eastern Strategic Alliance, the Southern Carolina Regional
  Development Alliance and Darlington County Progress, Inc. which work in rural and economically depressed
  areas. We work with these organizations to evaluate how to meaningfully invest funds in the areas they
  represent.
- Santee Cooper has franchise agreements with 10 towns and municipalities in Berkeley, Georgetown, and Horry counties, allowing us to place, maintain, and repair electrical equipment within the public rights of way. In exchange for these rights, each ratepayer within the town or municipality limits is charged a franchise fee, which we collect on behalf of the municipality in the monthly bills and return to those respective entities twice per year. For participating towns and municipalities, a percentage of the fee (typically 40%) is withheld in an "underground conversion fund" and matched dollar for dollar by Santee Cooper. As the fund reaches a balance required to perform a conversion project in a particular location selected by the entity, Santee Cooper designs the project and administers the construction work. This has been a very successful and cooperative undertaking—especially in our larger municipalities, like Myrtle Beach for instance, where several blocks of conversion can be completed at a time.

"As Mayor of a small town, I'm always looking for creative ways to meet needs and the timing of this proposal was perfect! This is just one of many examples where Santee Cooper has supported the Town of St. Stephen – we appreciate the partnership." – John Rivers, Mayor, Town of St. Stephen

Santee Cooper has a long tradition of serving our local stakeholders. We take a holistic approach to these relationships and maintain a significant degree of flexibility in our current form to launch, scale and amend various support initiatives based on the individual needs of each community. For instance, in order to better address the needs expressed by the towns of St. Stephen and Atlantic Beach, we released their funds from

the underground support program, which made available nearly \$300,000 and \$40,000 to St. Stephen and Atlantic Beach, respectively.

"When we looked at the numbers, it was obvious to me that Atlantic Beach needed increased revenue and cash flow more than underground power – especially if there was no trade-off for reliability and service. In my short time here, I've found that Santee Cooper goes above and beyond to support our Town" – Benjamin Quattlebaum, Town Manager, Town of Atlantic Beach

#### A History of Firsts: Innovation at Work

The original Santee Cooper Hydroelectric and Navigation Project achieved several firsts according to a 2007 article in The State newspaper, including:

- Highest single lift lock in the world—75 feet—at the Pinopolis Dam
- Longest earthen dam in the world, the 8-mile-long Santee Dam
- Elimination of malaria—in 1948, there was no malaria reported in the five counties around the lakes, compared to 1,300 cases reported in those counties in 1938

More recently, Santee Cooper was the first utility in South Carolina to generate renewable power for customers. Our portfolio includes landfill gas, biomass, solar and wind resources, and each of these was also a first for the State. We have over 250 MWs of renewable power online or under contract and plans for another 1,500 MWs of solar by 2031. A few highlights:

- Santee Cooper launched its Green Power program in 2001, generating electricity from landfill methane gas.
  This was a huge environmental win due to the potent greenhouse gas effect of methane released into the
  atmosphere. We have landfill gas generating stations in Anderson, Richland, Lee, Berkeley, Georgetown and
  Horry counties.
- We introduced solar power to the State grid in 2006, launched the first rooftop solar program in 2008, and contracted for the first utility-scale solar farm in South Carolina in 2014. The State's first community solar project—also delivered by Santee Cooper—came in 2016.
- We contracted for the State's first biomass facilities exclusively used for electricity production.
- We collaborated with partners in major wind power research beginning in 2005, and later brought online the State's first grid-connected wind turbine as a demonstration project.

Santee Cooper has provided other environmental firsts, such as installing the first scrubber at a coal-fired generating station, launching a statewide used motor oil recycling initiative that still offers pickup points in all 46 counties, and launching the rebate-focused energy efficiency programs mentioned above. Our innovative program to excavate our legacy coal ash ponds and recycle that ash has drawn positive attention nationally. We have been recognized as an example of how to do it "right" when handling this by-product in an environmentally responsible way.

#### **Supporting State and Communities**

Beyond our annual payment to the State (totaling more than \$427 million since 1943), Santee Cooper's efforts save the State and its taxpayers hard and soft dollars, increase the quality of life for residents, and help the State and localities in ways that investor-owned utilities would not.

Santee Cooper has stepped in many times to help the State or localities solve a particular need.

After the federal government announced the Myrtle Beach Air Force Base closure in 1991, the State acquired
the land and then-Gov. Carroll Campbell asked Santee Cooper to redevelop it. Santee Cooper facilitated
environmental assessment and cleanup of the property, as well as dividing the land and handling property

transfers. The property now includes AVX Corp, Horry-Georgetown Technical College, the International Culinary Institute of Myrtle Beach, the International Technology and Aerospace Park (ITAP), the Market Common residential, business and retail community, sports facilities and recreational parks.

- Santee Cooper financed and constructed Old Santee Canal State Park for the S.C. Department of Parks, Recreation and Tourism. The park opened in 1989 and a decade later, when State budget cuts put its future in jeopardy, Santee Cooper assumed its ownership and operation. The park has been a haven for wildlife and nature seekers, and it plays an important role in State history and education. Around 50,000 people visit the park each year, including approximately 8,000 schoolchildren. We provide guides, educators, classes, tours and hands-on activities as part of school curriculum.
- Our commitment to the State's natural resources continues through lake management and providing clean, award-winning water to much of the Lowcountry and beyond. Santee Cooper operates the Santee Cooper Regional Water System on Lake Moultrie and the Lake Marion Regional Water System, two modern water treatment systems serving nearly 200,000 people, with plenty of room to grow. They are the result of landmark partnerships between multiple local jurisdictions, which still serve as a road map for public entity cooperation. And the water tastes good—both systems have won "Best Tasting Water" recognition by the South Carolina Rural Water Association.
  - The Santee Cooper Regional Water System began operating in 1994 and serves the Lake Moultrie Water Agency and its four members—Berkeley County Water and Sanitation, City of Goose Creek, Summerville Commissioners of Public Works and Moncks Corner Public Works Commission.

"Nothing has been more important to the development of our community than this water system," said former City of Goose Creek Mayor Michael Heitzler on the 20th anniversary of the Lake Moultrie Water System.

The Lake Marion Regional Water System opened in May 2008 and is heralded for bringing clean, safe and reliable drinking water to counties along I-95, including some of the State's poorest and most rural communities. The water system serves the Lake Marion Regional Water Agency and currently provides water to three agency members—Town of Santee, Calhoun County and Orangeburg County. Other members include Dorchester County and Berkeley County Water and Sanitation, which will be served by system expansions.

"This is a tremendous day for the communities...that will ultimately benefit from the clean, safe drinking water this project will provide. Access to potable water is also a key component to attracting economic development to the I-95 corridor," U.S. Representative James Clyburn said at the ribbon-cutting event for the Lake Marion Regional Water System.

- Maintaining the Santee Cooper Lakes' water quality is important to ensure a safe water source for the drinking water systems, and to preserve the lakes' natural habitat. It's a job Santee Cooper takes seriously. We control disease-carrying mosquitoes, as well as invasive plants that would otherwise jeopardize navigation channels on the lakes. Santee Cooper and the S.C. Department of Natural Resources (DNR) work closely on the management of the lakes.
- Lake management is critical to tourism in a largely rural part of the State. We maintain public boat access at 21 boat landings around the two lakes, and we maintain four sandy beach areas for visitors to enjoy. Additional commercial facilities along the lake shores and surrounding areas help bring \$415 million worth of tourism to the five counties surrounding the lakes and supports 3,750 jobs.
- The Palmetto Trail, stretching from the Lowcountry to the Upstate, is a hiking, biking and camping pathway
  enabling users to experience dozens of habitats and ecosystems. Santee Cooper built several sections,
  including the first section of the Trail—the 26-mile Lake Moultrie Passage, which opened in January 1996.

Santee Cooper also built seven miles of the Eutaw Springs Passage and nine miles of the Lake Marion Passage. We work with DNR and volunteer organizations to help maintain trail passages.

Back to Volvo: Not only did Santee Cooper step in and buy the tract quickly when Commerce needed it, we
also inclusively managed environmental planning needs. Santee Cooper worked with influential
environmental groups, including Audubon South Carolina and the Coastal Conservation League, in wetlands
planning and other environmental assets for the Volvo location. Our plans for the property reflect that
collaboration.

Santee Cooper employees are generous with their time and talents outside of work. In 2017 alone, Santee Cooper employees reported nearly 19,000 volunteer hours.

As one example of employee generosity, Santee Cooper and our Old Santee Canal Park host the annual Celebrate The Season Holiday Lights Driving Tour, providing a community-centered holiday event that raises money for local charities. Hundreds of employees have volunteered to make the event happen through the years. More than \$880,000 has been donated to charities like the Coastal Community Foundation since 2010. We expect that number to top \$1 million after this year's event.

The bottom line is, South Carolina can count on Santee Cooper and our employees to pull out all the stops when it matters.

Consider September 2018, when 300 employees waged a weeks-long proactive effort to protect the Waccamaw River from a threatening breach of the ash ponds that we had been excavating. The Waccamaw was headed for a new record flood level thanks to rains from Hurricane Florence. Employees pumped water into the ponds to stabilize dike walls against the rising river; staged heavy equipment, sand and other materials; monitored pond and river water quality; placed 11,000 feet of floating containment boom as a barrier against particles; and installed and inflated 6,000 feet of AquaDam around the perimeter of Pond 2, adding 30 inches of height. The river crested just below the top of the Aqua Dam, and the dike walls held, so the hard work paid off. Meanwhile, a neighboring utility was dealing with ash pond breaches in North Carolina because of the same storm.

"Santee Cooper acted with diligence to decrease the threat posed by their coal ash," Cara Schildtknecht,
Waccamaw Riverkeeper, said. "I believe they have done everything humanly possible to protect
downstream communities."

In recent years, Santee Cooper employees have prepared for and responded to an unusually high number of weather-related events such as hurricanes, floods, and ice storms. We have hardened our system to minimize outages, and when they cannot be avoided we respond quickly to restore power.

Santee Cooper delivers value to South Carolina far beyond dollars and cents. Our employees are not just part of this great State, we are in invested in her well-being. South Carolina is better because of Santee Cooper, because we are South Carolinians.

#### **Annual Economic Impact: \$2 Billion**

In addition to the \$15 billion in new industry and over 80,000 jobs that Santee Cooper's economic development programs have helped produce, Santee Cooper's own economic impact is significant.

Santee Cooper's operations are located entirely within South Carolina, and our supply chain is concentrated here. We have a sizeable impact on the State's economy. According to a 2019 analysis by Joey Von Nessen<sup>2</sup>,

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<sup>&</sup>lt;sup>2</sup> Santee Cooper commissioned this study in October 2019.

research economist with the University of South Carolina Darla Moore School of Business, Santee Cooper generates approximately \$2 billion in annual economic activity while supporting 4,436 jobs and \$271 million in worker pay.

These benefits extend across the State. Counties seeing the highest impact are:

Berkeley: \$871 million

Horry: \$370 million

Georgetown: \$189 million

Dorchester: \$115 million

Charleston: \$85 million

Approximately \$1.1 billion of benefits are concentrated in Charleston, Berkeley, and Dorchester counties.

Santee Cooper's economic impact will increase to \$2.3 billion by 2033 as we execute our September 9, 2019, Business Forecast (2019 Business Forecast), Von Nessen concluded. Conversely, if Santee Cooper were sold to an out-of-state party as outlined in one of the scenarios examined in last year's ICF process, 500 Santee Cooper jobs would be eliminated. Von Nessen concluded that this scenario would reduce Santee Cooper's economic impact by over 40% (or approximately \$950 million), and would eliminate 1,749 jobs statewide.

In addition to all the benefits detailed here, Santee Cooper will continue to make an annual payment to the State general fund of 1% of gross budgeted revenues. That has equaled roughly \$20 million a year for the past few years. South Carolina, which invested \$0 in Santee Cooper, will continue to receive that cash influx plus customer—and State—focused benefits, for decades to come.

We stand ready and eager to continue providing that value—from South Carolinians, to South Carolinians. Santee Cooper has powered South Carolina for nearly 80 years, and Santee Cooper is best positioned to do so for another 80.

#### 1.1 REFORM PLAN POWER SUPPLY ROADMAP

#### New Power Supply Roadmap for Santee Cooper

Santee Cooper's Reform Plan provides a roadmap for changes to its generation and transmission systems that will result in more affordable and competitive service to wholesale and retail customers who rely on Santee Cooper for their electricity needs. In addition to making the future cost of electricity more affordable, the changes identified will preserve the reliability of our supply and will significantly reduce the carbon footprint of our generation fleet. The Reform Plan enhances the diversity of Santee Cooper's resource portfolio and better positions Santee Cooper to adapt as conditions change in the future.

Savings = \$110 million a year through 2022 and \$200 million a year and growing beginning 2023

#### **Resource Planning Principles**

A sound resource roadmap is built on three foundational aspects: a broad view about future key assumptions such as fuel costs and customer loads, analyzing resource options both existing and new, and evaluating a large number of different resource portfolios against specific metrics. Santee Cooper's goal in this process is to appropriately balance all the important metrics that guide decision making during the planning process. These core Resource Planning Principles for Santee Cooper—the important metrics to balance —are outlined below. These principles were the driving force behind the new Power Supply Roadmap.

- **Customer Focus**: Provide safe, reliable and affordable power, and respond to changing customer expectations by providing new options sought by customers such as more control over the source and use of their power
- Cost Management: Deliver resource value by keeping prices low through effective cost management over the long-term
- **Ensuring Reliability**: Reliability is the number one product of any utility, not electricity. Reliability enables a robust economy
- Environmental Stewardship: Responsibly manage the environmental impact of Santee Cooper's operations
- Taking a Long-Term View: Develop a long-term resource strategy to ensure an optionality over a wide range of possible future assumptions
- Reducing Financial and Planning Risk: Add generation in smaller increments, more closely matching resource needs

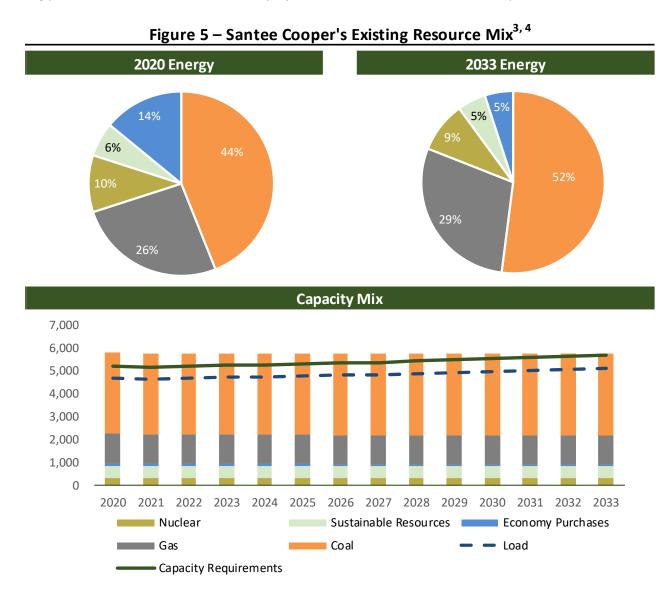
Flexibility to adapt to whatever the future brings

- Embracing Innovation: The accelerating development of new technology is transforming generation, transmission, and distribution. On the customer side of the meter, new technologies are improving energy efficiency and conservation and increasing information options. Santee Cooper will embrace such innovations and will incorporate them into our plans.
- **Transparency**: Engage customers, stakeholders, Board Members and elected officials in a transparent resource planning process that is responsive to questions and input

Overall, our goal is to create a diverse portfolio of resources with more innovative technology, greater operating efficiency, and reduced environmental impact. By doing that, we are confident that Santee Cooper will continue to provide affordable and reliable service to our customers.

#### Santee Cooper's Existing Power Supply Portfolio

Santee Cooper's current power supply portfolio is heavily weighted toward coal-fired resources. Figure 5 below shows the projected mix of energy resources for 2020 and 2033, and the capacity resources in Santee Cooper's existing portfolio. As shown, unless the portfolio is changed, approximately 44% of Santee Cooper's energy is projected to come from coal resources in 2020, increasing to approximately 52% by 2033. The projected increase is due to forecasted growth in our customers' energy needs and projections suggesting that Santee Cooper would have fewer economic opportunities by 2033 to save on fuel costs by purchasing energy from surrounding systems. (See the reduction in "Economy Purchases" from other utilities shaded in blue.) In addition, Santee Cooper's existing portfolio of resources would exceed projected customers' needs into the early 2030s.



<sup>&</sup>lt;sup>3</sup> Financial Forecast used in ICF Process.

<sup>&</sup>lt;sup>4</sup> Capacity is the maximum output of electricity that a generator can produce under ideal conditions. Energy is the amount of electricity that is produced over a specific period of time.

#### **Identifying Desired Changes**

Santee Cooper adhered to its Resource Planning Principles in developing this Power Supply Roadmap.<sup>5</sup> As explained above, Santee Cooper has targeted a new power supply portfolio with a greater diversity of resources, less reliance on coal, and increased use of renewable resources and other environmentally friendly generation resources, including highly efficient natural gas generation units. The Power Supply Roadmap also places a greater emphasis on energy efficiency and demand response programs.

In formulating this Power Supply Roadmap and restructuring its power supply portfolio, Santee Cooper embarked on a significant planning effort beginning in the spring of 2019. The culmination of this effort was the 2019 Business Forecast which was approved by the Santee Cooper Board on September 9, 2019. The report associated with this work, 2019 Resource Planning Study by nFront, is provided in Appendix 8.3. This Reform Plan builds and improves upon the 2019 Business Forecast.

#### Factors Driving Santee Cooper's New Plan

Santee Cooper's analysis of potential resource plans identified most of the economic combinations of our existing resources and the various types of potential new resources consistent with flexibility to adapt as conditions change. Most importantly, our plan will enable us to continue to provide reliable service to our customers. Below are some of the key factors that impacted our analysis of various scenarios:

- 1,500 MW new solarBuy, not build
- Sites at which new natural gas combined-cycle units (NGCCs) could be developed at the most favorable total
  costs, including consideration of natural gas pipeline access, delivered natural gas costs, and required
  upgrades to the electric transmission system necessitated by the resource changes being considered
- Projections of the costs of construction, operation, and maintenance of potential new resources, pipelines, and electric transmission upgrades
- Time periods required to plan, permit, procure, construct and place into service new generation facilities, electric transmission system improvements, and extensions and upgrades to natural gas delivery systems. These time periods range from three to ten years depending on the option being considered
- Projected costs of long-term purchase power agreements (PPAs) including the capacity charges, O&M charges, and cost of transmission service
- Forecasted costs of purchasing energy from solar projects, the profile of energy that would be provided from those projects on a must take basis, variability of solar resource output, and initial analyses as to the amount of solar capacity Santee Cooper should include in the plan pending more detailed operational studies and more information about future load levels
- Estimates of costs avoided by retiring existing coal units and stations as well as the time required for appropriate personnel transition processes
- Expectations and assumptions regarding inflation and escalation of labor and material costs, environmental
  compliance costs, and delivered costs of coal and natural gas for the necessary long-term planning horizon
  (through the 2030s and beyond to consider cost implications of decisions to undertake resources that would
  have useful lives extending into the 2050s)

<sup>&</sup>lt;sup>5</sup> Seeking input from stakeholders and customers was limited due to confidentiality requirements of the Joint Resolution (Act 95).

- Long-term forecasts of customer demand for and use of electricity
- Governmental policy regarding legislation to impose a tax or other means to constrain carbon emissions from electricity generation

Santee Cooper and our advisors assembled a set of internally-consistent assumptions with respect to the above factors and performed comparisons of numerous alternatives before arriving at the Reform Plan discussed below. These assumptions were vetted and found to be reasonable by nFront Consulting LLC and Navigant Consulting, Inc., both of which have significant experience in energy resource planning. Their reports are included in Appendix 8.3 and 8.9.1. Santee Cooper assessed a wide range of resource portfolios and identified the most favorable combinations based on our Resource Planning Principles.

Our internal assessment also considered these additional factors:

- Potential impact on neighboring utilities and regional reliability
- Alignment of Santee Cooper's costs and prices with surrounding utilities under various scenarios from a competitive perspective
- Potential impact on economy energy purchase opportunities
- Impact on Santee Cooper's customers of various sensitivity/risk analyses
- Qualitative assessments of factors that are best considered by experienced judgement

#### **Reform Plan Resource Directions**

Santee Cooper has built flexibility into the Reform Plan to adapt to dynamic future scenarios. Accordingly, the following roadmap can and would be modified as more information becomes available, additional studies are completed, the needs of Central Electric Power Cooperative (Central) and our other customers change, and discussions with potential partners progress.

We are committed to executing on our Power Supply Roadmap in an aggressive, yet responsible, manner consistent with providing affordable and reliable service.

Accordingly, Santee Cooper's current roadmap to its power supply future is as follows:

#### **Reduction In Coal**

ACTION – Retire the Winyah Generating Station by early 2027 using a phased retirement approach

The retirement of a coal-fired generating station would require costly transmission improvements to the system unless replacement generation is installed in specific areas. Santee Cooper assessed various retirement scenarios and their impact on need for new generation and modifications of the transmission system. As part of the assessment, we optimized the cost of resolving transmission impacts against the cost of natural gas pipeline access and fuel delivered via that pipeline path to potential replacement generating sites. Our conclusion was that a phased retirement of Winyah Generating Station would produce the greatest benefit for customers.

Initially, Santee Cooper plans to remove two of the four generation units at the station from service in 2023, which will reduce our capacity to serve load by approximately 580 MW.<sup>6</sup>

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<sup>&</sup>lt;sup>6</sup> Winter Capacity Rating.

To ensure reliable supply to customers without the two retired Winyah units, Santee Cooper plans to:

- Purchase approximately 25 MW of capacity from parties connected to adjacent transmission systems in the winter months of 2023, or such other amounts as may prove necessary in the 2023–2036 period if loads are different from what we currently forecast
- Adjust maintenance outage schedules in the spring and fall seasons to assure adequate reserves during those periods

We then plan to retire the other two generation units at Winyah in 2027. This will reduce generation capacity by approximately 570 MW. Santee Cooper will coordinate the timing of the Winyah retirement with the development and installation of approximately 500 MW of capacity from a high efficiency NGCC generation unit within the Santee Cooper system. Santee Cooper intends to work with other utilities to explore the most cost effective ways to provide this additional NGCC capacity while best matching our capacity needs and allowing customers to benefit from the economies of scale associated with developing larger generation units.

As the retirement of Winyah progresses, Santee Cooper will work to minimize expenditures at the plant and to productively and appropriately transition the approximately 185 loyal employees that work there. We also intend to explore opportunities to lessen the impact to the Horry-Georgetown area during this transition.

Santee Cooper also assessed the retirement of the Cross generating units, and under current forecasted conditions, their retirement would increase costs to Santee Cooper customers. There are, however, several plausible changes in the future that would change this conclusion, such as the imposition of a tax on greenhouse gases or carbon dioxide emissions and/or the development of new, more efficient generating resource options.

As part of the Santee Cooper Reform Plan, we will continually assess whether it makes sense to retire units at Cross, particularly Units 1 and 2, the older and less efficient units at the plant.

#### **Substantially Increase Sustainable Resources**

ACTION – Add approximately 1,000 MW renewable generation to the Santee Cooper system by 2024 and an additional 500 MW by 2031

Santee Cooper plans to enter contracts with multiple development companies to purchase the output of renewable generation assets that these developers would finance and construct at multiple sites. Santee Cooper anticipates that a majority of the 1,500 MW of renewable generation would be obtained under contracts with companies that specialize in the development of photovoltaic solar projects.

In October 2019, Santee Cooper issued a Request for Expressions of Interest and Indicative pricing (RFI) for solar resources. The RFI requested information and indicative pricing for solar projects having an installed capacity in the range of 25 MW to 125 MW with contract terms of 15 to 25 years. To date, Santee Cooper received 76 responses from 25 developers, indicating a healthy interest in developing solar resources within our system. The indicative pricing received from the RFI process was supportive of the assumptions used in our Reform Plan. A summary of the responses is included in Appendix 8.2.4.

Reduce CO<sub>2</sub> emissions 43%
 3X increase in sustainable resources

Weather conditions can interrupt the supply of energy from solar resources. Therefore, Santee Cooper's plan anticipates installation of the new solar resources at diverse locations relatively near our load centers. Specifically, Santee Cooper is targeting multiple sites in the eastern third of the State to achieve geographic diversity of solar resources. As a rule of thumb, 7 to 10 acres of land are typically required per MW of solar generation capacity. Therefore, installing 1,500 MW of solar resources can be expected to require approximately 10,500 to 15,000 acres of property.

Solar resources produce energy only as sunlight and cloud conditions allow. Santee Cooper anticipates that very little energy would be produced by the solar photovoltaic resources during early mornings on winter days when customers' demand for electricity from our system is highest. Accordingly, adding solar resources is not expected to reduce the amount of generation capacity Santee Cooper will need to reliably serve its customers' loads during the highest demand periods. Instead, the addition of solar resources is expected to mainly offset the amount of energy that would otherwise be produced from carbon dioxide-emitting generation resources.

During the hours of the day when the output of solar resources normally would be highest, energy from 1,500 MW of solar would represent approximately 30% to 45% of the total demand for energy of Santee Cooper's customers in summer and winter months. However, in minimum load months such as March, April, October and November, Santee Cooper's loads during the hours of solar energy production are much lower and therefore the amount of solar energy provided to the system would represent a much higher proportion of Santee Cooper's total load.

Figure 6 below illustrates the use of 1,400 MW of solar resources on a peak load day in April 2030. Note that the amount of solar energy (yellow shaded area) available represents a larger portion (approximately 50% or more) of Santee Cooper's total demand for energy of approximately 2,500 MW in the applicable hours. The green shaded area represents energy provided from NGCC resources needed to serve load in the hours before, during and after solar energy is being provided to the system.

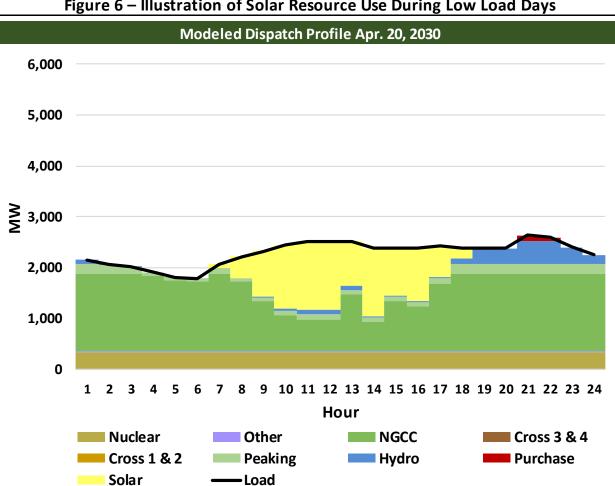


Figure 6 – Illustration of Solar Resource Use During Low Load Days

Figure 6 above illustrates that NGCC resources (represented by the green areas) operate very near their minimum output levels in the hours when solar output is highest. Dispatchable generation plants can be throttled back from full output, but only to specified minimum limits and at reduced efficiency. If load were to be insufficient for those plants to operate at least at minimum output levels, Santee Cooper would either need to use less cost-effective resources during the day to serve its load or sell excess energy into adjacent markets (even if the price is well below the cost of production).

In the analysis underlying Figure 6, Santee Cooper modeled various amounts of solar resources. Based in part on that analysis, Santee Cooper has concluded that it could fully utilize the energy from up to 1,000 MW of solar resources in the near-term, under a wide range of future load forecasts, and readily manage various operational issues related to that use. Santee Cooper has also concluded it could reliably integrate an additional 500 MW of solar resources in the longer term after the planned installation of a NGCC in 2027. The addition of the NGCC is expected to provide resource flexibility, allowing our generation fleet to respond more quickly and to achieve lower minimum loads to address the variable nature of the additional solar generation while reducing overall costs.

Santee Cooper also evaluated the impact of solar resources on operating reserves, which are required for reliable system operations. Working with Navigant Consulting, Inc., Santee Cooper determined that 65% of the forecasted solar output should be considered firm in real-time operations; therefore, operating reserves would only be required to backstand the remaining 35%. This will lower costs as other generating units will not have to backstand 100% of solar output. The study results are outlined in the Navigant report in Appendix 8.9.1.

Accordingly, at this time, Santee Cooper has targeted adding 1,000 MW of solar resources by 2024 and an additional 500 MW of solar resources by 2031.<sup>7</sup> As Santee Cooper performs additional simulations, considers technology improvements in advanced storage devices, and learns more about future load levels, we anticipate that installing additional solar resources could be advantageous for our customers and we will continue to assess that potential. It is important that new sustainable resources be added to the system in a responsible manner that benefits the environment, reduces costs to customers, and maintains Santee Cooper's excellent reliability record.

## Incorporate More Advanced Technology ACTION – Progressively add 200 MW of energy storage devices to Santee Cooper's system

Santee Cooper has targeted the installation of energy storage devices that would meet approximately 200 MW of customer demand by 2028.

Capabilities and costs of energy storage devices are expected to improve significantly over the next several years. By phasing in the addition of storage devices, Santee Cooper intends to capture the greatest benefit for its customers at the most reasonable cost available.

Storage devices will be helpful in managing:

- Abrupt early morning changes in customer demand during the winter season
- Early evening peak customer demand during summer months
- Abrupt changes in the output of solar facilities
- Use of energy produced by solar resources during low load periods
- In certain cases, abrupt changes in demand from certain large customers

Moreover, colocation of battery and solar capacity makes sense for many reasons including economy of project development and operational considerations. Battery resources are often used to store energy produced by solar resources, and on an integrated electric system like Santee Cooper's, conventional resources could also be called upon to further enhance the utility of battery storage. Stored energy can be used to manage fluctuations in solar plant output, regulate balance of energy demand and supply, and satisfy loads during high load periods.

<sup>&</sup>lt;sup>7</sup> Utility scale solar capacity resources can be added within a two to three year period. Waiting until more information is available reduces risks of overcommitting to solar resources while allowing Santee Cooper to gain further information from installation and operations of the planned 1,500 MW.

Consideration must also be given to how the deployment of emerging technologies, such as battery storage, into the power system may introduce additional safety concerns for employees, emergency responders, and the general public. Santee Cooper has a long history of operating and maintaining a safe and reliable power system. Safety is paramount in everything we do. Santee Cooper intends to deploy utility scale battery storage systems in a way that protects the safety of everyone impacted. While lithium-ion batteries are currently the leading technology for utility scale battery storage applications (the same technology used in laptop computers, tablets, and cellular phones), the specific technology selected for deployment will be assessed for its safety risk and will include safeguards such as active cooling and thermal management, active fire suppression, and remote monitoring.

We intend to work with local emergency responders to develop comprehensive emergency response plans consistent with National Fire Protection Codes related to battery storage. These response plans will include training in the rare event that an incident occurs.

Santee Cooper currently favors Lithium Iron Phosphate technology due to its superior thermal and chemical stability. This stability allows for safer installation because lithium iron phosphate can withstand higher temperatures (its cathode material will not burn) and is not prone to thermal runaway. The recent battery system fires in Arizona were caused by a different lithium-ion technology, which is more prone to failures associated with high temperatures and thermal runaway. These events were also exacerbated by the extreme heat of the Arizona desert environment.

Ensure System Reliability in a Manner that Intentionally Seeks to Moderate Transmission Investment

ACTION – Strategically locate two quick-start combustion turbines, battery storage, and solar resources to reduce new capital investment in transmission infrastructure

During the phased retirement of the Winyah Generating Station, Santee Cooper plans to install two quick-start dual-fueled combustion turbine generators (approximately 100 MW) near our load centers to ensure reliable supply to customers. These resources will be used during peak load periods and during contingencies on the transmission system. The planned battery storage is also planned to be sited in strategic locations near load centers to support the transmission system. These additions reduce the near-term need for significant transmission reinforcements.

Siting new resources in strategic locations on the system will allow Santee Cooper to moderate future investment in transmission infrastructure. As energy storage technologies develop, resources will become more distributed and will be installed closer to load centers. Intentionally moderating investment in Santee Cooper's transmission system in the near-term will reduce the risk of infrastructure not fully being utilized for its expected useful life as more distributed resources are developed.

#### **Increase Customer Programs to Reduce Load**

ACTION – Progressively implement programs to reduce the loads of customers, particularly during peak demand periods

Santee Cooper has initially targeted demand-side programs to meet approximately 150 MW of customer winter peak load by 2027 and grow to 200 MW by 2037. The planned programs will allow Santee Cooper to control key loads or incentivize customers to reduce demand for electricity during the winter periods of highest demand, which typically occur between 7 am and 8 am from December through February. Examples of these programs include demand reductions through conservation, direct load control of residential and commercial equipment, conservation voltage reduction, and critical period pricing. See Section 1.1.3 for details on specific programs.

Central comprises a very large proportion of Santee Cooper's load. Therefore, coordination of demand-side programs with Central, particularly targeting the winter peak demand periods, will be very important.

#### **Increase Natural Gas Resources**

ACTION – Add high efficiency NGCC capacity in increments matching peak customer requirements

With the planned retirement of Winyah Station and projected growth in customer peak demand for electricity, Santee Cooper is projected to need additional generation capacity<sup>8</sup>. This need will be met with the addition of approximately 500 MW from a high efficiency NGCC constructed at Santee Cooper's Pee Dee site in 2027, plus nearly 500 MW of purchases in the 2030s from existing surplus natural gas resources owned by others.

Santee Cooper will work to jointly develop the 2027 NGCC addition at Pee Dee with others in order to achieve economies of scale and to reduce the financial and planning risks to Santee Cooper. NGCC technology is proven, and therefore, the implementation risk is low. We have assumed that the natural gas for the Pee Dee NGCC would be sourced from the Atlantic Coast Pipeline (ACP). If the ACP is not completed or delayed significantly, Santee Cooper has identified an alternative plan to locate the needed NGCC at a site near the V.C. Summer Station. The overall cost of the V.C. Summer alternative for the 2027 NGCC unit is comparable to the Pee Dee site under a wide range of assumptions about future fuel costs and other considerations.

Santee Cooper also expects to identify more favorable power supply arrangements by working with other utilities in the area. Through discussions with a neighboring utility, the Southern Company, Santee Cooper has identified an opportunity to secure one or more long-term PPAs in the 2031 through 2039 time period. The PPAs can be sized on an annual basis to closely match Santee Cooper's peak load requirements. The PPAs would provide firm capacity and energy from NGCC units owned by the Southern Company. Southern Company's indicative pricing is shown in Appendix 8.2.5.

In our Reform Plan, these power purchases replace the potential addition of a second 500–600 MW NGCC at Pee Dee included in our 2019 Business Forecast. Purchasing Santee Cooper's natural gas resource needs in the 2030s rather than constructing our own NGCC offers several important benefits: (1) lower costs to customers, (2) reduced financial and planning risks, (3) increased operational diversity, (4) reduced debt, and (5) reduced risk of technological obsolescence.

<sup>&</sup>lt;sup>8</sup> As noted, the 1,500 MW of planned solar resources is not expected to help serve Santee Cooper's customer loads during the hours when peak demand occurs.

Maximize Benefits of Energy Purchases and Increase Natural Gas and Purchase Power Hedging ACTION – Continue maximizing benefits of energy purchases from surrounding markets and increase certainty of savings through hedging both energy purchases and natural gas commodity needs

As discussed above, favorable market conditions currently present Santee Cooper with good opportunities to purchase energy (Economy Energy Purchases) from surrounding transmission systems. Those opportunities are expected to diminish as market conditions change in future years. Maximizing Economy Energy Purchases in the near-term and implementing an enhanced hedging strategy for natural gas and purchase power will ensure that our customers benefit from current low-cost natural gas and purchase power markets. Hedging strategies are more fully discussed in Section 1.1.2.

**Pursue the Advantages of Larger Scale Through Partnerships** ACTION – Work together with neighboring utilities to find mutual benefits for our customers

Santee Cooper will continue to look for opportunities to work with other utilities in ways that mutually benefit our customers. The opportunities include: coordination of system dispatch, co-development of new generation, more favorable natural gas supply, capacity and energy transactions, management of coal combustion products, and other efforts to reduce operational costs. These opportunities are discussed more fully in Section 1.2.3.2.

#### Projected Improvements Resulting from the Reform Plan

#### **Lower Generation and Transmission Costs**

The Reform Plan changes will result in significant cost savings for customers.

- 2020 through 2022: \$110 million average annual savings<sup>9</sup>
- 2023 and after: \$200 million average annual savings, growing to \$230 million per year<sup>9</sup>

These savings provide the foundation for lower, stable prices.

#### More Diverse Energy and Capacity Mix

In 2033, projected energy from coal drops from 52% to 33%, a reduction of 37% (Figure 7). Energy from sustainable resources increases from 5% to 17%, more than a three-fold increase 10, advancing our Resource Planning Principle of Environmental Stewardship. Total energy from natural gas (self-generated plus purchased energy) increases slightly from 34% to 40%. The result is a balanced energy mix between sustainable resources, natural gas, and coal.

The energy and capacity mix under this Reform Plan is much more diverse and greener than the existing mix (Figures 7 and 8). Having a more diverse mix of resources is key to maintaining relatively stable costs and adapting to a wide range of future conditions.

than 800%.

<sup>&</sup>lt;sup>9</sup> Compared to the Financial Forecast used in ICF Process.

<sup>&</sup>lt;sup>10</sup> Santee Cooper's hydroelectric, solar, and waste-to-energy carbon-free resources. Solar resources would increase by more

Figure 7 – Energy Mix in 2033<sup>11</sup>

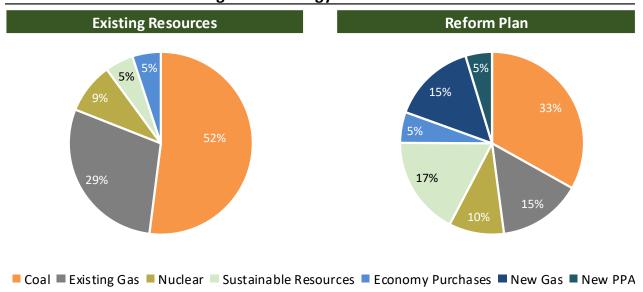
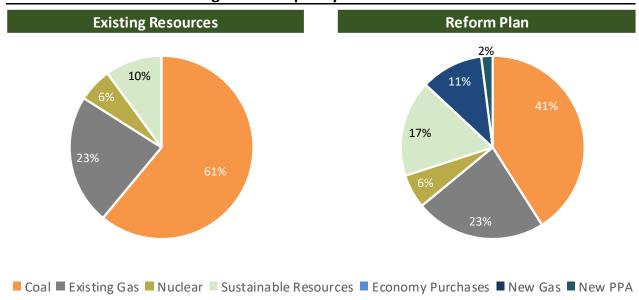


Figure 8 – Capacity Mix in 2033<sup>11</sup>



#### Improved Flexibility and Optionality

The Power Supply Roadmap changes increase flexibility to successfully adapt as conditions change. Figure 9 below illustrates how the Reform Plan allows us to adapt to changes in circumstances, which is perhaps the most critical Resource Planning Principle—Taking a Long-Term View.

Another element of the Reform Plan that enhances flexibility is purchasing, rather than building, NGCC additions. As renewables and demand-side technologies continue to improve in performance and decrease in price, the potential exists for NGCCs to become obsolete prior to the end of their typical 25-to-30-year life span. By relying

<sup>&</sup>lt;sup>11</sup> Capacity is the maximum output of electricity that a generator can produce under ideal conditions. Energy is the amount of electricity that is produced over a specific period of time.

on purchase power agreements in the 2030s, Santee Cooper's Power Supply Roadmap avoids the cost of building a NGCC and leaves open the option to incorporate new technologies and more renewables.

Figure 9 – Potential Changes to the Plan to Adapt to Different Circumstances

Potential Changes in Conditions	Retire Cross 1 & 2	Retire Cross 3 & 4	Source of Natural Gas for New NGCCs	Change Use of Resources	Change Schedule of Resource Additions	Purchases from Third Parties
Carbon Tax Imposed	✓	$\checkmark$		More solar / storage		
Higher Customer Demand					Advance / increase resources and Demand Side Management	Solicit capacity purchases
Lower Customer Demand	✓				Delay new resources	Reduce capacity purchases
ACP Cancelled or Indefinitely Delayed			Supply from Transco to Near-Summer site			
Lower Prices for Economy Energy from Adjacent Systems				Reduce use of coal units		Increase energy purchases
Very High Natural Gas Prices				Reduce Natural Gas use by adding solar & storage and increasing coal unit production when economical		

#### **Greener Resource Mix**

Under the Reform Plan, carbon emissions would be substantially less on average during the 2030s than in 2005 and 2015, which are the base years most often referenced in discussions concerning carbon-limiting legislation. As shown below in Figure 10, in the 2030s, carbon dioxide emissions associated with electricity supplied to Santee Cooper's customers are projected to be 43% less than in 2005 and 30% less than in 2015. Remarkably, these carbon reductions are possible even though Santee Cooper's total load in the 2030's is projected to be 4% and 10% higher relative to 2005 and 2015, respectively. Lower carbon dioxide emissions support our Resource Planning Principle of Environmental Stewardship and reduce Santee Cooper's risk exposure to any future carbon-related legislation.

**Carbon Emissions** Under the new resource plan, carbon emissions are projected to be 43% lower on average during the 2030s than in 2005 120% 100% 100% 82% 80% 57% 60% 40% 20% 0% 2005 2015 Average 2030 - 2039

Figure 10 - Reductions in Carbon Emissions Under the New Resource Plan

#### **Reduced Financial and Planning Risks**

The capital investment associated with new resources can be substantial (up to \$500 million for the NGCC). In addition to financing risk, there is also execution risk associated with large-scale construction projects. By purchasing needed resources rather than building and owning a NGCC resource in the 2030s, Santee Cooper is eliminating exposure to these risks during this timeframe. Furthermore, adding the resources in smaller increments that match resource needs reduces cost to customers.

#### **Summary**

The new generation, transmission and natural gas transportation Power Supply Roadmap associated with Santee Cooper's Reform Plan is leaner, greener and more adaptable to changing future conditions. The Reform Plan also embraces innovation and reduces financial and planning risks. We are confident that our Reform Plan will result in safe, reliable and more affordable power for our customers both in the near term and well into the future.

#### 1.1.1 Coal Procurement

Although reducing energy from coal is one key resource direction in Santee Cooper's Reform Plan, coal will still remain part of our resource mix for several years. We forecast coal commodity prices by integrating coal price forecasts from industry experts (including Energy Venture Analysis, S&P Global Market Intelligence (SNL), and ICAP Energy) with contract terms and indicative pricing provided by current suppliers. The forecasted coal prices from the 2019 Business Forecast were used as the basis for the assumptions used in the Act 95 Process. Industry experts have continued to lower forecasted coal prices since the development of the 2019 Business Forecast. For this Reform Plan, we contacted current suppliers in October 2019 and received indicative offers.<sup>12</sup>

The term of Santee Cooper's current rail transportation contract for coal extends through 2021. The contract includes an annual fixed escalator to rail rates from various coal basins. Extending this contract, with the application of the escalator, was the basis for the coal transportation assumptions used in the Act 95 Process. For our Reform Plan, Santee Cooper entered into discussions with its current supplier and received an indicative offer<sup>12</sup> for transportation rates beyond the current term.

An element of coal procurement that has implications for the quantity of coal to be purchased is the target level for coal stockpiles at our generating stations. For the Reform Plan, we determined it would be feasible to lower stockpile targets to a range of 800,000 to 1,200,000 tons (40 to 60 days at average daily burn levels). This would reduce the stockpile levels by 14% relative to current target levels, which would free approximately \$30 million for debt reduction.

For the Reform Plan, we have incorporated a reduction of 5-6% to forecasted delivered coal pricing, based on the indicative pricing received from our current suppliers and rail provider.

#### 1.1.2 Gas & Purchase Power Hedging

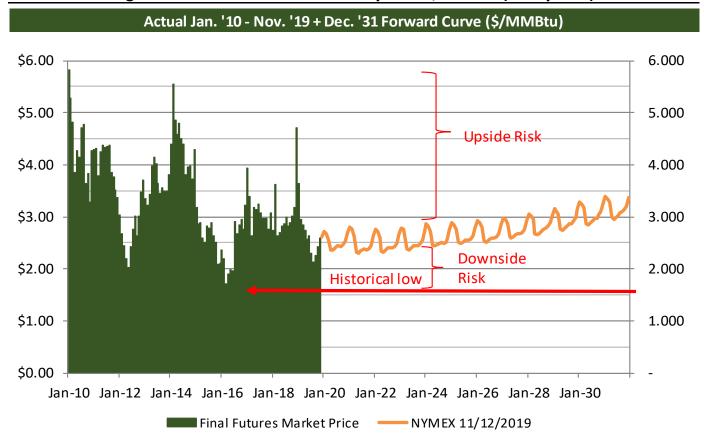
A component of Santee Cooper's Reform Plan focuses on improving resource diversity through a reduced reliance on coal coupled with an increased use of sustainable resources and clean, high efficiency natural gas. In support of the Reform Plan, Santee Cooper has developed a natural gas and purchase power hedging plan strategy to ensure the ability of our customers to benefit from current low-cost natural gas and purchase power markets.

#### **Natural Gas Hedge Strategy**

Since the onset of hydraulic fracking, the U.S. natural gas market has seen significant change. The market experienced a notable decline in 2009. Since 2015, pricing has remained at low-\$3 to mid-\$2 levels. Current natural gas pricing is at near historic lows, creating a dynamic where the price risk associated with natural gas is much greater to the upside than downside. Figure 11 illustrates the current market dynamics and related risks.

<sup>&</sup>lt;sup>12</sup> The written indicative offer from current coal and transportation providers are considered competitive information by providers and therefore are not included in the Reform Plan Appendix.

Figure 11 - Natural Gas Commodity Prices, NYMEX (Henry Hub)



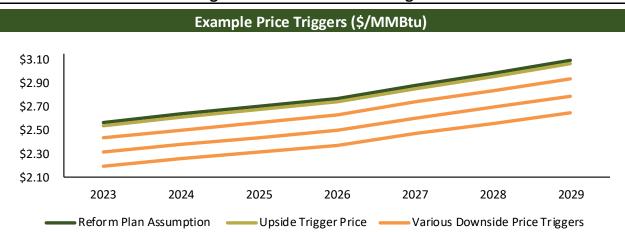
Natural gas is a liquid market in which financial hedges can be placed at near current New York Mercantile Exchange (NYMEX) curve price levels. Near term hedges can be placed with no or very small premiums; premiums grow in later years because market liquidity declines. However, the premium is manageable in order to enable cost-effective hedges in later years. Operating under its fuel risk management policy, Santee Cooper currently has hedge positions in place, to provide price certainty, for approximately 70% of the projected natural gas volumes for the years 2020 through 2022.

As part of the Reform Plan, Santee Cooper has worked with The Energy Authority (TEA) to develop a natural gas hedge plan beyond 2022. With Santee Cooper's leadership, TEA was formed in 1997 as the nation's first public power marketing alliance and continues to help Santee Cooper evaluate energy market opportunities and respond competitively for the benefit of our customers. Santee Cooper plans to lock in over 60% of projected natural gas volumes for 2023 and 2024. This plan will be executed using a tranche approach, with downside and upside triggers. Figure 12 shows an example of proposed trigger levels relative to natural gas prices assumed in the Reform Plan. This approach allows for the ability to capture additional downside market movement, should it occur, but ensures, via a defensive upward target, that hedge positions are placed should there be an upward market move. The triggers are set to ensure hedge positions are executed very close to or below the Reform Plan natural gas price assumptions.

Santee Cooper and TEA project a significant potential for the market in 2025 through 2029 to adjust further down on the NYMEX curve. Therefore, the hedge plan strategy is to obtain a hedge position of up to 50% of the natural gas volumes projected to be needed for the system in these years at various downside triggers. This approach protects Santee Cooper from placing hedges at too high of a price level and targets to place positions at opportunistic price points. Santee Cooper, along with TEA, will closely monitor the natural gas markets to see if an upside trigger needs to be added to the hedge plan strategy for these years.

Our systematic plan for hedging natural gas from 2025 through 2029 ensures rate stability for customers considering historical, fundamental and risk analysis to develop the tiered execution approach. The tiered approach is set in 25% increments and the targeted hedge volumes are sized to ensure significant coverage of the projected burn requirements of the NGCCs, locking in rates of the lowest cost units of the portfolio. The tiered approach targets ensure natural gas hedges are entered into at historical attractive pricing levels and levels consistent with credible fundamental forecasts. Moreover, the upside price risk evident in the current forward price curve would be contained. Figure 12 provides an example of how the price triggers would be implemented.

Figure 12 - Natural Gas Hedge



Given the current NYMEX curve, Santee Cooper and TEA are confident the assumed natural gas price levels in Santee Cooper's Reform Plan are obtainable by execution of the above hedge plan. In fact, on September 20, 2019, TEA received an indicative offer that would lock in significant volumes for a ten-year period below the Reform Plan price assumptions. Timely execution of this hedge plan is important to ensure action is taken before any upward shifts in the NYMEX curve take place. Figure 13 below shows the current NYMEX curve relative to the assumed natural gas levels in Santee Cooper's Reform Plan. TEA has historically executed for clients within this timeframe and feels confident that natural gas hedges can be executed within the (NYMEX forward curve +5 cents) price reference. Figure 14 shows the hedge levels achieved upon execution of the hedge plan described above as well as the price certainty that will be in place. Prior to the implementation of the hedge plan, Santee Cooper will evaluate the need for additional hedging to ensure the Reform Plan pricing levels are achieved.

Figure 13 – Natural Gas Commodity Prices

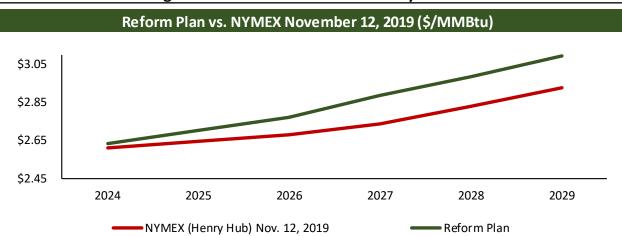


Figure 14 - Proposed Hedge Program

Metric	2023	2024	2025	2026	2027	2028	2029
Natural Gas Projected Volumes (MMBtu)	46,000,000	38,000,000	32,500,000	35,500,000	56,500,000	56,000,000	52,000,000
Natural Gas Hedge Level Upon Hedge Plan Implementation (MMBtu)	26,500,000	26,000,000	14,500,000	14,500,000	27,000,000	27,500,000	25,500,000
NG Hedge %	58%	68%	45%	41%	48%	49%	49%

<sup>\*</sup>Hedges will be priced at 5 cents above Reform Plan natural gas price assumption levels or below

#### **Purchase Power Hedge Strategy**

Recent short-term purchase power pricing has enabled Santee Cooper to capture significant savings for customers by utilizing market purchases when they are economically more beneficial than system resources. Santee Cooper and TEA expanded the scope of activities to ensure market opportunities were realized from both a volume and price perspective. The amount of energy obtained by these purchases has increased to a 4-5 million MWh range in recent years, and in 2018, accounted for 16% of total energy supply. While these purchases result from short-term economics, they require delivery from neighboring utilities in a manner that permits continued reliable operation.

Since 2012, economic savings associated with short-term purchases have averaged tens of millions of dollars annually. Santee Cooper has developed a strategy to ensure our customers continue to benefit from low purchase power markets and experience price certainty and stability.

Purchase power markets do not offer the same amount of liquidity as natural gas markets, making it more difficult to hedge financially, particularly for long durations. Through market exploration and discussions with various potential counterparties, Santee Cooper and TEA believe a significant portion of the short-term projected purchases can be secured at assumed prices within the Reform Plan by expanding tactics utilized in the recent past. This includes making more defined term purchases, securing transmission service on adjacent systems, and structuring purchase power deals so natural gas financial hedges can be used to fix the price.

The Reform Plan projects between 4 million and 5 million MWhs of economy purchases through 2025. Santee Cooper plans to pursue entering into agreements that would ensure approximately 50% of the projected short-term market purchases for 2020 and possibly 2021. Execution on the 2020 and 2021 deals will reduce Santee Cooper's risk exposure to the purchase power market by approximately 40% for 2020 and 2021, respectively.

Due to the lack of liquidity in the purchase power market, locking in purchase power deals beyond 2021 would likely result in additional cost—associated with risk—being passed on to customers. Santee Cooper, with the support of TEA, will closely monitor the purchase power market to evaluate execution of deals beyond 2021.

#### **Summary**

Santee Cooper has a natural gas and purchase power hedge plan that will:

- Ensure natural gas hedge execution near or below the Reform Plan price assumptions by utilizing a disciplined price-driven hedge plan
- Lock in savings from purchase power by entering into defined term purchases and securing transmission service with adjacent systems

<sup>\*</sup>Hedge levels ensure price certainty for a significant portion of combined cycle projected burn volumes

Timely execution of the natural gas and purchase power hedge strategies will ensure that Santee Cooper's customers will benefit from current low natural gas and purchase power prices, price certainty and price stability.

#### 1.1.3 Empower South Carolina – Energy Efficiency and Demand Response Programs

Title 58, Chapter 37 of the S.C. Code of Laws requires Santee Cooper to invest in energy efficiency and demand response programs. These are utility-led programs that promote the reduction or more efficient use of energy by utilities, their energy suppliers, and their retail and wholesale customers. These programs include conservation, energy efficiency, load management, and renewable energy technologies. Projected impact to load from these programs are factored into Santee Cooper's Reform Plan. The following sections detail Santee Cooper's plan to achieve these requirements.

Santee Cooper will build on the successes of previous energy efficiency programs and introduce new demand side management (DSM) programs. These initiatives will help customers save another 100 GWh through energy efficiency efforts by 2030 and produce 150 MW in demand response savings by 2027, with an additional 50 MW by 2037.

In 2008, our Board of Directors set a goal to provide programs that would help residential and commercial customers save 209 GWh per year by 2020. Santee Cooper reached this goal in 2018, two years earlier than anticipated, and energy savings continue to grow. With these programs coming to an end, we are designing a 2030 program that continues our history of providing high-quality, relevant energy efficiency initiatives and customer service.

This program will include the following initiatives:

- Energy Efficiency Programs
- Beneficial Electrification Programs
- Solar Programs
- Residential Low-Interest Loans to encourage energy-efficient upgrades and solar panel installations
- Demand Response (Voluntary Load Management) Programs

#### **Energy Efficiency Programs**

Based on a consultant-led Energy Efficiency Market Potential Study (EEMPS), we identified potential energy efficiency opportunities, which include the following:

- Residential Programs
  - o <u>Smart Energy Existing Homes Program</u> will continue to provide rebates to customers for installation of qualifying energy-efficient equipment. Approximate savings of 24 GWh by 2030.
  - Home Energy House Call Program will continue to have Energy Advisors (EAs) visit customer homes to provide them with energy efficiency products and information. Approximate savings of 2 GWh by 2030.
  - Online Store will be implemented to supplement The Home Energy House Call Program and will allow our customers to purchase energy-efficient products, many at a reduced price. Approximate savings of 6 GWh by 2030.
  - o <u>Behavioral Program</u> will send notifications to encourage customers to reduce energy consumption during peak usage periods. Approximate savings of 12 GWh by 2030.
  - Smart Energy New Homes Program will continue to offer rebates to builders who construct new energyefficient homes that meet established eligibility requirements. Approximate savings of 3 GWh by 2030.

- Commercial Programs
  - o <u>Commercial Prescriptive Program</u> which provides rebates for qualifying energy efficient upgrades. Approximate savings of 48 GWh by 2030.
  - <u>Commercial Custom Program</u> rebates commercial customers for installing emerging energy efficiency technologies, which are not part of the Commercial Prescriptive Program. Approximate savings of 3 GWh by 2030.
  - Commercial Retrocommissioning Program is a building performance improvement program that offers low-to-no-cost solutions through optimizing the operation of existing equipment. Approximate savings of 2 GWh by 2030.

#### **Beneficial Electrification Program**

Santee Cooper is promoting electric vehicles (EVs) through the following internal advocacy efforts:

- Replacing 60 traditional fleet vehicles with EVs and installing dedicated charging stations
- Installing up to 25 chargers at Santee Cooper facilities for employees and visitors

Santee Cooper plans to offer the following customer programs:

- Incentives for a minimum of 250 residential and 100 commercial charging stations
- Incentives for customers to replace a minimum of 100 traditional fleet vehicles with EVs

#### **Solar Programs**

By 2030, we project to have customers participating in 1.5 MW of community solar generation and to have the capacity of our customers' rooftop solar installations exceed 2% of our distribution system's projected summer peak. The 2030 program is being designed to be adaptive such that new technologies and customer needs can be readily incorporated.

#### **Loan Program**

Santee Cooper offers low-interest loans to qualifying residential customers to help them purchase energy-efficient equipment and renewable energy resources. Since 1982, we have loaned 8,928 customers a total of \$54.2 million.

#### **New Demand Response Programs**

Santee Cooper plans to progressively implement programs that will reduce customer load during peak demand periods, particularly in the winter. These programs will help ensure system reliability.

Santee Cooper has set targets for our demand response programs to meet approximately 150 MW of our system's winter peak demand by 2027, with an additional 50 MW by 2037. This peak typically occurs in the morning from December through February. We have identified several initiatives that could achieve these targets. One demand response initiative is optimization of the conservation voltage reduction (CVR) network. Lowering the voltage reduces the demand on our system. With system optimization and customer growth, we project being able to lower demand of Santee Cooper's direct served customers by approximately 26 MW by 2027 and 48 MW by 2037.

We are also planning to implement a demand response program in which residential and commercial customers are incentivized to allow their high energy usage equipment, such as HVAC units and water heaters, to be cycled on and off remotely in order to reduce demand primarily during the winter peaks.

Central comprises a large proportion of Santee Cooper's load. Therefore, coordination of our demand response efforts with Central will be very important in realizing these system benefits. Any opportunities to partner with Central on these initiatives will be pursued so costs and program complexities can be minimized.

Reductions from the demand response initiatives have been incorporated into the Reform Plan and are projected to lower winter demand by approximately:

- By 2027 (cumulative reduction)
  - o 26 MW from Santee Cooper's distribution system CVR
  - o 35 MW from Santee Cooper's demand response program
  - o 89 MW from Central Cooperative's demand response efforts
- By 2037 (cumulative reduction)
  - 48 MW from Santee Cooper's distribution system CVR
  - 44 MW from Santee Cooper's demand response program
  - o 108 MW from Central Cooperative's demand response efforts

The potential for additional demand reduction could be realized through the implementation of new residential rates dependent upon the participation of Santee Cooper customers.

Santee Cooper is evaluating a Critical Peak Pricing rate, which would notify customers of an upcoming peak load event and the associated pricing. Based on these price signals, Santee Cooper anticipates customers will elect to lower their demand during peak events. Similar to Critical Peak Pricing, demand-based rates have also resulted in reductions in utility demand as customers change their energy use patterns to off-peak times. These combined rates could provide up to 10 MW of additional demand reduction when fully implemented. Because of the behavioral nature of these rates, we have not included their anticipated demand savings in the demand response program goal. We look forward to collaborating with Central to improve demand-side plans, both as to which specific programs are best and the level of load reductions.

### 1.2 INITIATIVES

#### 1.2.1 Human Resources

Santee Cooper has an excellent workforce dedicated to serving customers and the State of South Carolina. Our employees go home to 36 of the State's 46 counties and work at Santee Cooper facilities located in 17 counties. The Santee Cooper workforce is consistently among the top agencies ranked for diversity by the South Carolina Human Affairs Commission. In the Commission's most recent report, Santee Cooper finished first among agencies with 1,000 or more employees and third overall. Santee Cooper employees were also awarded the American Public Power Association's (APPA) Safety Award of Excellence for safe operating practices in 2018, earning first place in the category for utilities with 1,000,000 to 3,999,999 worker-hours of annual worker exposure.

### **Headcount Management**

Santee Cooper's budgeted headcount for 2020 is 1,675 full-time employees. This represents a 10% reduction in staffing levels and \$18 million in annual payroll savings when compared to the 2017 budget. Santee Cooper's 2019 Business Forecast provides for

Savings = \$18 million a year now, growing to \$43 million a year by 2028

further budgeted headcount reductions of 45 positions and \$5 million in annual payroll savings by 2025. The 2019 Business Forecast also provides for an additional 116 positions and \$20 million in annual payroll savings by 2028. These reductions are primarily related to the closure of the Winyah Generating Station and related support. This eight-year planning window provides Santee Cooper the ability to identify future opportunities within the organization, including at new facilities contemplated in our new Power Supply Roadmap, as well as take advantage of retirements and natural attrition. Santee Cooper is committed to working proactively with our operational management and employees to identify transferrable knowledge, skills and abilities and provide retraining opportunities. Our goal is to accomplish Winyah's closing and related staffing reductions without layoffs.

### **Executive Leadership Team**

Santee Cooper's executive leadership team has undergone significant change. In July 2019, a new President & CEO and Deputy CEO were hired to provide new vision and direction for the organization. Each of these individuals brings more than 40 years of utility experience and prior executive experience. We also have a new CFO who has been with Santee Cooper for several years but brings a new perspective to the position. Further, Santee Cooper has reduced the size of the executive leadership team by 25%.

The Santee Cooper Board of Directors (Board) has also modified Santee Cooper's executive-level compensation philosophy. In February 2018, the Board closed the Santee Cooper Executive Retention Defined Benefit and Defined Contribution plans to new participants, effective immediately. In addition, the new President & CEO has begun work with the Board to redesign Santee Cooper's executive-level compensation structure with a focus on moderating the opportunity for incentive pay while still providing competitive salaries in order to attract and retain a strong, experienced and cohesive leadership team.

### **Organizational Benchmarking**

Santee Cooper proactively benchmarks staffing with industry best practices. In 2018, Santee Cooper hired a third-party consulting group, with no prior history with Santee Cooper, to benchmark Santee Cooper staff levels with other electric power utilities of comparable size, scope of services, generation mix and customer mix. The results showed:

- "Santee Cooper landed in the 1st or 2nd Quartile in 66% of (12 out of 18) benchmark areas."
- "We find that the core operations are quite strong and that this is a well-run organization."

- "A company with a very strong family and community culture which is reflected in the high level of engagement of staff and commitment to weather the challenges it currently faces."
- "We find diversity, including the leadership quality of women in technology leadership roles."
- "We find laser focus on Santee Cooper's broad mission and customer outcomes."

In conjunction with the process of evaluating potential bidders for Santee Cooper, the South Carolina Department of Administration hired Black & Veatch to perform an Independent Technical and Environmental Assessment of Santee Cooper. Some observations from its October 25, 2019 analysis:

- "Santee Cooper's six primary executive leaders each has substantial experience working in the industry; they
  share a combined 163 years of utility experience and three of the executive leaders have held multiple other
  positions within the organization prior to being promoted into their current role."
- "Santee Cooper's overall reporting structure appears typical and in-line with Black & Veatch's expectations for a public utility of this nature. Most key functional responsibilities are divided amongst the executive leadership in a manner that is consistent with Black & Veatch's understanding of the utility's business operations."
- "Each [Santee Cooper] facility has been well staffed with appropriate level of personnel with the right knowledge and skill sets to provide effective and reliable operations of the facilities."
- "Santee Cooper's key safety metrics are similar to or better than averages for similar utilities, indicating that Santee Cooper's safety programs appear to be having a real and meaningful impact on the overall health and safety of the Santee Cooper employees."

# **Organizational Restructuring**

As part of the ongoing effort to optimize operations in light of new priorities identified in our Reform Plan, Santee Cooper has engaged a nationally-recognized human resource consulting firm, Willis Towers Watson, to assist in the development of a new organizational structure. This new structure will facilitate the organization's focus on positive outcomes for all customers and drive improved capabilities in innovation, digital technology, strategic and resource planning, and energy pricing. In conjunction with this reorganization, Santee Cooper will flatten its management structure and ensure that its senior management team is appropriately-sized with defined span of control expectations and benchmarked roles and responsibilities. We have also worked with Willis Towers Watson to develop benchmarked Severance Guidelines, at the request of the CEO, to be used in concurrence with this reorganization, if and as necessary. While complete reorganization plans will be finalized by first quarter 2020, this management structure change has already started with the elimination (or reclassification to a more appropriate level) of five non-executive vice president positions, representing a 25% reduction in these positions.

Santee Cooper's Reform Plan offers a bold step forward for our customers and the State, and is a departure in many ways from business activities of the past. These positive changes will be reflected in appropriate staffing levels, personnel selection, benchmarked compensation, and an efficient organizational structure. Santee Cooper is positioned to manage these bold changes while prioritizing the well-being of our employees and maintaining focus on stable electric prices for all customers.

# 1.2.2 Debt Management

Santee Cooper's Reform Plan includes a well-reasoned, achievable debt management plan comprised of initiatives that will reduce our debt on an accelerated basis without raising costs to customers. We will continue our practice of refinancing current higher interest rate bonds with lower interest rate bonds when market conditions permit, all while maintaining a debt structure that provides low and stable debt service requirements. Our debt management plan is a part of our larger financial plan designed to ensure Santee Cooper's current and future financial health and provide stable to declining prices to our customers for at least seven years, with any increases beyond that timeframe at or below the rate of inflation.<sup>13</sup>

# **Debt Reduction**

Santee Cooper is aggressively paying down its debt and has done so since the cessation of construction on V.C. Summer Units 2 and 3. Our debt management plan continues to focus on reducing the overall amount of debt to capitalization (referred to as the "Debt

Reduce debt by an average \$1 billion every 5 years for the next 20 years

Ratio" in Figure 15 below) and reducing our cost of debt when possible. The accelerated reduction of both the amount and life of this debt will be achieved through the strategic use of internal cash flow to pay down longer-dated, higher coupon debt among other initiatives. As of October 31, 2019, Santee Cooper had approximately \$6.6 billion of Revenue Obligation Bonds outstanding (compared to approximately \$7.7 billion as of July 31, 2017), of which \$3.6 billion has been allocated to V.C. Summer Units 2 and 3 for purposes of compliance with U.S. Treasury "private use" regulations. Although we track the use of bond proceeds for private use compliance purposes, there is in fact no legal distinction between "nuclear" and "non-nuclear" debt. Santee Cooper's bonds are all governed by the same revenue bond resolution, have the same credit rating, are secured by the same revenue stream and are governed by the same overall revenue stream, and are governed by the same bond covenants. For these reasons, we manage all Santee Cooper bond debt in the aggregate.

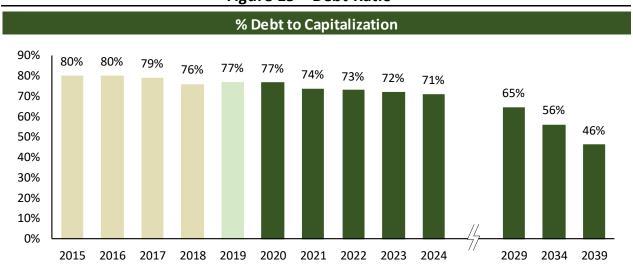


Figure 15 – Debt Ratio<sup>14</sup>

<sup>&</sup>lt;sup>13</sup> On a rolling multi-year system average basis, normalized for customer mix.

<sup>&</sup>lt;sup>14</sup> 2019 projected based on actual performance through October 31, 2019, and assuming the final two months of the year are on budget.

In the near term, Santee Cooper plans to deploy \$155 million of internally generated cash in 2020 and \$425 million of assumed proceeds from the sale of nuclear equipment in 2021 for the continued accelerated reduction of debt.

A significant component of our debt reduction strategy is to avoid issuance of new debt while accelerating the paydown of existing debt. Since the cessation of the nuclear project, we have funded a large majority of our capital needs with our Capital Improvement Fund (CIF) or other internal funds and have not borrowed any new money long-term debt. As we execute our Power Supply Roadmap, we will carefully evaluate the cost and risks of building assets ourselves (which may require issuance of new debt) versus buying output from a counterparty.<sup>15</sup>

Our Reform Plan financial projections include \$4.6 billion in capital needs over 20 years, and only \$1.9 billion of new debt issuance. During this period, we achieve a net debt reduction of \$4.7 billion.

Figure 16 below sets forth Santee Cooper's projected debt service coverage statement for 2019, including actual data through October and projections for November and December. This statement is on a "cash basis" – that is, cash revenues minus cash operating expenses minus cash debt service (i.e. 100% of principal and interest payments), and demonstrates an internally generated cash bottom line of \$182 million this year. This is tremendously significant because it means Santee Cooper is paying its bills—all of them—with a sufficient margin for capital improvement or other needs including debt defeasance. In fact, \$155 million of the \$182 million shown below has been earmarked for debt defeasance in 2020 for the benefit of our customers. There is no financial crunch at Santee Cooper. Our debt is low-cost, properly and conventionally structured, and being paid in full and on time.

Figure 16 – 2019 Projected Debt Service Coverage

	(\$ in millions)	
Revenues		\$1,751
Operating Expenses	<u>-</u>	\$1,122
Available for Debt Service	æ	\$629
Total Debt Service	_	\$447
Funds Available After De	ebt Service	\$182

## **Debt Refunding**

Santee Cooper will also continue to employ other debt reduction tools as market conditions permit, including refunding debt at lower interest rates as it becomes callable. Santee Cooper has over \$4.2 billion in tax-exempt debt callable prior to final maturity dates, which occur at various intervals through 2026. We will refund these bonds as they become callable with the proceeds of new, lower cost debt, which is expected to produce significant savings on debt service. We estimate gross savings of \$2.4 billion from refunding the \$4.2 billion of debt, based on benchmark tax-exempt interest rates provided by DOA's advisors. We note that the actual savings achieved are sensitive to interest rates.

On November 21, 2019, Santee Cooper refunded not previously defeased mini-bonds with proceeds from a variable rate bond offering totaling approximately \$163 million. This closes the mini-bond program and creates \$40 million in debt service savings from 2020 to 2036.

<sup>15</sup> See Generation, Transmission, and Natural Gas Transportation Power Supply Roadmap, Reform Plan Resource Directions.

<sup>&</sup>lt;sup>16</sup> Source: Santee Cooper – Interest Rate Assumptions provided by Moelis & Company using interest rates as of November 7, 2019.

<sup>&</sup>lt;sup>17</sup> Approximately \$145 million of which is attributed to the electric system with the remainder attributed to the water system.

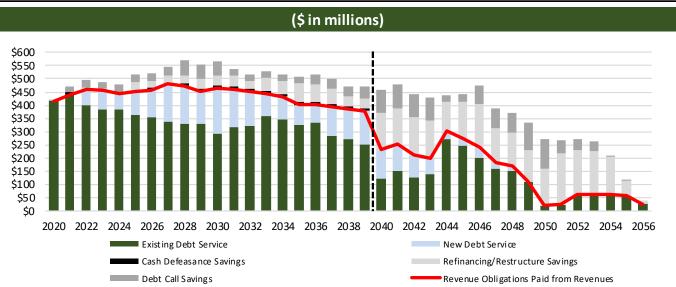
In Figure 17 below we summarize the historical and projected impact of the above debt reduction strategies on Santee Cooper's outstanding debt.

Figure 17 – Revenue Bonds Outstanding (\$ in millions)

	Jul. 31, '17	Oct. 31 '19	Dec. 31 '24	Dec. 31'29	Dec. 31 '34	Dec. 31 '39
Existing Debt	\$7,662	\$6,620	\$4,984	\$3,999	\$3,008	\$1,555
New Debt	-	-	\$621	\$761	\$549	\$361
Total Debt	\$7,662	\$6,620	\$5,605	\$4,760	\$3,557	\$1,916

As the above figure shows, total outstanding debt decreases from \$6.6 billion to \$1.9 billion from 2019 to 2039—a reduction of \$4.7 billion. In fact, outstanding debt is reduced, on average, by \$1 billion dollars every five years. This means it will take twelve years to pay off principal equal to what is currently attributed to V.C. Summer Units 2 and 3, all while stabilizing current customer prices for an extended period of time.

Figure 18 – Revenue Obligation Debt Service



# **Debt Structure**

Figure 18 illustrates the cumulative impact of debt reduction tools on our long-term Revenue Obligations debt service. The red line is the amount of forecasted debt service to be recovered from customers in rates in our Reform Plan. The stacked bars represent the amount of debt service that would have been collected from customers absent our actions outlined above. The debt service figure outlines how we will reduce debt across the maturity schedule. The figure also demonstrates that Santee Cooper's Reform Plan does not reduce debt in the short term at the cost of increasing debt service in the later years in the forecast. These savings will not only contribute to stabilization of rates for the next seven years, but will also provide longer term savings for our customers.

It is typical for a public power entity such as Santee Cooper to structure its debt much like a homeowner's mortgage—spread out over a long period, keeping total periodic payments of both principal and interest level and lower than would otherwise be the case. Santee Cooper's debt structure is consistent with this approach to debt management as seen in Figure 18 and is "spread out" over roughly 40 years. The debt reduction plan outlined here provides stability in debt service over the 20-year forecast period presented in this Reform Plan. Beyond the 20-year period Santee Cooper's debt service obligations decline dramatically due to amortization of new debt within a short period as savings from the refunding of existing debt are realized. In other words, Santee Cooper projects that it will pay

off any new debt quickly and at attractive interest rates. These actions provide the company with significant balance sheet flexibility to address continuing changes in the utility sector in the period after the 20-year forecast.

# **Balance Sheet Considerations**

Finally, we note that in the event of a sale of Santee Cooper, all its bond debt will have to be immediately satisfied, either by defeasance or redemption with a pre-payment penalty. That is to say, a buyer of Santee Cooper could not elect to satisfy only those bonds from which proceeds were used to fund nuclear construction. A buyer will be required to satisfy the entirety of Santee Cooper's debt, replacing it with new debt and equity securities. The buyer, presumably, will then look to customers both to repay newly issued debt and provide a return for the buyer's equity investors. In short, rather than relieving Santee Cooper's customers of the debt obligations associated with the construction of V.C. Summer Units 2 and 3, those customers presumably will be saddled with servicing some new combination of debt and equity. Santee Cooper's tax-exempt status along with our strong credit ratings means our borrowing costs are generally lower than a taxable entity. This, along with the fact that there is no need for us to earn an equity rate of return, as outlined in Appendix 8.6, results in a lower cost of power for our customers. Santee Cooper's overall cost of debt stands today at an average rate of 3.74%.

# **Securitization**

Securitization has been used by utilities in many U.S. states to reduce costs and manage stranded costs. Stranded costs are regulatory assets on a utility's books representing costs incurred by a utility that are eligible for recovery from customers. Santee Cooper has explored a securitization that will replace our nuclear debt with low-cost securitization bonds. The bonds resulting from securitization, known as rate reduction bonds, could produce meaningful savings for Santee Cooper's customers. Because of the legal structure of the securitized bonds, they have a higher credit rating which results in lower interest rates. The savings from the lower interest is passed on to our customers.

Should the General Assembly choose to enact legislation authorizing securitization of nuclear debt, it has the ability to identify the debt to be securitized by Santee Cooper using several methods, including limiting securitization to: (i) the debt represented by bonds issued for V.C. Summer Units 2 and 3; (ii) the debt represented by bonds of which securitization produces the greatest savings, up to the amount of debt outstanding for V.C. Summer Units 2 and 3; or (iii) nuclear debt of a specified dollar amount.

Securitization will require the creation of a special purpose entity. Funds received from the issuance of the rate reduction bonds would then be used to purchase Santee Cooper's right to collect an identified utility charge, representative of the nuclear debt. Santee Cooper would then use the purchase price to pay off the nuclear debt. To achieve AAA rating, the legislation must give the special purpose entity the irrevocable right to charge a fee on customers' monthly bills to cover debt service on its outstanding rate reduction bonds, provide a pledge from the State not to impair rate reduction bondholders' rights, and create a "true up" mechanism that periodically adjusts the customer charge to minimize over- or under-collection.

Based on our preliminary analysis, we estimated an average reduction of approximately \$5.6 million<sup>18</sup> in revenue requirements annually, starting in 2025 through the end of our forecast period. These savings will further reduce customer prices on top of savings achieved through the Reform Plan.

Santee Cooper is prepared to provide the General Assembly with all information necessary to assist it with the consideration and drafting of legislation that will meet its objectives concerning securitization of the nuclear debt, while also meeting the expectations of credit rating agencies needed to achieve a rating that supports the potential savings outlined above.

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<sup>&</sup>lt;sup>18</sup> Assumes authorization to issue \$3 billion in Rate Reduction Bonds.

### Summary

Santee Cooper's debt management plan is driven by the aggressive pay down of our debt in amounts that exceed the debt attributed to the nuclear project. Our debt management plan, lower cost finance plan, and new generation, transmission and natural gas Power Supply Roadmap will result in reduced debt levels that benefit our customers in both the near and long term.

# 1.2.3 Opportunities and Initiatives

Santee Cooper has a proven track record of identifying opportunities and implementing initiatives that create cost savings for our customers. Some initiatives are done independently, while others are done jointly with other utilities. Regardless of whether we are initiating an innovative program to keep motor oil out of ground water or coordinating a large scale off-shore wind study, Santee Cooper is always on the lookout for new opportunities.

# 1.2.3.1 Independent Initiatives

# 1.2.3.1.1 Continuous Improvement

The vision for Santee Cooper's Continuous Improvement (CI) initiative is to foster a culture that inspires the continuous pursuit of industry excellence. The CI Initiative emerged from strategic planning efforts several years ago. Based upon extensive research of industry best practices for CI, a basic methodology was defined upon which to train employees for mapping, measuring, improving and sustaining our core business processes.

In 2014, the CI Initiative was rolled out across the company in a structured manner with formal training for participants. Today, what began with strong top-down support has transformed into a grassroots bottom-up approach that harvests improvement ideas from the frontline employees. From 2014–2019, Santee Cooper employees have participated on over 60 project teams and generated over \$13 million in total savings.

Since 2014, Santee Cooper employees have participated in over 60 continuous improvement projects and generated over \$13 million in savings.

An example of a project with unexpected significant financial impact involved a gypsum dewatering process at our Cross Generating Station. Gypsum is a coal combustion byproduct available for resale to wallboard producers. This project was initiated to reduce material waste and to address potential safety risks. Process solutions included mechanical adjustments and improvements focused on repairing material thickness indicators and reducing belt speed, thereby reducing material carryover and subsequent waste, and eliminating the safety risk of slipping on spilled material. The project resulted in more than \$1.5 million dollars in annual savings.

Figure 19 – CI Financial Benefits & Employee Engagement Summary Since Inception (2014 - October 31, 2019)

Reporting Year	Employee Engagement/Year	New Financial Benefits/Year		
2014-2016 Pilot Projects	6%	\$1,025,596		
2017	24%	\$2,106,723		
2018	60%	\$3,968,761		
2019 YTD (Oct. 31)	83%	\$6,196,588		

<sup>\*</sup>The financial benefits above are annual projected benefits that come from new projects that were completed during that reporting year. Most projections will recur for several years thereafter but are not included in the annual benefits reported each year. Only new projected savings are reported.

Change management is already in process within Santee Cooper, and managing a culture of change will be a component of reformation going forward. Therefore, we will continue to engage our employees, inspire innovative thinking, and equip them with the knowledge, skills, and tools to pursue excellence in their jobs.

# 1.2.3.1.2 Internal Opportunities

The sections below describe opportunities and initiatives that are categorized as:

- Current initiatives in progress with plans to enhance or new initiatives that we have studied and plan to implement
- Opportunities that have potential, but require further study and are not factored into the forecasted financial results

# **Smart Grid Modernization**

Smart grid is a utility industry term used to describe an electrical grid that incorporates digital communications technology. A smart grid can include a variety of tools such as automated devices that allow for monitoring, maintenance and repair of the system, smart meters that provide customers the ability to manage electricity consumption, and distributed energy generation resources behind the meter at residential, commercial or industrial establishments. Utilities in the future will increasingly employ smart grid technology to provide reliable, low-cost, energy efficient service to customers. Under the Reform Plan, Santee Cooper will enhance smart grid services.

Santee Cooper launched its smart grid initiative with the deployment of distribution automation equipment, using digital sensors and switches, and advanced communication technologies, to automate equipment health monitoring and voltage management for our distribution system. As part of the Reform Plan, Santee Cooper will accelerate the next phase of our smart grid rollout with the implementation of smart meters throughout our direct served retail service area. Santee Cooper has deployed over 42,000 smart meters to date and we plan to complete full deployment with supporting technologies by 2021.

The use of smart meters will allow Santee Cooper to become more efficient in the distribution of electricity, provide quicker restoration after power outages, reduce operations and maintenance costs, improve the use of large-scale renewable energy systems and ultimately lower power costs to our customers through greater efficiencies. Additionally, a smart grid will provide our customers with the information and tools they need to make informed choices about energy use.

Santee Cooper will accelerate investment over the next two years to complete the smart meter deployment, resulting in significant benefits to our customers and improvements to our operations. This represents another example of Santee Cooper proactively working with our customers to identify customer needs and then delivering high quality service at reasonable prices.

# **Tower and Property Leasing**

Prior to 2000, Santee Cooper collaborated with neighboring electric utilities to share available space on communication towers for dedicated electric system functions without collecting fees. After 2000, and with the widespread deployment of modern telephony technologies and the adoption of ordinances limiting new communication tower construction, Santee Cooper elected to commercialize these relationships by becoming a lessor of our tower space to others. Where requests could be accommodated, Santee Cooper's tower infrastructure has been utilized to meet the operational needs of several Cooperative and IOU electric utilities and telecommunications providers, as well as law enforcement, fire and emergency services for various State and local agencies in South Carolina with low-cost leases. To date, 45 tower leases are in place.

Santee Cooper will move more aggressively into tower space leasing, including expanding available-to-lease space from communication towers to other facilities and structures, and engaging with consultants to manage and renegotiate existing leases and drive new leasing and development opportunities.

Santee Cooper estimates that the revenue opportunity in the first year is \$200,000 and by the fifth year will have grown to \$1.5 million annually. This initiative is part of our broader effort to maximize our revenue sources that will flow through directly to customers to offset costs.

# **Fleet Management**

Santee Cooper's vehicle fleet maintenance and repair, and the associated facilities and capital budgets, have historically been decentralized and simultaneously managed by as many as three different departments. In this decentralized structure, individual departments have the flexibility to customize the fleet and to localize fleet maintenance. It also allows departmental fleet mechanics to develop specialized skills.

However, we recently evaluated centralizing fleet management and determined it would lead to cost synergies through flexible fleet replacements, resource-sharing, optimized inventory, and improved vehicle standardizations.

Santee Cooper estimates the cost savings of centrally managing its fleet will be \$1 million annually.

### **Procurement and Inventory**

Santee Cooper has well-documented procurement policies and procedures that are followed company-wide. Competitive bids are generally favored in order to produce the best pricing. However, there are instances where purchases are proprietary or single sourced due to the nature of the product. Internal controls are in place to avoid conflicts, limit individual purchasing authority, and comply with all applicable laws and regulations.

Current inventory practices prioritize system reliability by holding higher levels of materials than are regularly needed, holding the same materials at locations in close proximity, sourcing backup suppliers for certain items, and maintaining more warehouse facilities than might otherwise be necessary.

As a result of engaging management consulting firm Alvarez & Marsal to review our procurement and inventory practices, Santee Cooper will implement the following recommendations:

- Amend policies and practices to permit negotiation flexibility
- Appropriately lower inventory levels without impacting availability
- Consolidate warehouse facilities with similar materials provided reliability is not impacted

Santee Cooper estimates that these modifications will produce annual cost savings of \$650,000 without impacting reliability.

# **Generation Maintenance**

Today, coal is the largest source of fuel for Santee Cooper. In 2018, 46% of energy sales were sourced from coal burned at Cross and Winyah. The operating costs incurred by Santee Cooper to supply energy to customers are primarily comprised of fuel and non-fuel generation costs. Non-fuel generation costs include non-fuel operations and maintenance (NFOM) expenses. In 2018, NFOM at both Cross and Winyah totaled \$116.5 million.

After a review by Alvarez & Marsal of our coal plant maintenance practices, Santee Cooper will implement the following modifications:

- Share a portion of maintenance staff between Cross and Winyah Generating Stations to minimize overtime and contractor expenses
- Establish a more thorough maintenance crew scheduling process to increase productivity

Santee Cooper estimates that these changes will reduce costs by approximately \$1 million annually through 2028.

## **Carbon Credit**

Santee Cooper is currently in the exploratory phase of creating a carbon credit bank. A carbon credit bank enables companies that are seeking to offset or reduce their overall carbon footprint with the ability to purchase carbon generation rights from entities which agree to limit their land use, therefore sequestrating carbon. Carbon sequestration is verified by third parties and then marketed through carbon brokers. One carbon credit is equivalent to one metric ton of sequestered carbon.

Examples of companies that currently purchase carbon credits include airlines and petroleum companies. In South Carolina, carbon credit banks have been established by Audubon's Francis Beidler Forest, Norfolk Southern's Brosnan Forest, Brookgreen Gardens, and Middleton Place.

The carbon bank would be created using Santee Cooper land holdings that have existing restrictions in place limiting their use. At present, we are determining the feasibility of creating a carbon credit bank on approximately 25,000 acres and potential revenues based on current markets. The pricing and timing of any potential sales is dependent upon market conditions, demand, regulations, and availability.

Using recent sales guidance along with average potential carbon credit value, we estimate significant revenue potential from this endeavor. Since this opportunity is in an exploratory phase, it was not included in the Reform Plan.

## **Dark Fiber Leasing**

Santee Cooper has a bulk communication system established throughout South Carolina. The bulk communication system consists mainly of 1,200 miles of fiber optic cables strung on Santee Cooper's transmission system and is used to manage Santee Cooper's electrical system.

Recently, requests have been made of Santee Cooper to access and use fiber optic network capacity to provide high-speed internet access to rural areas that are unserved or underserved. To be considered, the fiber optic network capacity in the form of fiber optic strands must be unused, available, and in excess of Santee Cooper's reserve capacity. Unused means that the strand is not currently carrying any network traffic. Available means that use of the strand is not currently part of any Santee Cooper plans. In excess of reserve capacity means that designating the strand for use will not harm Santee Cooper's potential future need for fiber optic network capacity. Fiber strands that meet this definition are called "dark fiber."

The availability of high-speed internet in unserved or underserved locations improves retention and attraction of businesses and residential customers in rural communities by improving opportunities for lifestyle, work, and education. Additionally, if high speed internet were provided as a service to Santee Cooper's industrial customers, the convenience of bundled services may provide an incentive for attraction and retention of those customers. This opportunity would also provide Santee Cooper with a revenue stream that would be used to offset customer costs.

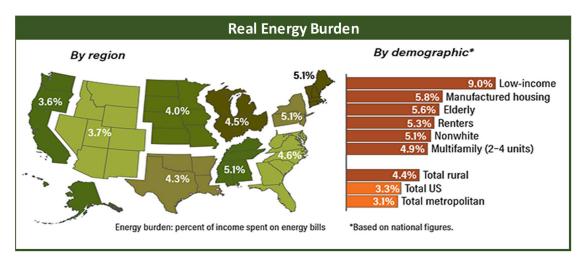
Dark Fiber leasing is not included in the Reform Plan. Before it can be made available to third parties, a significant legal consideration would need to be addressed: many of Santee Cooper's existing transmission easements do not provide for use of those easements for high-speed internet access.

If this legal consideration were to be addressed successfully, the prospects for rural high-speed internet and the advantages it would bring to rural communities would be promising. Santee Cooper is prepared to provide the General Assembly with all information necessary to assist with the consideration and drafting of legislation that will support this opportunity.

### 1.2.3.1.3 Bill Assistance Program

In order to further our mission to improve the quality of life for all the people of South Carolina, Santee Cooper is committed to helping ensure that all customers, regardless of socioeconomic status, are able to meet their electricity needs. The percentage of income spent on utility bills, or energy burden, is disproportionately higher for limited income households. For example, "middle class" homes spend an average of 5% or less of their income on energy, while lower income households spend 10-20% on electricity.

South Carolina ranks fifth in the nation for the highest low-income energy burdens among limited income households, due to older homes in need of repairs and outdated less energy-efficient appliances. Some of these South Carolinians must prioritize heating or cooling their homes over necessities such as medication or food.



Santee Cooper's Energy Equality program is a new effort, proposed as part of our Reform Plan, to lower the energy burden for Santee Cooper's limited income customers and builds on several current initiatives.

### **Execution**

 Empower customers to manage their monthly energy expenses. Santee Cooper already offers budget billing, through which customers can average their payments for predictable monthly bills. Santee Cooper will educate more customers about budget billing and expand other ways to allow customers to manage their expenses, such as allowing customers to pick their monthly bill due date and appointing a third person to be notified in the event of pending shut-offs or late payments (Safety Net Program). Santee Cooper plans to begin implementing new programs in the six months following approval of this Reform Plan, and we are continuing to promote existing programs to customers.

- **Engage** our employees and customers by creating an account (run by a third party) that distributes emergency funds to customers to pay their utility bills if they are facing a financial crisis (SHARE program). Employees and customers could voluntarily donate to this emergency-fund account. We are working through the details and will be ready to implement the program by the middle of 2021 with Board approval.
- Enhance options for limited income customers by offering discounted pricing for eligible accounts. Santee
  Cooper has already begun investigating ways to set up a discounted pricing plan for certain qualifying
  accounts. Due to the processes required to make rate changes, this is a long-term project that will not be
  implemented until the next rate process, at least seven years from now.
- Enlighten our customers about Santee Cooper programs and other resources available to pay or reduce their
  utility bills. Santee Cooper will train and continue to use a group of dedicated Customer Service
  Representatives (CSRs) who can guide customers in need. Santee Cooper's CSRs also have documentation
  and information that allows them to direct customers to aid agencies.
- Encourage Energy Efficiency by teaming up with community organizations that perform weatherization for
  eligible limited income customers and enacting an energy literacy program to equip customers with the
  knowledge to help them make smart energy choices. Santee Cooper can lend its energy analysts, contribute
  funds, and donate house call kits to community action agencies that offer these services already. Santee
  Cooper aims to have smart meters deployed to all customers within two years, which will help us identify
  households in need of weatherization and provide assistance to limited income communities.

Santee Cooper has knowledgeable and compassionate employees eager to take on new projects and expand upon those already in use, to benefit our limited income customers.

## 1.2.3.2 Joint Coordinated Operation Opportunities

In addition to these internal efforts, over the past year, Santee Cooper has also pursued opportunities to further reduce fuel, non-fuel operation and maintenance (NFOM), and capital costs by engaging neighboring utilities to identify areas in which we may be able to leverage synergies. However, with the adoption of Act 95 and the subsequent Department of Administration (DOA) process, these conversations have been paused with entities engaging in the DOA process to ensure there are no conflicts throughout the process. Santee Cooper has continued to engage one neighboring utility not participating in the DOA process to further refine potential savings.

Based on previous conversations with these utilities and assisted by industry expert Navigant Consulting, Inc. (see Appendix 8.9.1), Santee Cooper has identified the following areas with the potential to improve operational efficiencies and result in savings:

### **Operational Functions**

Fuel Supply Management: Based upon the scale of our neighboring utilities, there is a potential opportunity
to optimize the usage of existing access to fuel supplies and existing transportation agreements to improve
economics. The ability to access existing unused fuel capacity controlled by neighboring utilities has the
potential to impact future generation planning and benefit both parties by saving significant fuel costs for
Santee Cooper customers while increasing the utilization of the resources of our neighbors. In addition, when
permitted to engage in future conversations, Santee Cooper will review procurement practices among our

neighboring utilities to gain insight into how to improve our practices and become more efficient in our operations.

Any opportunities identified through these efforts would be in addition to the savings previously identified related to coal commodity pricing, coal transportation pricing, and optimization of our existing coal piles.

- Procurement: Santee Cooper and our neighboring utilities procure comparable equipment in the fulfillment
  of our responsibilities as electric utilities. We plan to pursue the identification of volume-buying opportunities
  mutually beneficial to both parties at the conclusion of the DOA process. All such opportunities would be in
  addition to the \$650,000 in annual savings identified by Alvarez & Marsal from a refinement of our internal
  practices.
- DSM Options, Metering and Grid Modernization: As part of our Reform Plan, and outlined in Sections 1.1.3 and 1.2.3.1.2, Santee Cooper is committed to accelerating our rollout of Advanced Metering Infrastructure (AMI), increasing our commitment to DSM, and achieving the energy efficiency savings identified in our 2030 program. In addition to these efforts, Santee Cooper anticipates an opportunity to optimize these plans by leveraging experience and best practices from our neighboring utilities and collaboratively modernizing the grid within South Carolina to achieve further cost savings.
- Coal Combustion Products (CCP): Santee Cooper's future costs are impacted by a requirement to fulfill
  existing CCP contracts, and we recognize that our neighbors may have CCP that we can utilize while offsetting
  disposal costs for these neighbors. A review of operational practices at these utilities will offer us the ability
  to identify opportunities to improve the financial position of both entities. Santee Cooper has historically
  engaged in these conversations, but a renewed focus from our neighbors to reduce environmental costs leads
  to the potential to secure increased savings.
- Coordinated Generation Dispatch: A joint dispatch analysis was completed with one neighboring utility prior to the enactment of Act 95. This study demonstrated potential fuel savings ranging from \$8-29 million annually, which is within the range recently provided by Navigant indicating that between 1-3% of fuel cost savings may be realized through a joint dispatch arrangement (Appendix 8.9.1). We will pursue coordinated dispatch opportunities following the conclusion of the DOA process.
- Dark Fiber Partnerships: The analysis presented in Section 1.2.3.1.2 discussed the opportunity to leverage Santee Cooper's fiber network as a potential new revenue stream to offset costs to our customers. In addition to this potential revenue stream, there is the potential to leverage the planning and integration of our dark fiber network with similar fiber networks owned by our neighbors. Coordinated planning of the future build-out of this network would potentially allow for the elimination of duplicative projects and an overall decrease in the costs to the customers from participating utilities by minimizing duplication of construction efforts. This practice expands upon a program already in place between Central, Central's members, and Santee Cooper.
- Right of Way Management and Inspection: Santee Cooper's transmission network is intermingled and overlapped with our adjacent neighboring utilities. The geographical overlap of these networks means that inspection and maintenance crews are essentially crossing paths with one another while carrying out the necessary inspection and maintenance work. Santee Cooper recently engaged in a pilot program with one neighboring utility to coordinate vegetation management and line patrols to streamline operations based on the geographic overlap of transmission systems. Future coordination of these efforts may be mutually beneficial to both entities and directly reduce costs to all of Santee Cooper's customers.
- System Operations: The interdependencies of the Santee Cooper's transmission system with neighboring systems means that scheduled transmission or generation outages on one system have the potential to greatly impact the costs and operations on neighboring systems. We are prepared to coordinate with neighboring utilities to align efforts to schedule outages in a manner that minimizes impacts to the interconnected systems. A single coordinated outage has the potential to greatly minimize fuel costs on Santee Cooper's system. In addition to the outage planning, Santee Cooper also anticipates working with these neighboring utilities to assist with outage response efforts. We have crews with bases in areas that

may be able to more quickly respond to outages on neighboring systems and the converse is also true. Coordination of these efforts not only lowers costs to customers, but also would minimize outage times experienced by customers.

- Craft Labor Training: Santee Cooper currently utilizes in-house training expertise to support the operational
  training of our craft labor positions. Similarly, our neighboring utilities perform the same functions, while
  also offering this resource to municipalities. Santee Cooper intends to discuss how we can each share
  expertise and work together to fully train our collective craft labor workforce, while minimizing costs to
  customers.
- Fleet Standardization: As mentioned in Section 1.2.3.1.2, recent analysis demonstrates that Santee Cooper
  anticipates saving approximately \$1 million annually from capital expenses by centralizing fleet vehicle
  management. In addition to these efforts, Santee Cooper anticipates exploring the potential for
  standardization of vehicles and power-operated equipment with our neighboring utilities to further reduce
  costs.

# **Planning Functions**

- Long-term Power Supply: There are numerous opportunities to optimize long-term power supply to meet the needs of our customers. These opportunities range from the joint planning and potential construction of new generation capacity to leveraging existing excess resources from neighboring utilities. The advantages of joint construction include economies of scale, site selection to optimize benefits to the interconnected systems, and potential access to more liquid or available fuel sources. Our Reform Plan is an executable plan as it currently stands; however, there are enormous economic benefits to be realized through joint planning of these resources.
  - Similarly, leveraging existing excess resources offers many benefits to our customers. Through discussions, Santee Cooper successfully identified an opportunity to secure long-term PPAs to effectively delay our plan to construct a second NGCC generating facility until beyond 2039. While Santee Cooper has not executed this agreement, we believe this is further indication of the market availability. We anticipate building upon these potential savings at such time as we are able to enter discussions with these neighboring utilities.
- Joint Planning, Engineering and Construction of Transmission Systems: Similar to the potential advantages
  of jointly building generation resources, leveraging the overlap of our interconnected transmission systems
  offers large potential savings. Expanding our existing planning relationships will provide added value to our
  customers as well as all utility customers within South Carolina. As with joint planning efforts on our fiber
  systems, expanded joint planning could eliminate duplicative construction efforts.

In total, the joint efforts outlined above have the potential to leverage the scale of our surrounding utilities with the benefits of Santee Cooper's Public Power model to significantly reduce costs to our customers. We have conservatively estimated these efforts in our financial projections to reduce our annual fuel and NFOM costs by \$10 million and \$5 million, respectively. There is significant potential for savings from these efforts to far exceed these conservative estimates. We stand ready to pursue these added savings, which are not included in our financial projections, at the conclusion of the DOA process to the benefit of the parties involved and ultimately to further benefit our customers.

The savings outlined in this section are in addition to the internal efficiency improvements and have been validated by third-party industry experts. Furthermore, the realization of jointly constructing new generation resources or improving fuel supply to existing generating resources has the potential to far exceed these reduction estimates.

## 1.3 FINANCIAL RESULTS

Our Reform Plan financial forecast incorporates the Power Supply Roadmap and initiatives outlined in this document. It also includes the satisfaction of our long-term contracts and obligations and the funding costs associated with economic development. As we demonstrate in this section, our financial plan delivers on or exceeds the key objectives established as we set out to develop the Reform Plan:

- Stable to declining all-in customer prices (including fuel and purchase power) for at least the next five years and future increases beyond that period held below the rate of inflation
- Minimal increases to customer base rates
- Credit metrics that ensure Santee Cooper's financial health and support an 'A category' credit rating
- Accelerated debt reduction

# **Revenue Requirements and Customer Prices**

Santee Cooper's commitment to reducing costs, diversifying its generation portfolio, and paying-off or refinancing debt enables us to generate significant savings relative to previously projected revenue requirements. The benefit of those savings are passed on directly to our customers. We project average revenue requirements through 2039 that are 12.4% below the "Business as Usual" scenario developed by ICF in its February 1, 2019 report, "Evaluation of Responses to the Request for Expressions of Interest and Indicative Offers for Santee Cooper."

 \$2.7 billion NPV operating and capital savings from our Power Supply Roadmap over 20 years

We have summarized average growth in revenue requirements per kWh in Figure 20 below. Over the twenty-year period from 2019 through 2039, average revenue requirements are projected to grow 0.6% annually. Adjusting for inflation, this represents a "real" annual price decline of slightly over 1.4%. As shown below, the majority of the projected future price increases are the result of fuel costs. The remaining costs, over which Santee Cooper has more direct control, are projected to increase only 0.3% annually (significantly below inflation).

(¢/kWh) 2019-2024 2024-2029 2029-2034 2034-2039 2019-2039 Fuel and Purchased Power -2.6% 2.3% 2.2% 2.7% 1.1% Energy Remaining Revenue 0.3% -0.2% 1.0% 0.2% 0.3% Requirements **Total Revenue Requirements** -1.1% 1.4% 0.9% 1.3% 0.6%

Figure 20 – Annual Growth in Revenue Requirements<sup>19</sup>

Revenue requirements drive our customer rates and enable us to achieve the following outcomes:

- Stable or declining all-in prices (including fuel and purchase power) for all customers for an additional seven years through 2026, continuing the trend of the past three years
- Future price increases significantly below inflation rates for the entire 20-year forecast period. Stated another way, "real" prices will decline making electricity more affordable for our customers

<sup>&</sup>lt;sup>19</sup> Based on 2019 budgeted revenue requirements.

- Lower cost of power to Central enabling it to lower prices for its retail customers
- Growing competitive advantage compared to neighboring IOUs

Below, we have summarized the projected rate impact by key customer classes and have included detailed 20-year rate projections in Appendix 8.4.1.

# A Decade of Stable Prices for Retail Customers: Residential, Commercial and Industrial Rates

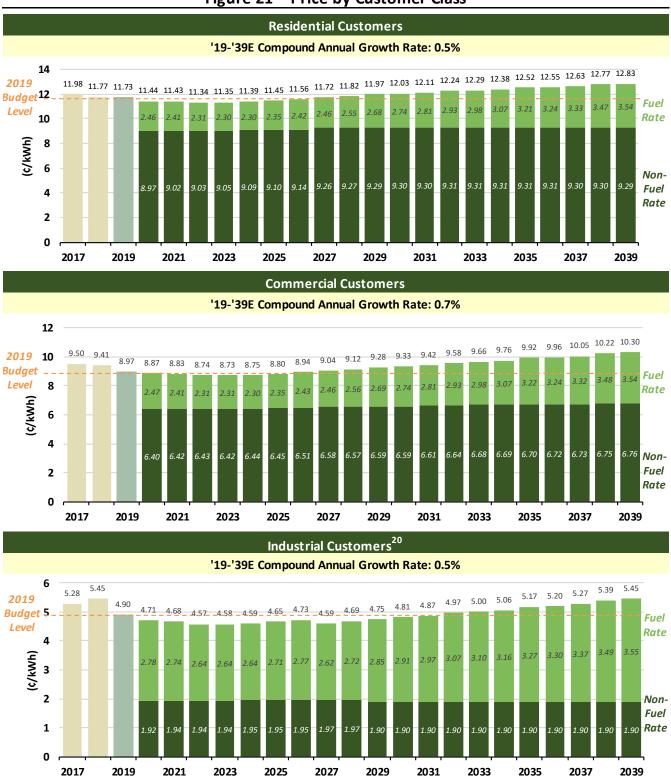
Figure 21 presents average rates for direct serve retail which include residential, commercial and industrial customers. The figures below include actual rates for years 2017 and 2018, budgeted rates for 2019, and projected rates for years 2020 through 2039 based on Santee Cooper's Reform Plan. The rates presented in these figures are all-in rates including fuel and purchase power. Based on year-to-date savings achieved in fuel costs, we currently project customer bills to be approximately 1.5% lower than budget in 2019.

- 7 more years of stable customer prices
- Future price increases below inflation rate

As indicated in Figure 21 our Reform Plan results in continued price stability for our customers over an extended period. Specifically we project the following impact on our direct serve customers:

- **Price stability for a decade**. The Reform Plan delivers declining to stable prices through at least 2026 for all customers. This contributes to over a decade of stable prices from 2017 through 2028. These prices also include our fuel cost projections so we can determine the aggregate impact on customer bills. Over the next twenty years, we project an average annual price increase ranging from 0.4-0.7% for residential, commercial and industrial customer classes.
- **Declining "real" prices.** After adjusting for inflation, our forecast projects 25% real price decline for customers over twenty years or 1.4% annually.
- Minimal base rate increases. We currently project the need for a small base rate increase of less than 1% in 2027. With cost reductions and the initiation of the Reform Plan, we can now avoid the 7% aggregate base rate increase that was projected in our forecasts earlier in 2019.

Figure 21 - Price by Customer Class



<sup>&</sup>lt;sup>20</sup> Average prices for industrial customers based on Appendix 8.2.7 Load Forecast. Actual pricing could vary significantly depending on actual mix of firm and non-firm sales.

# Rates that are competitive with neighboring Investor-Owned Utilities

Santee Cooper monitors and compares its rates with neighboring utilities which serve customers in South Carolina with the goal of improving our competitive position. Figure 22 compares the typical monthly bill for a 1,000 kWh residential customer at Santee Cooper, Duke Energy Carolinas (DEC), Duke Energy Progress (DEP) and Dominion Energy South Carolina (DESC) over the past four years. Santee Cooper's residential customers currently pay rates that are 6-10% below neighboring IOUs. We expect our competitive advantage will widen due to our Reform Plan's ability to maintain price stability.

We have achieved our competitive advantage in spite of several recent changes advantageous to IOUs, including: (i) the 2018 tax reform that lowered taxes paid by IOUs and (ii) a 15% reduction in SCE&G's rates following its acquisition by Dominion (Santee Cooper's rates remain lower than those of the new entity—Dominion Energy South Carolina—even after this reduction).

Figure 22 – Residential Bill Comparison (1,000 kWh Monthly Usage)<sup>21</sup>

Year	Duke Energy Carolinas			Santee Cooper	
2016	\$115.14	\$103.37	\$145.96	\$114.91	
2017	\$111.66	\$114.83	\$147.68	\$117.32	
2018	\$114.65	\$123.20	\$138.32	\$117.63	
2019	\$120.87	\$126.29	\$124.57	\$113.33	

# **Over a Decade of Stable Prices for Central**

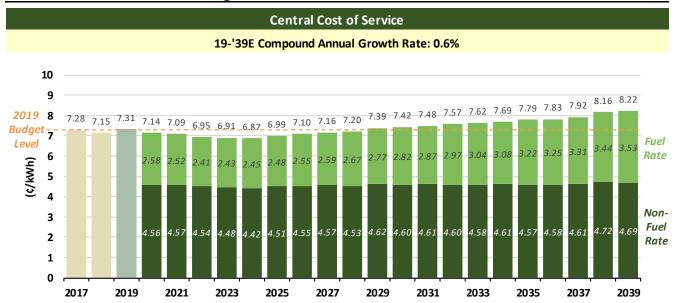
Figure 23 presents projected rates for Central based on our revenue requirements and the existing Coordination Agreement. The figure includes actual rates for years 2017 and 2018, budgeted rates for 2019, and projected rates for years 2020 through 2039 per Santee Cooper's Reform Plan.

Santee Cooper's prices to Central are projected to remain stable or decline, continuing the trend over recent years. Similar to our other customer classes, this decline would result in over a decade of stable prices. The wholesale cost of power from Santee Cooper represents a significant portion of the prices paid by Central's retail customers, and we therefore expect significant savings and relative price stability for those customers.

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<sup>&</sup>lt;sup>21</sup> IOU rates determined based on data available on South Carolina Office of Regulatory Staff Webpage - https://regulatorystaff.sc.gov/regulated-utilities/electric-natural-gas/electric/historical-electric-residential-bills

Figure 23 - Central Cost of Service



### **Return for Major Customer Classes**

Santee Cooper's customer rates are established using generally accepted and commonly used cost allocation methodologies. Central's cost of service is determined based on the terms of the Coordination Agreement, whereas rates for direct serve retail customers (residential, commercial and industrial) are based on tariff rate schedules approved by our Board. For both classes of customers, however, costs are largely allocated on the basis of cost

causation. To demonstrate equitable allocation of cost between various customer classes, we determined returns by customer class. The returns, shown in Figure 24, represent the ratio of operating income to net plant (excluding CWIP and including regulatory assets) for the system and for major customer classes. The returns by class were determined by allocating projected 2020 operating income and net plant among classes using allocation factors used to establish prevailing retail rates. The same allocation factors were used for retail classes and Central, providing for an "equivalent" basis of comparison. As shown, the returns for all classes are within a reasonable range of the system average of 4.9%. This narrow variance between classes demonstrates our equitable rates for major customer classes.

Figure 24 - Return by Customer Class (2020) 12% 10% System Average: 4.9% 8% 6.7% 6.1% 6% 4.6% 4<u>.6%</u> 4% 2% Residential Commercial Industrial Central

## **Credit Metrics**

The Reform Plan envisions continued achievement of our high credit quality and credit rating objectives, and we expect to preserve the requisite financial ratios that will maintain our current 'A category' credit ratings from all rating agencies. We have summarized key credit metrics (Debt Ratio, Debt Service Coverage, and Liquidity) in Figure 25 below and have included detailed metrics over 20 years in Appendix 8.4.1 of our response.

**Debt Ratio:** Santee Cooper's current debt ratio of 77% is expected to decline each year over the 20-year horizon of our forecast and is projected to reach 46% by 2039. We achieve this improvement through a combination of strategies discussed in Section 1.2.2. These include (i) accelerating debt paydown, (ii) avoiding new debt (majority of new capital funded with CIF funds), and (iii) refunding opportunities. Our Power Supply Roadmap supports this objective by favoring smaller generation resources with lower capital costs and PPAs rather than through large self-financed projects.

We note that as a public power entity, Santee Cooper does not have the ability to raise equity from the capital markets. As a result, our debt ratio increases during a major build cycle and then declines over time. Over the past 35 years, our debt ratio has ranged from 84% (1985) to a low of 69% (2005). We project that our *debt ratio will reach a historic low of 68% by 2026 and continue to decline thereafter.* 

**Debt Service Coverage (DSC):** We project a sufficient debt service coverage (DSC) ratio, averaging 1.39x over the next twenty years. This indicates that, after funding all operating expenses, remaining funds exceed debt service by 39%. These funds are then invested back in the system or used to execute our accelerated debt reduction program. Over the next five years this ratio is projected to average 1.33x, as we rapidly amortize debt without raising customer rates. However, DSC improves significantly in later years due to the impact of this debt paydown and resulting reduction in debt service.

Liquidity: Santee Cooper will continue to maintain cash-on-hand of at least 90 days of operating expenses and additional liquidity through bank lines to meet its needs. We have sized our debt reduction program and borrowing schedule to ensure we have sufficient funds available to meet our needs. Based on our projections, we estimate 159 days unrestricted cash by 2039, which includes over \$200 million in funds available for debt reduction. As we execute our Reform Plan, we intend to monitor our liquidity and continue to deploy excess funds for reducing debt.

Figure 25 – Credit Metrics

	2020	2021	2022	2023	2024	2029	2034	2039
Debt Service Coverage								
DSC	1.34	1.34	1.32	1.32	1.33	1.38	1.42	1.54
Leverage								
Debt Outstanding (\$ billions)	6.66	6.18	6.08	5.93	5.75	4.91	3.64	1.99
Debt-to-Capital	77%	74%	73%	72%	71%	65%	56%	46%
Liquidity								
Days Cash on Hand	97	95	103	106	107	172	214	159
Days Liquidity on Hand	171	176	244	194	256	303	345	274

<sup>\*</sup>Days liquidity is based on \$600 million of commercial paper/direct purchase agreements.

## **Summary**

Our financial and operational initiatives will result in a leaner, cleaner and greener Santee Cooper that provides customers stable rates over the long term while maintaining strong credit ratings and a robust financial position.

The net result of our Reform Plan is that average revenue requirements will be 12.4% lower than the "Business As Usual" case that was developed by ICF.

# **2** GOVERNANCE & OVERSIGHT

## <u>Introduction</u>

Within the public power business model, two primary efforts drive ultimate costs to customers:

- **Resource Planning Principles:** the planning and development of a robust and diverse generation mix analytically driven by sound "Resource Planning Principles"
- **Pricing Principles:** a combination of revenue requirements, cost allocation, and pricing design driven by economically equitable and purposeful "Pricing Principles"

In offering a new governance and oversight structure for Santee Cooper, we focus on the development, adoption and ongoing compliance with appropriate Resource Planning and Pricing Principles that are statutorily mandated, customer informed, critically important and fully transparent to stakeholders and regulators.

We believe our proposed changes in governance and oversight are proactive and allow not only for more transparency and accountability, but also include new measures to ensure Santee Cooper is doing what is best for our customers and the State. We recommend greater emphasis on resource planning in particular as that ultimately drives pricing for an electric utility.



As described in more detail below, Santee Cooper recommends key changes in these critical areas:

### • Resource Planning

- Adoption by Santee Cooper of and adherence to Resource Planning Principles designed to reduce cost, manage risk, create flexibility, ensure reliability, and promote environmental stewardship
- Creation of an Integrated Resource Planning Group (IRP Group), including General Assembly representation, to ensure Santee Cooper's resource plans reflect customer, general public, and legislative oversight

#### Pricing

- Adoption of Pricing Principles and metrics
- Initiation of new annual pricing compliance review by the Office of Regulatory Staff (ORS) and other stakeholders

# Transparency

- Adoption of a public hearing protocol for consideration of major generation and transmission projects
- Codification of Santee Cooper's public engagement process for setting electricity prices and Board transparency practices

We have reviewed these items with external bond counsel and financial advisors and determined that the recommendations comply with our bond covenants and would not adversely impact our credit rating metrics or utility operations. While we can and will implement some of the recommendations immediately (adopting Resource Planning and Pricing Principles and board meeting transparency practices), others will require endorsement and authorization by the General Assembly.

## A. Resource Planning Principles and Directions

A sound resource roadmap is built on three foundational aspects: (i) a broad view about the future of key assumptions such as fuel costs and customer loads, (ii) analyzing resource options both existing and new, and (iii)

evaluating a large number of different resource portfolios against specific metrics. Santee Cooper's goal in this process is to appropriately balance all the important metrics that guide decision making during the planning process. These core Resource Planning Principles for Santee Cooper, adopted as part of the Reform Plan, are as follows:

- **Customer Focus**: Provide safe, reliable and affordable power, and respond to changing customer expectations by providing new options sought by customers such as more control over the source and use of their power
- Cost Management: Deliver resource value by keeping prices low through effective cost management over the long-term
- **Ensuring Reliability**: Reliability is the number one product of any utility, not electricity. Reliability enables a robust economy
- Environmental Stewardship: Responsibly manage the environmental impact of Santee Cooper's operations
- Taking a Long-Term View: Develop a long-term resource strategy to ensure an optionality over a wide range
  of possible future assumptions
- **Reducing Financial and Planning Risk**: Add generation in smaller increments, more closely matching resource needs
- **Embracing Innovation**: The accelerating development of new technology is transforming generation, transmission, and distribution. On the customer side of the meter, new technologies are improving energy efficiency and conservation and increasing information options. Santee Cooper will embrace such innovations and will incorporate them into our plans.
- **Transparency**: Engage customers, stakeholders, Board Members and elected officials in a transparent resource planning process that is responsive to questions and input

Santee Cooper adhered to these principles in developing Power Supply Roadmap in this Reform Plan. The application of these principles resulted in the following resource planning directions:

- Reduction in coal
- Substantially increase sustainable resources
- Incorporate more advanced technology
- Ensure system reliability in a manner that intentionally seeks to moderate transmission investment
- Increase customer programs to reduce load
- Increase natural gas resources
- Maximize benefits of energy purchases and increase natural gas and purchase power hedging
- Pursue the advantages of larger scale through partnerships

# B. Integrated Resource Planning Group and Annual Compliance Review

To engender transparency, foster accountability and encourage stakeholder engagement in the pivotal process of resource planning, Santee Cooper proposes to create an IRP Group. Resource planning has significant long-term impacts on many stakeholders, and a planning board would give stakeholders direct input to and in-depth knowledge of Santee Cooper's resource planning principles and directions.

Santee Cooper proposes to create this group through statutory authorization and require that it interact directly with the Santee Cooper Board of Directors. The IRP Group members would serve terms equal to that of the Board of Directors and meet with staff and consultants as needed, with its activities funded by Santee Cooper. In addition, the IRP Group would meet at least annually with the Santee Cooper Board. The IRP Group meetings would be public and follow South Carolina's Freedom of Information Act laws to include public notice.

The IRP Group would advise Santee Cooper on resource planning principles and strategic direction. The IRP Group would be composed of the following 12 members, appointed by the chairperson of the Santee Cooper Board of Directors:

- 1 member from the Santee Cooper Board of Directors
- The requested membership of 2 members of the General Assembly, with 1 Senator recommended by the President of the Senate and 1 House Member recommended by the Speaker of the House
- 1 member representing residential customers recommended by the Santee Cooper Customer Advisory Council
- 1 member representing commercial customers recommended by the Santee Cooper Customer Advisory Council
- 1 member representing industrial customers recommended by our industrial customer association
- 1 member representing Central Electric Power Cooperative recommended by Central
- 1 member from the environmental community
- 1 member from economic development community
- 1 member representing municipal customers
- 1 member representing customers living below federal poverty guidelines
- 1 public member appointed to serve as chair, with significant utility industry background

Appointments shall be made in a way that assures the IRP Group is representative of all citizens of the State of South Carolina.

The IRP Group should consider whether Santee Cooper's resource plans adhere to the adopted planning principles and directions. At least every two years, the IRP Group would publish a publicly available report with a review and evaluation of said principles and directions with recommendations as appropriate to the Santee Cooper Board of Directors.

## C. Hearings for Major Construction Projects

Santee Cooper supports having greater transparency, accountability and public participation required in the process for approval of major generation and transmission resource projects. As such, it is proposed that Santee Cooper Board of Directors require management to conduct one or more public hearings for major capital projects involving generation of 200 MW or more or transmission at or above the 125 kV level. This proposal closely aligns Santee Cooper with the requirements of the investor-owned utilities in the State who undertake major construction projects.

The hearing must consider at least:

- The need for the facility
- The location of the facility
- Any environmental impacts
- Conformity with state and local laws
- The interest of system economy and reliability
- Project timeline and costs

The hearing process would include provisions for public and customer notice similar to the notice provisions required in Section F below. Notice would also be provided to the ORS, and when considered appropriate by the Executive Director of the ORS. The ORS would have standing to intervene in the process for the purpose of providing input to the Board of Directors with respect to the proposed construction. The Board of Directors must provide a response to any input received and an explanation of their ultimate decision.

In summary, Santee Cooper understands the need for greater public input to and review of specific resource decisions and welcomes it.

# D. Pricing Principles and Metrics

Consumers generally focus on the total cost of their monthly bill, but a close review of any utility bill reveals a series of charges for various components of generating and delivering reliable electricity to a customer's meter. These various costs need to be allocated to customer loads according to economically sound and responsible principles.

To better inform customers going forward, Santee Cooper recommends that its Board of Directors follow a process to adopt and adhere to a set of Pricing Principles, subject to an annual compliance review by the ORS as outlined in Section E below.

The core Pricing Principles for Santee Cooper, adopted as part of this Reform Plan, are listed below:

- **Mission**: Limit price increases to less than inflation (10-year rolling system average price, normalized for customer mix), and maintain prices that are competitive in the region
- **Equity**: Allocate costs to specific customer classes in a reasonable, equitable and defensible manner (i.e. customer class returns should be nearly equal)
- Efficiency: Design prices so that conservation savings are shared with the customers
- **Financial Adequacy**: Provide sufficient revenue to preserve the financial integrity of Santee Cooper (long-term 'A category' or above) and comply with commitments to bondholders
- Notice: Ensure customer notice and engagement in rate proceedings (see Section F below)
- Protection: Allow reasonable relief mechanisms for financially distressed customers
- Transparency: Require openness in annual review of compliance with Pricing Principles

The Board shall engage a nationally recognized pricing consultant, reporting to the Board to assist it in this regard.

## E. Annual Report to, and Review by, the Office of Regulatory Staff on Adopted Pricing Principles and Metrics

The ORS has unique expertise and skills to analyze, review, and comment upon Santee Cooper's pricing framework. To provide greater transparency and an annual opportunity for all stakeholders to better understand Santee Cooper's pricing, Santee Cooper recommends that it provide a "Pricing Principles Compliance Report" each year to the ORS. After its review, the ORS shall be asked to publicly issue its review and comment on Santee Cooper's compliance report.

## F. Codification of Pricing Process

In addition to consistently delivering reliable, efficient, and low-cost power, Santee Cooper desires to provide transparency in its rate-setting process. Santee Cooper recommends that the General Assembly codify a detailed public retail rate process that must be followed prior to increasing rates. Though Section 58-31-360 of the South Carolina Code, as amended, currently requires Santee Cooper to give all customers affected by a retail rate increase at least sixty (60) days' notice of such increase, the new statutory-based procedure will offer certainty, engagement, and participation in the decision-making process for Santee Cooper customers, legislators, and key stakeholders on matters that affect the quality, cost, and competitiveness of Santee Cooper's services.

This pricing process will also include provisions for a public hearing before the Board of Directors for ultimate approval or rejection of the proposed prices. Notice will also be provided to the ORS, and when considered necessary by the Executive Director of ORS and in the public interest, ORS shall have standing to intervene in the process for the purpose of providing input to the Board of Directors with respect to the proposed prices.

## **G.** Codification of Transparency Practices

Santee Cooper has already been livestreaming our Board of Directors and Board Committee meetings pursuant to budget provisos that will expire. We plan to continue that practice, and we propose that the General Assembly codify the requirements to guarantee increased transparency of committee and Board discussions and decisions. Santee Cooper has found that this requirement is helpful to those who may not be able to travel to meetings or have conflicted schedules and need to watch the proceeding later.

As part our Reform Plan, Santee Cooper will make agendas, livestreams and recorded videos of the meetings available on Santee Cooper's website. When Board members appear telephonically or electronically at special-called Board meetings, audio only will be presented if no Board members are physically present at the meeting.

We also propose including on the website documents scheduled to be presented at Board meetings. These documents will be uploaded prior to each meeting and continue to be made available after each meeting.

Codifying these actions will ensure Board committee and Board meeting materials, including archived videos and materials, are readily available to the public, without the public having to request them.

In addition, per Freedom of Information Act requirements, Santee Cooper will continue to make committee and Board agendas available on our website and upon request at least 24 hours before each meeting.

## **Summary**

These proposed changes to our governance and oversight structure reflect our commitment to increased transparency and accountability while ensuring we do what is in the best interests of customers and the State. Santee Cooper's focus on strengthening its resource planning function will allow us to maintain competitive pricing and remain the most reliable electricity provider in South Carolina. The Resource Planning and Pricing Principles

have been adopted by our Board as a first step in creating the framework described herein. We recommend the General Assembly adopt legislation to codify and formalize the following to further implement our recommendations:

- The Resource Planning and Pricing Principles adoption processes
- Creation of the IRP Group, with legislative representation
- The Annual ORS Review of Santee Cooper's Pricing Principles Compliance Report
- Santee Cooper electric prices review process
- Board meeting transparency practices

We stand ready to assist the General Assembly with drafting legislation as requested.

# 3 CENTRAL AGREEMENT PROPOSAL

### The Central-Santee Cooper Coordination and Integration Agreement (CA)

From 1950 to 1980, Santee Cooper served Central through a series of six power contracts. In 1980, Santee Cooper and Central agreed to a new, more comprehensive agreement referred to as the Power Systems Coordination and Integration Agreement. The sixth amendment to that 1980 agreement became effective in May 2013<sup>22</sup> and is currently in effect.

The CA was structured to allow Santee Cooper and Central to capture benefits of economies of scale in planning, constructing, operating and maintaining generation and transmission, and purchasing power from surrounding systems as needed to meet the Combined Authority-Central System load. Key to achieving that goal was to include commitments by Central that would allow Santee Cooper to finance future generation and transmission under favorable terms to the mutual benefit of the customers served by Central's Members and Santee Cooper. In 2013, the extension of the CA allowed Santee Cooper to develop a debt plan that would structure new debt and restructure existing debt at a near-term aggregate cost reduction of approximately \$1 billion from 2013-2030. Santee Cooper fulfilled this commitment and overachieved on these targets. In 2013 alone, a near-term reduction of nearly \$50 million was achieved.

The following highlights significant changes made to the CA in 2013:

- The parties deferred their respective rights to terminate the agreement prior to January 1, 2059 and agreed to other provisions to facilitate financing of new generation and transmission facilities by Santee Cooper under favorable terms.
- Central and Santee Cooper agreed to share costs of Santee Cooper's then existing and future "Shared Resources", including V.C. Summer Units 2 and 3, in proportion to load.<sup>23</sup>
- Provisions pertaining to coordination of resource planning activities and sharing information regarding fuel
  arrangements were expanded to provide Central much more information and opportunity to provide input
  to resource and transmission system expansion decisions.
- A process was included under which Central may elect to become responsible to develop its share of specific Proposed Shared Resources determined to be needed to reliably serve the Combined Authority-Central System load. Under this process, should Central elect to opt-out of a Proposed Shared Resource, Santee Cooper and Central each would become responsible to undertake their respective load ratio shares of the proposed resource and thereby directly bear their associated costs of the resource. The provisions allowing Central to undertake these Non-Shared Resources were structured not to reduce Central's obligations with respect to existing Shared Resources, but rather, to align Central's and Santee Cooper's interests regarding proposed resources and allow Santee Cooper to finance Shared Resources under mutually beneficial terms.
- Cost allocation formulas were revised, updated, and made more favorable to Central.
- Provisions were included for Santee Cooper to jointly schedule, dispatch, and account for energy produced by Shared and Non-Shared Resources to assure customers of Central's Members and Santee Cooper would benefit from economies and other advantages of "power pools" implemented in other portions of the country.

<sup>&</sup>lt;sup>22</sup> The existing Power Systems Coordination and Integration Agreement Between South Carolina Public Service Authority and Central Electric Power Cooperative, Inc., is a compilation of that original agreement dated December 31, 1980, and the subsequent first, second, third, fourth, fifth, and sixth amendments thereto dated April 17, 1984, February 25, 1985, July 1, 1985, October 24, 1986, March 31, 1988, and May 20, 2013, respectively (the "Coordination Agreement" or the "CA") along with applicable memoranda of understanding (MOU).

<sup>&</sup>lt;sup>23</sup> Load used in cost allocations is defined in more detail in the CA.

 Rights were added for Central to purchase a load ratio share of Santee Cooper's generation and transmission system upon termination of the CA.

Since May 2013, the parties have entered into a total of 15 memoranda of understanding (MOU) and letter agreements. Six of the 15 MOUs and agreements facilitated economic development activities by Central and its member cooperatives and the remaining nine addressed matters not contemplated under the CA.

### Advantages of the CA

## An Integrated, Multi-Faceted Agreement

Overall, the existing CA is far more than a power purchase or power sales agreement. The CA includes and integrates agreements in all of the following areas. Each of the areas listed below are important and beneficial to Central, Central's Members, and all customers served from the Combined Authority-Central System.

**Long-term Commitment to Serve Agreement:** Obligations of Santee Cooper to reliably provide power and energy for the Combined Authority-Central System as needed through at least January 1, 2059 and to jointly plan and undertake development of new resources needed to do so

Coordination of Planning and New Resource Options Agreement: Coordination between Santee Cooper and Central of resource and transmission system planning activities and options for Central to become responsible for and undertake its load ratio share of specific new resource additions needed to reliably serve load on the Combined Authority-Central System

**Power Supply Resource Pooling Agreement:** Use of the Combined Authority-Central System of resources in a pooled fashion to most economically produce the energy supplied to the customers of Central's Members and Santee Cooper

Transmission Service Agreement: Santee Cooper's provision of and charges for transmission service to Central<sup>24</sup>

**Cost Allocation Agreement:** Allocation of Santee Cooper's production and transmission system related costs to Central based on Central's load using accounting and allocation methods and formulas which are consistent with the uniform system of accounts and cost allocation principles established by the Federal Energy Regulatory Commission (the "FERC")

Agreement for Santee Cooper to Operate Designated Central Transmission Facilities: Provides for Santee Cooper to operate and maintain more than 500 miles of Central-owned Designated Transmission Facilities (transmission lines and rights-of-way) under cost recovery terms favorable to Central

**Cooperation and Assistance Agreement:** Santee Cooper provides other services to Central and Central's Members. For example, Santee Cooper assists in the following areas under terms that are beneficial to Central and its Members:<sup>25</sup>

- Transmission and distribution facility build and design work
- Fiber sharing

- Microwave system maintenance
- Shared use of the trunked radio system

<sup>&</sup>lt;sup>24</sup> Transmission service to Central is not provided under Santee Cooper's Open Access Transmission Tariff (OATT), as is the case for other transmission customers. Instead, provision of and charges for transmission service to Central are governed by the CA. This cost structure is grandfathered under FERC, which allows for the bundling of transmission service.

<sup>&</sup>lt;sup>25</sup> The majority of these services are essentially performed based on Santee Cooper's incremental cost of so doing, which is favorable to Central and its Members. Central or the individual cooperatives are typically billed directly. Income to Santee Cooper from the reimbursements is treated as a revenue credit against O&M or A&G charges in the cost of service used under the CA to determine charges to Central. Santee Cooper obtains no profit or margin in providing these services.

- Emergency substation services (transformer testing, oil samples, troubleshooting, mobile substation installation)
- Fault analysis and lightning strike verification on customer owned equipment (at no charge)
- Routine testing/troubleshooting of customer-owned substation equipment on request and
- Administering NERC compliance on Central's behalf, including maintaining and filing required documents

# Effective Platform for Best Serving Our Customers and South Carolina

The missions of Central, Central's Members, and Santee Cooper are uniquely aligned. Our primary goals are to provide low-cost, safe, and reliable electric service to customers, sustainable over the long term and contribute to the economic development of the communities we serve. Central, Central's Members and Santee Cooper are located within the State of South Carolina, and our focus is on the well-being of the State and the customers we serve. We have collaborated effectively on economic development initiatives and have worked together in solving significant operational challenges, such as recovery from severe storms.

Our efforts are carried out through a not-for-profit framework and we each seek to minimize total costs of production and transmission facilities while fulfilling our aligned missions. Under the CA, the entities benefit from grandfathered tax-exempt status which helps reduce costs and provides access to the financial benefits outlined in Appendix 8.6.

The CA uniquely provides Central with substantial access to information and opportunities to actively participate in determining power supply plans and implementing power supply resources. Furthermore, under the CA, Santee Cooper and Central can jointly make the best decisions for our customers, whether those decisions involve short-term or long-term resources. These features of the CA provide a framework for Central and Santee Cooper to function in a coordinated manner to benefit the State and our customers. These features are not present in the typical PPA structure.

### A Long-Term Commitment to Seek the Most Affordable Power Supply

Santee Cooper is obligated under the CA to provide service in coordination with Central for the long-term. Under Santee Cooper's Reform Plan, costs to Central are projected to be competitive under a wide range of future conditions. Under a shorter-term PPA, the supplier's obligation to provide service can be expected to end with the termination of the agreement.

The relatively short-term commitment of the power supplier creates potential scenarios in which Central may be forced into becoming completely responsible for its power supply with short notice during a period when doing so would be very costly. A decision by the supplier to terminate its obligations to provide power to Central would most likely occur during tight, high-price market conditions. Although the regional market has been favorable for many years, markets change and could change dramatically in the face of certain shifts in conditions (e.g., aggressive carbon policy or dramatic tightening of natural gas supplies). This presents the prospect of significant uncertainty for Central's Members.

### The Advantages of the CA are Significant

Overall, the CA is complete; it exists. The framework of the CA allows for both parties to work together to readily improve and refine the agreement, while covering the many facets of the long-term partnership between Central and Santee Cooper that time has proven must be addressed for both parties to function successfully. The CA addresses all considerations, transactions, and liabilities between Santee Cooper and Central. Santee Cooper's plans to lower the cost of debt and improve the economies of our power supply portfolio position the parties to capture benefits from both short and long-term markets as those opportunities arise.

### Goals in Improving the CA

While the CA offers significant advantages, Santee Cooper proposes to work with Central to develop refinements and improvements seeking to achieve the following goals:

# **Effectively Implement the Reform Plan**

The Reform Plan offers substantial benefits for the customers of Central's Members and Santee Cooper, and for the regions of South Carolina which we serve. Santee Cooper is, and must be, committed to aggressively working to deliver essential aspects of the Reform Plan. We propose to amend the CA such that Central and Santee Cooper work side-by-side to implement and improve upon the Reform Plan.

### **Preserve the CA's Benefits**

As described previously, the CA is structured in a manner that offers substantial benefits. We should work together to amend the CA in a manner that preserves these benefits as we proceed forward together with the Reform Plan.

### Improve the Business Relationship

Our business relationship should be a collaboration. This relationship has not been as effective as it can be, and we are committed to improving in this area as it is critical to our collective long-term success. Making changes to bring about the kind of relationship that promotes better decisions and ultimately results in better serving our customers is in our mutual interests.

### **Improve the CA Joint Planning Processes**

The CA's planning process should be an asset for both organizations, since it results in resource plans that will drive long-term competitiveness. The process should produce the best service to our customers and allow the parties to meet new oversight requirements efficiently and effectively. Successfully planning together will better align our interests and incentives and promote decisions that are best for the Combined Authority-Central System.

### Benefits to Central of Moving Forward with an Improved CA

Two of the fundamental benefits of Central continuing to be served by Santee Cooper through an improved CA are outlined below.

# 1. Continue Broad Range of Services

Moving forward under an improved CA allows Central to continue receiving a broad range of services and advantages, including:

- a. Long term commitment to serve
- b. Joint coordination of long-term system planning
- c. Joint development of resources
- d. Economic advantages of pooled resources
- e. Bundled transmission service
- f. Transmission O&M and other various services at cost
- g. Grandfathered tax advantages
- h. Aligned business missions

### 2. Realize Reform Plan Benefits

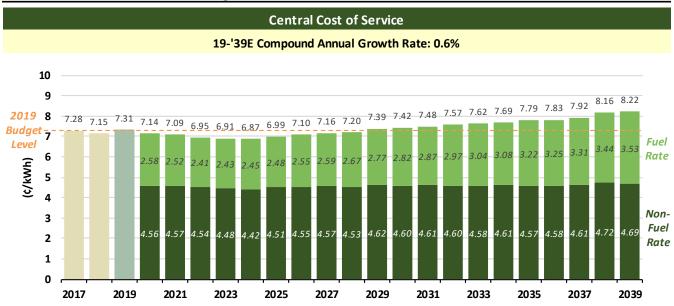
Under an improved CA, Central will benefit from the Reform Plan which is leaner, greener, adaptable to changing future conditions, embraces innovation, and reduces financial and planning risks. The Reform Plan will result in the provision of safe, reliable, and affordable power, sustainable for the long term.

a. Lower and Stable Prices

Figure 26 shows projected Central prices under the Reform Plan. These price projections are consistent with the terms and conditions of the current CA, including repayment of V.C. Summer Units 2 and 3 debt. Notwithstanding the V.C. Summer Units 2 and 3 sunk costs, through the Reform Plan, Santee Cooper projects a significant reduction in costs to Central. This will result in over a decade of stable pricing to Central from 2017 through 2028. Moreover, the prices do not factor in

the improvements suggested in the following sections. These improvements should help to further manage prices.

Figure 26 – Central Cost of Service



## b. Flexibility/Adaptability of Future Resources

Future resources assumed by the Reform Plan are designed to provide a diverse portfolio of resources that is flexible and adaptable to market and industry changes. Additionally, the resources contemplated are expected to offer significant economic savings while reducing financial and planning risks. Importantly, the Reform Plan proposes adding generation resources in smaller increments to more closely match the projected resource needs, thereby minimizing risks and ensuring the plan can be modified to allow continued competitiveness.

### Improvements to the CA

A threshold first step required for developing the amendments proposed below is that both parties adopt the Reform Plan Power Supply Roadmap as the starting point. Moving forward, working together, we will adapt the plan to changing conditions and we will seek to improve upon it. However, we must agree it is the starting point as delineated in the Santee Cooper Reform Plan.

With the Reform Plan as our starting point, following are the amendments we believe improve and strengthen the CA.

#### 1. Work together to implement the Reform Plan

Jointly implementing the Reform Plan effectively and with urgency is of paramount importance to both parties' customers. The Reform Plan holds the promise that Central's and Santee Cooper's costs will be much lower and will remain competitive over the long-term under a wide range of future conditions.

The Reform Plan sets the framework for improving the system portfolio of resources with proven, lower-risk, and innovative technology. The portfolio also significantly increases operating efficiency, diversity, and environmental performance. The Reform Plan involves balancing power supply resources and transmission additions to achieve the most economic results for everyone.

Importantly, however, the process of implementing any plan is a continuous one, involves changing direction as business conditions change, and includes finding ways to improve upon the Reform Plan at every step along the way.

The Resource Planning and Commitment Processes set forth in the CA need to be modified for such collaboration to occur. Central and Santee Cooper should jointly develop these CA amendments. A suggested framework for these CA changes is outlined below following a summary of the current CA approach.

### a. Current CA Administration and Planning Coordination Approach

Coordination between Santee Cooper and Central under the CA currently is accomplished by employees that provide key points of contact or liaison between the parties and the following three Committees specifically provided for in the CA.

#### • Executive Committee:

Membership includes the Chairman of Santee Cooper's Board of Directors, the President of Central's Board of Trustees, four Members of each party's Board, and the senior executive of each party. The Executive Committee meets at least twice each year. The Executive Committee is responsible for (i) the implementation and administration, on behalf of the Parties, of the provisions of the CA, (ii) the resolution of disputes between the Parties arising under or relating to any provision of the CA, and (iii) such other matters as may be agreed upon between the Parties. No action can be taken by the Executive Committee except by a majority vote of all members.

### Joint Planning Committee (JPC):

Membership includes two salaried employees from each party as appointed by the respective senior executive of each party. The JPC is required to meet at least quarterly. The JPC is responsible for the exchange of information and studies and analyses relating to matters involving generation and transmission system planning and such other matters as may be specifically designated by the Executive Committee or as otherwise specifically set forth in the CA.

Generally, with respect to resources, the planning process includes updating and sharing load forecasts, assessments of need for additional resources, and then identifying Proposed Shared Resources put forward either by consensus of the planning committee or by Santee Cooper. Then, a Resource Commitment Process occurs out of which comes decisions to either (i) have Santee Cooper proceed with the new resource and account for it as a Shared Resource like Santee Cooper's existing resources or (ii) require each party to undertake to provide to the system its load ratio share of the needed new resource capabilities as a Non-Shared Resource.

Given the framework laid out by the Reform Plan, the Resource Commitment Process is unlikely to capture the most favorable resource options for the Combined Authority-Central System. Santee Cooper desires to work with Central to best adapt the Resource Commitment Process to achieve the most desirable results for the system.

### Joint Operating Committee (JOC):

Membership includes two salaried employees from each party as appointed by the respective senior executive of each party. The JOC is required to meet at least quarterly. The JOC is responsible for the exchange of information and studies and analyses relating to matters involving operations of the integrated generation and transmission systems of Authority and Central as may be specifically designated by the Executive Committee or as otherwise specifically set forth in the CA.

## b. Suggestions for a More Effective Relationship

Santee Cooper and Central should work together to implement and refine the framework set in place by the Reform Plan. The expected benefits for both parties from a successful joint implementation of the Reform Plan assumes new resources would be treated as Shared Resources under the CA. The Reform Plan portfolio structure is expected to reliably and economically serve the current forecasted Combined Authority-Central System loads. The planning effort and oversight of the Reform Plan has been extensive; Santee Cooper looks forward to sharing our efforts with Central as we begin to then refine and implement the plan together.

In order to implement the Reform Plan together and to improve our business relationship we suggest that Central and Santee Cooper make CA improvements in the following areas.

First, change the charter, the members, and the structure of the JPC. Santee Cooper believes placing the responsibilities in the hands of senior management in each organization that constantly work together, not just share information, to establish schedules for and accomplish planning and contract administration processes will produce an improved relationship. We believe it will enable the parties to jointly make more effective decisions and to address new oversight requirements and schedules as we move forward together.

Fundamentally, this approach will be extremely productive for our customers if we conduct ourselves according to the following basic tenets. To achieve this, Santee Cooper proposes the redirected JPC be contractually committed to following these principles:

- Planning should achieve economies of scale and cost effectiveness for the benefit of all customers of the Combined System commensurate with properly managing risks;
- Stabilization of costs, rates, and charges to Central and to Santee Cooper's customers should be a high priority requiring effective management of uncertainties about a range of factors, such as load, fuel prices, and regulatory policy;
- Planning should be conducted with no adverse distinction, which requires both parties not making decisions or recommendations that benefit one party at the expense of the other;
- All planning processes should be conducted with consistency, transparency, and accountability
  on the part of both parties consistent with obligations to maintain information as confidential;
  and
- Planning must be accomplished in a manner that meets schedules, standards, and requirements of applicable South Carolina statutes by entities that provide oversight of the parties' resource planning processes, and as needed to provide reliable economic service to all customers of the Combined Authority-Central System.

Assigning the right individuals to lead this process is essential, especially as we work together to further develop the recommended new approach. Santee Cooper proposes that the following individuals initially be appointed to the JPC. The parties would contractually agree to use good faith efforts to appoint future representatives to the JPC approved by the other party.

JPC Central representatives:

- Rob Hochstetler, President & CEO
- Jim Lamb, Senior VP of Planning and Power Supply

JPC Santee Cooper representatives:

- Charlie Duckworth, Deputy CEO and Chief of Planning
- Marty Watson, Manager Generation Services

The responsibilities of the JPC would cover all areas necessary for the parties to effectively coordinate planning activities, work together on joint system operations and energy risk management, and effectively administer the CA. The following is an initial proposed list of the JPC's responsibilities. We welcome input from Central regarding these suggestions.

- Establish planning schedules as necessary to meet requirements of the CA, South Carolina statutes, and applicable oversight entities
- Establish planning goals, objectives, and metrics that would guide the planning process
- Jointly prepare load forecasts for the parties and assess load forecast uncertainty
- Assess adequacy of resources to reliably serve load
- Establish target planning reserve margins for the Combined System
- Assess and establish operating reserve requirements
- Prepare and update Combined System Integrated Resource Plans as required by South Carolina statute<sup>26</sup>
- Assess and make recommendations regarding ownership and PPA options that prove to offer the most beneficial plans moving forward
- Coordinate and jointly accomplish procurement and implementation of resources
- Recommend solutions to issues under, and updates to, the CA
- Develop specific plans regarding classification of proposed resources under the CA as Shared Resources, Non-Shared Resources, and Load-side/DR resources or programs as deemed most favorable for each party and the Combined System
- Recommend adjustments to charges to Central under the CA when necessary to pass-through to Central an appropriate share of benefits of demand response programs to the extent not accomplished by the cost allocation formulas
- Recommend adjustments to fairly functionalize and allocate debt service and CIF balances under the CA if necessitated by proposed Shared Resources or Non-Shared Resources
- Provide input and direction regarding hedging and energy risk management options and programs

<sup>&</sup>lt;sup>26</sup> In May 2019, Section 58-37-40 of the South Carolina Code of 1976 was amended to require Santee Cooper and Central to submit Integrated Resource Plans (IRPs) to the State Energy Office each three years. The amendment requires IRPs to provide information regarding long-range forecasts, planned generation and transmission facilities, multiple fuel cost and environmental regulation scenarios, evaluation of multiple potential resource portfolios, facility retirement assumptions, customer efficiency and demand response programs, and specifics regarding cost and reliability implications of planned generation and transmission expansion projects. We want to work together with Central as we develop future IRPs. Accordingly, it will be in Central's and Santee Cooper's mutual interest to redefine the planning and resource decision-making processes in the CA to dove-tail with and support new oversight processes.

- Provide oversight, input and direction of matters involving operations of the integrated generation and transmission system, formerly handled by the JOC
- Resolve disputes arising under or relating to any provision of the CA, and
- Present and recommend plans to both parties' management teams, the Executive Committee, both parties' Boards, and entities providing oversight of the parties' resource planning processes and decisions

The JPC would direct, establish responsibilities of, and be supported by a "Planning Coordination Group" (PCG), an "Energy Risk Management Group" (ERMG), and a "Systems Operations Group" (SOG). These groups would include employees of Santee Cooper and Central. Resource and transmission planning would be integrated and coordinated by the PCG. Matters related to the integration of the generation and transmission systems, formerly handled by the JOC, would be coordinated by the SOG.

Santee Cooper and Central employees would have access to appropriate data and information and would work together to accomplish analyses and studies. As with the JPC, the parties would contractually agree to use good faith efforts to appoint representatives to the PCG, the ERMG, and the SOG acceptable to the other party.

With the reconstituted duties of the JPC, the Executive Committee of the CA will be responsible for the implementation and administration of the provisions of the CA and will serve as a necessary approval authority prior to the presentation of recommendation to either parties' Boards. If the recommendations of the JPC are not approved by the Executive Committee, the issue will be remanded back to the JPC for resolution of all issues identified.

If recommendations of the JPC regarding a proposed resource are approved by the parties' management and Boards, the parties would jointly apply for regulatory approvals required to undertake the resource, such as a certificate of convenience and necessity, as needed and to the extent required. Resource owners would apply for environmental and other permits and proceed to implement the resource in coordination with the JPC.

Santee Cooper is willing to work with Central to incorporate different default mechanisms to address situations in which recommendations of the JPC regarding a proposed resource are not approved by both Boards, including terms by which the JPC could revamp the plans.

Combined System IRPs would be submitted with the involvement of both parties. As necessary, the JPC could recommend alternative plans be addressed in the IRP.

Santee Cooper would have the right and obligation to proceed under Article IV.B.1.b of the CA titled—Exigent Circumstances—to assure reliability of the system. That section of the CA provides that Santee Cooper:

"may in its reasonable discretion and consistent with Good Utility Practice take any necessary actions to maintain the reliability of the Combined Authority-Central System. Authority shall reasonably attempt to seek Central's input through the Planning Committee [JPC] and through communications among officers of both Parties.... To the extent Authority acquires Shared Resources..., Authority shall use commercially reasonable efforts to acquire Shared Resources only to the extent reasonably necessary to address such Exigent Circumstances."

The Executive Committee of the CA will continue to exist as outlined in the CA and will continue to meet a minimum of twice each year. The Executive Committee will provide oversight and direction

to the JPC and be a necessary approval authority prior to the presentation of recommendation to either parties' Boards.

Santee Cooper believes the above revamping of the committees combines the best of the existing process while eliminating aspects that are not efficient or desirable as we proceed forward. This new, proposed approach would make the coordination of planning activities anticipated by the CA more collaborative and effective, allowing the parties to meet IRP-related obligations under State statute and additional oversight requirements effectively and on a timely basis. Tasking specific members of senior management of both parties to partner together to develop plans with the support and full engagement of the three recommended analytical groups will lead to a fuller understanding of the issues from both parties' perspectives and to sensible compromise during the plan development stage. The result will be consistent with the needs and interests of both parties and therefore more likely to be approved by both parties' management and Boards and acceptable to State authorities.

Santee Cooper would welcome the opportunity to discuss changes to the Coordination Agreement so that the processes, schedules, and recommendations established by the JPC would effectively displace the need to use many of the provisions of Article IV of the CA that pertain to developing and approving load forecasts, preliminary assessments of the need for new generation, establishing planning and operating reserve requirements, decisions as to retirement of resources, establishing generation expansion plans, and the Resource Commitment Process.

#### 2. Work together to modify and change system loads to reduce rates to all customers

In addition to changing the charter and structure of the JPC, Santee Cooper suggests adding new opportunities for both parties to reduce costs to customers. Such opportunities will include:

a. Expanded and better coordinated economic development efforts

We propose a review by both parties of current and previous economic development incentive rates in order to develop new initiatives. Working together, Central and Santee Cooper can attract new large loads/customers in a manner that lowers the overall system average rate. To the extent existing cost allocations in the CA do not reflect the benefits of the added load to all customers, changes in cost allocation will be considered as a component of the new initiatives.

b. Expanded and better coordinated customer demand response, time-of-use pricing, and/or energy efficiency programs

To the extent through coordinated efforts peak demands are reduced through various customer programs, these peak load reductions will delay the need for new generating resources and power system improvements.

Given the nature of its load, Central is uniquely positioned to achieve such load reductions. The CA may be amended to appropriately allocate savings associated with the deferral of resources to Central.

For instance, DSM/DR programs that reduce winter and/or summer peak demand may reduce supply-side costs to a different extent than the resulting reduction in charges to Central under the CA fixed cost allocation formulas. Santee Cooper proposes to work with Central to establish procedures under the CA for assessing and flowing-through to Central additional benefits (above the benefit realized through the demand cost allocation formulas) realized due to fixed cost reductions caused by delaying or avoiding new supply side resources from Central's involvement in new DSM/DR Programs.

c. Ability for Central to provide capital for and own shared generation and transmission resources

The parties will jointly assess whether it would be best for Central to finance and own, in part or in whole, new shared generation or transmission resources and the cost savings associated with such transaction structures will flow to Central.

### d. Large Industrial Rates

Both parties have placed special emphasis on economic development activities to promote job creation and capital investment. Santee Cooper has developed an extensive menu of large industrial rate schedules, including several Non-Firm options.

When appropriate for new loads, Central can elect to purchase power under the terms of these industrial schedules in lieu of pricing under the CA.

Central has also developed specific rates for large loads based on coincident peak rates. All of these activities are intended to provide affordable power to this customer class, which can be more sensitive to pricing than other customer classes.

Santee Cooper recognizes that more opportunities for growth can be expected in the areas served by Central's Members. Santee Cooper will continue to support economic development in those areas with the same commitment as in areas served directly by Santee Cooper.

Santee Cooper would like to work with Central to determine how to develop new or revised rates and cost of service treatments to more effectively serve these types of loads, regardless of service provider, and thereby further enhance our economic development efforts. We suggest the parties discuss the potential benefits to establishing a set of rate schedules for all load over 1 MW that could be offered by both Santee Cooper and Central.

Santee Cooper will collaborate with Central to modify the CA such that the above opportunities to improve on the pricing projection of the Reform Plan are incorporated.

#### **Summary**

Central and Santee Cooper have a longstanding and productive relationship. Since 1980 our relationship has been governed by a comprehensive Power Systems and Coordination and Integration Agreement. The CA provides significant benefits to both parties and those benefits should be preserved and enhanced through amendments.

Working together going forward, we are uniquely positioned to best serve the State of South Carolina. The not-for-profit missions of Central, Central's Members and Santee Cooper are completely aligned.

By collaborating to implement and improve upon the Santee Cooper Reform Plan, guided by an amended CA, we can best provide low-cost, safe, reliable and environmentally sensitive service and contribute to the well-being and economic development of the communities and customers we serve.

### 4 DOA CONFORMING ASSUMPTION CASE

As part of the Act 95 Process, DOA established a set of Fixed Assumptions for participants to use in their proposals. The Fixed Assumptions include (1) inflation, (2) fuel prices, (3) load, (4) gypsum prices, (5) FERC relicensing costs, and (6) cost allocation between retail and wholesale customers. Participants are required to prepare a proposal with the Fixed Assumptions, which are consistent with the DOA's "Electric – Sensitivities Output" spreadsheet (DOA Sensitivity Case).

To comply with this requirement, Santee Cooper prepared a DOA Conforming Assumption Case. The DOA Conforming Assumption Case adheres to the Fixed Assumptions and incorporates the following changes <u>relative to</u> the Santee Cooper Reform Plan:

- 1. The DOA Conforming Assumption Case assumes that that the Atlantic Coast Pipeline (ACP) would not be available and the NGCC unit needed in 2027 will be sited near the V.C. Summer Station using natural gas from Transco. Santee Cooper's sensitivity analysis showed that this configuration would produce power supply prices comparable to the Pee Dee site with natural gas sourced from ACP.
- 2. With the siting of the 2027 NGCC at a location near the V.C. Summer Station, Santee Cooper must reinforce its transmission system without the support of Pee Dee generation in order to maintain system reliability. This includes:
  - Two additional dual-fueled combustion turbine generators in the Horry-Georgetown area at the cost of approximately \$125 million
  - Approximately \$145 million in additional transmission system upgrades
- 3. The two additional dual-fueled combustion turbine generators provide approximately 100 MW of additional reserves, reducing additional capacity needs to meet planning reserve requirements.
- 4. The DOA Conforming Assumption Case assumes market pricing to correlate with the higher natural gas pricing in Fixed Assumptions to ensure internal consistency between natural gas and energy market pricing.
- 5. The DOA Conforming Assumption Case assumes \$150 million proceeds will be available to Santee Cooper from the sale of V.C. Summer Units 2 and 3 equipment. This is a reduction from the Reform Plan, which assumes \$425 million proceeds from the sale of the equipment.
- 6. The depreciation rates as shown in the Santee Cooper Revenue Requirement Model.

Other assumptions used in the DOA Conforming Assumption Case are the same as in the Reform Plan.

We have included a detailed forecast titled "2020 DOA Conforming Case Electric Operations Financial Forecast", as well as corresponding customer rates in Appendix 8.4.2 of our response. The key impacts of the DOA Conforming Assumption Case are summarized below:

**Revenue Requirements & Customer Prices.** The DOA Conforming Assumption Case results in Revenue Requirements, on a cents/kWh basis that grow annually at 1.0% over 20 years (CAGR) compared to 0.6% growth in the Reform Plan. Almost all the growth is the result of higher fuel cost assumptions.

- In this scenario we project aggregate base rate increase of an additional half percent versus the Reform Plan, starting a year sooner in 2026. We still project stable pricing (including fuel) for direct-serve customers for at least five years through 2024.
- Central's cost of service rates will be declining to stable for the next five years with rates below 2019 budgeted rate through 2024.

**Financial Metrics.** The DOA Conforming Assumption Case does not adversely impact financial metrics. By 2039, Santee Cooper is projected to have \$2.2 billion in total debt outstanding (\$226 million more than our Reform Plan), however this does not adversely impact our debt-to-capital ratio due to the benefit of lower depreciation rates. We also project to achieve Debt Service Coverage ratio and liquidity consistent with the Reform Plan and our targets.

### **5** GOALS & METRICS

Santee Cooper is the most reliable electricity provider in South Carolina with customer satisfaction levels well above national averages. Our safety performance is consistently among the top three for similarly sized public power utilities around the country. Our strong balance sheet, liquidity and financial metrics enable us to consistently maintain low and relatively flat customer prices. We have also been faithful environmental stewards for South Carolina.

In formulating the Reform Plan, Santee Cooper focused on maintaining or improving its strong performance in these key areas while also targeting other areas for improvement.

#### Reliability

When measured by the standard industry metric, System Average Interruption Duration Index (SAIDI), Santee Cooper is the most reliable provider of electricity by at least a factor of four among large power companies in South Carolina. SAIDI measures the average duration of electricity interruption experienced by each customer for a given year. In 2018, Santee Cooper's distribution system SAIDI was 20.6 minutes, while the transmission system yielded a SAIDI of 14.2 minutes. The Reform Plan includes a continued investment in these systems that is designed to maintain excellent reliability.

Santee Cooper's reliability depends on many factors that require long-term focus and investment.

- Our transmission and distribution teams utilize robust planning, design, construction, and maintenance
  practices. The bulk of our transmission and distribution systems are looped to provide redundancy so that
  service can be restored and maintained when elements of the system are out of service. This looped system
  allows Santee Cooper to provide excellent reliability to its customers.
- Santee Cooper plans its generation resources with a planning reserve margin of 12% for winter and 15% for summer to ensure adequate supply. Santee Cooper is also a member of the VACAR Reserve Sharing Group, which provides access to a pool of operating reserves used to respond to generating unit contingencies in real-time and facilitates compliance with NERC Reliability Standards associated with resource and demand balancing. This has a significant impact on operating costs as it allows Santee Cooper to carry approximately 25% of the required operating reserves if we were not a member of a reserve sharing group. Our membership in the reserve sharing group also significantly benefits reliability in the region as Santee Cooper contributes resources to aid other VACAR members and has access to a large pool of resources across the VACAR area during energy emergencies.
- Santee Cooper prioritizes capital and non-fuel operations and maintenance (NFOM) spending at our generating stations to meet targeted forced outage rates, which ensures our ability to serve load reliably.
- We have developed a strong company culture of customer focus regarding the generation and delivery of
  electricity, especially during system restorations. Our staff is highly responsive, dedicated, and does whatever
  is needed, within the bounds of safety, to keep the lights on.
- Santee Cooper and the electric cooperatives work together to isolate facilities experiencing outages on the transmission system, thereby speeding restoration of electric service to customers.
- Santee Cooper has a proud history of investing in, training, and retaining our staff, from system operators to line technicians. Our staff is knowledgeable, experienced, and prepared to safely and reliably operate and maintain the generation and delivery systems.
- Santee Cooper's largest generating stations are located near its load centers, which reduces the risk of transmission outages and improves system reliability.
- Santee Cooper has a strong history of compliance with NERC Reliability Standards and is at the forefront of the industry with no significant violations.

• As Santee Cooper's electrical system moves from analog and electrical-mechanical technologies to digital platforms, cybersecurity becomes more of a priority in protecting those technologies and supporting reliability. On average, Santee Cooper sees 8,000-12,000 cybersecurity attacks per day. An effective cybersecurity program includes elevating oversight to the corporate officer level, adequately investing in cybersecurity staff and technologies, and emphasizing cybersecurity awareness. Santee Cooper has implemented all three. To date, we have not had a material incident or a data breach, and we continue to improve our cybersecurity posture.

### **Financial**

Our financial position remains very strong. Santee Cooper continues to maintain an "A" category or better credit rating from all three major credit rating agencies. The agencies have identified several strengths in assigning these ratings, including: competitive rates; a long-term record of sound financial metrics; strong generation performance with lower than average power production costs; an economy that is positive for customer sales growth; and a broad and diverse customer base.

Santee Cooper will focus on the following performance indicators to measure the success of our Reform Plan:

- <u>Equitable Customer Class Returns</u>: This metric calculates the returns generated by customer class (e.g., residential, commercial, industrial, wholesale). A successful measure would require that each customer class has a return similar to the total system return with moderate variation among classes. See Figure 24 for more detail on this metric.
- <u>Customer Prices Relative to Inflation</u>: This measurement compares year-over-year changes in customer prices
  to the rate of inflation. Our Reform Plan is designed to limit price increases to less than inflation (ten year
  rolling system average price, normalized for customer mix), providing no real price increase to our customers.
- <u>Competitive Prices</u>: This metric compares our average price by customer class to state and regional peer utilities in order to ensure that we maintain a competitive position.
- <u>Financial Metrics</u>: These metrics include days of cash on hand, debt service coverage, and debt-to-equity ratio. Maintaining these financial metrics will support or improve our current "A" category credit rating.

These financial performance metrics have an important impact on our ability to provide equitable, consistently low and relatively flat prices to all customers.

### **Environmental Stewardship**

Environmental stewardship is a foundation for Santee Cooper, and we have been leading the way for decades. In 2001, Santee Cooper was the first utility in the State to supply renewable electricity, turning landfill methane gas into an energy source and taking it out of the atmosphere. In 2006, the first solar power provided to the State grid was produced by Santee Cooper. More firsts include: launching the State's first rooftop solar incentive program in 2008; adding biomass facilities to the State grid in 2013; providing power from the State's first utility-scale solar farm in 2014; and launching South Carolina's first community solar farm program in 2016.

The Give Oil For Energy Recovery (GOFER) program, which was brainstormed and developed as a "first of its kind" by our employees, has 29 years under its belt and continues to keep millions of gallons of used motor oil out of groundwater and freshwater sources. To date, Santee Cooper has collected 31 million gallons of used motor oil through collection sites in all 46 counties. The used motor oil has been used by Santee Cooper to produce electricity.

Santee Cooper oversees over 450 miles of scenic shoreline along Lake Marion and Lake Moultrie, making it available for citizens, residents and tourists to enjoy. That shoreline includes 40 miles of dams and dikes that require frequent inspections and maintenance. We also provide almost 35,000 acres that are either federally or state managed to protect and preserve natural habitats.

Santee Cooper continues to work on limiting and lowering emissions and reducing our reliance on coal. We have implemented numerous energy efficiency programs, and our Power Supply Roadmap continues and expands these efforts. It also adds a DSM initiative that will reduce our need to build generation for peak load.

We also lead the country with our innovative approach to beneficially using coal ash. Santee Cooper is excavating ash stored in ponds at four generating stations for use as a raw material in the cement industry. Any ash that cannot be beneficially used is placed into lined landfills. Beneficial reuse of the ash from the ponds creates jobs, supports manufacturing and is cost effective. Santee Cooper has excavated more than 3 million tons of ash since announcing this program in late 2013.

Including landfill gas generation, biomass, solar power, and a demonstration wind project, Santee Cooper now has more than 250 MW of renewable power online or under contract.

Specific goals embedded in our Reform Plan include:

- Reduction in coal-based generation
- Substantially increase sustainable resources
- Increase customer programs to encourage conservation and reduce load

Santee Cooper will continue demonstrating innovation in, and commitment to, environmental stewardship.

### **Customer Satisfaction**

Customer satisfaction has always been an important aspect of our service throughout South Carolina. As a state-owned not for profit utility with no shareholders, our focus is squarely on our customers. Our commitment to customer satisfaction is illustrated by decades of independent market research conducted by research firm MarketSearch. For example, the figure below reflects the percentage of responding customers expressing overall satisfaction with Santee Cooper in each of the last five MarketSearch surveys:

Figure 27 – Customer Satisfaction by Customer Type

Customer Type	2018	2017	2016	2015	2014
Industrial	100%	95%	95%	95%	89%
Commercial	95%	98%	98%	99%	96%
Residential	92%	91%	97%	97%	99%
Municipal	100%	100%	100%	100%	100%
Cooperative*	53%	41%	50%	78%	95%

<sup>\*</sup>This is the only category with a significant drop in customer satisfaction. Our ideas to improve the satisfaction rating are described in Section 3.

The municipal customers we serve include the cities of Seneca, Georgetown, Bamberg, and the ten member cities of the Piedmont Municipal Power Agency: Abbeville, Clinton, Easley, Gaffney, Greer, Laurens, Newberry, Rock Hill, Union and Westminster. These municipalities represent 13 of 21 electric cities in South Carolina, and Santee Cooper serves them under contracts that are competitively awarded.

Santee Cooper has always had an intentional emphasis on customer service. We engage with our residential, industrial, and commercial customers in a number of different ways. We have a Customer Advisory Council, representing our commercial and residential customers, which meets regularly with utility leadership and provides input on programs, pricing, and other matters. Roughly half of our customers have opted in to receive regular email news from Santee Cooper.

Santee Cooper leadership also meets with our industrial customers, as a group, at least twice a year to share information and obtain feedback. Our industrial customers have commented that they appreciate this unique opportunity to work together for the benefit of their businesses and our system.

Examples of services we provide to engage customers include:

- Enhancing the customer experience using modern digital services such as online billing notifications and mobile access to usage data
- Serving our retail customers where they want to be served, whether that be in-person, by phone, online, or through partner locations
- Communicating to customers when it matters most through proactive global and personalized messaging on topics from energy saving tips to extreme weather alerts
- Offering conservation and energy efficiency programs, free onsite energy audits, and energy efficiency loans
- Offering a variety of industrial rates to meet the different needs of customers within this group

Other research also points to how our customers feel as a result of our intentional emphasis on customer service. In the J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study, Santee Cooper's overall customer satisfaction score ranked No. 1 in South Carolina among large utilities.

We expect our customer satisfaction ratings to remain at these levels or increase as we move through the Reform Plan initiatives.

### Safety

Generating and delivering electricity and water is hazardous work, and safety is a core value at Santee Cooper. Our goal is that our employees return home to their families in the same condition in which they arrived at work. To reach that goal, Santee Cooper employs a robust safety program and fosters a safety culture that has continuously driven improved safety results. In 2018, we recorded our lowest Recordable Incident Rate (RIR) in company history: 0.58, meaning that per 100 employees, 0.58% experienced a recordable incident during the year. Our safety record, as measured by RIR, was ranked 1<sup>st</sup> in 5 of the past 10 years by the American Public Power Association against peers in our class, and placed among the top three in all years.

#### **Summary**

The goals and metrics discussed in this section drive our planning and were considerations in the design of the Reform Plan, which focuses on maintaining or improving performance in each of these areas. The Reform Plan is committed to delivering the best service and prices to our customers while continuing to maintain or strengthen our employee safety standards and our commitment to environmental stewardship.

### 6 Broad Mission, Unique Considerations & Other Obligations

As a state-owned electric utility with an economic development mission, Santee Cooper has a long history of contributions to stakeholders in the State of South Carolina. Our operations provide jobs and economic stimulus throughout the State. We have played a vital role in economic development, providing grants and loans to help local governments and electric cooperatives attract industry, as well as developing commerce parks and providing technical assistance. Santee Cooper and the State's electric cooperatives have supported industrial development in all 46 counties of the State and helped secure more than \$15 billion in capital investment and 80,335 jobs across South Carolina since 1988. In addition, our lakes have become a tourist magnet for fishing, hunting, water sports and other outdoor recreational opportunities.

Capital Investment Attracted <sup>27</sup>	>\$15 billion since 1988
Job Creation Stimulated <sup>27</sup>	>80,000 since 1988
Economic Development Loan Program <sup>27</sup>	>\$105 million since 2012
Economic Development Grants <sup>27</sup>	>\$51 million since 2014
Tourism from Lakes <sup>28</sup>	>\$430 million annually

Santee Cooper, along with the State's electric cooperatives, has helped bring major new employers into the region. Some notable recent examples of innovative industrial recruitment include Volvo, Google, Samsung, Mercom, Sigmatex, Startek, Wyman-Gordon, Executive HeliJet and Coca-Cola Consolidated. We were instrumental in creating the Charleston Regional Development Alliance (CDRA) after closure of the Charleston Navy Base in 1993. The CRDA continues to work to strengthen regional employment and prosperity by recruiting leading global corporations, talent and entrepreneurs to the tri-county area of Berkeley, Charleston and Dorchester. We have contributed to the development of both inland ports, in Greer and in Dillon County, helping attract industry to those parts of the State.

### Santee Cooper will continue the following Economic Development initiatives and programs

Activity	Description		
Revolving Credit Economic Development Loans	<ul> <li>Loan program to help local governments or cooperatives build industrial-spec buildings or other infrastructure that attracts industry and jobs</li> <li>\$90 million cap</li> </ul>		
Site Readiness Grants	<ul> <li>Grants to assist local governments and cooperatives with projects involving the acquisition, improvement, or enhancement of valuable economic development sites and buildings</li> <li>\$4.5 million/year in electric cooperative service territory</li> <li>\$1.5 million/year in municipal customer territory</li> </ul>		
Santee Cooper Economic	<ul> <li>Closing funds offered as an incentive to prospective companies to locate or expand in South Carolina</li> <li>\$1.725 million/year in electric cooperative service territory</li> </ul>		

<sup>&</sup>lt;sup>27</sup> Based on internal records.

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<sup>&</sup>lt;sup>28</sup> According to the 2017 study released by the South Carolina Department of Parks, Recreation and Tourism.

Development	• \$1 million/year in municipal customer territory		
Investment Funds			
Development Projects	Camp Hall Industrial Park in Ridgeville, SC		
	Ascott Valley Industrial Park in Conway, SC		
	Bucksport Marine Park in Conway, SC		

### **Responsibility for Several Critical Public Services**

Public service is in Santee Cooper's DNA. We were created as the "South Carolina Public Service Authority," and we operate our business in a manner that respects our charter. The Santee Cooper Lakes are a valuable resource, providing habitat for wildlife and recreational opportunities for people. We balance many competing interests in our lake management practices and strike a healthy balance of protecting the natural environment and affording safe and abundant access. Our lakes also supply our two Regional Water Systems. Those systems provide high-quality drinking water to our citizens and enable economic development. We protect the environment in other ways as well, creating the first of its kind Give Oil for Environmental Recovery (GOFER) program for collecting used motor oil. Beneficial reuse programs for byproducts of our generation facilities are innovative and cost-effective. The byproducts we can't beneficially reuse will be stored in lined landfills, following environmental best practices. Santee Cooper supports education at every level from pre-school to post-graduate, benefiting the State's students and teachers with outreach programs, scholarships, and other financial investments. We have invested in excess of \$3 million over the last six years for these programs. Our public service mission is deeply ingrained in the Santee Cooper corporate culture. The most significant programs and services are described below.

Activity	Description		
Lakes and Dams	<ul> <li>The Santee Cooper Hydroelectric and Navigation Project was created to impound the Santee River, transform its power into electricity and spark prosperity in Depression-ravaged rural South Carolina. Santee Cooper's activities related to this project include:</li> <li>Management of two lakes covering 170,000 acres spanning Berkeley, Calhoun, Clarendon, Orangeburg and Sumter counties</li> <li>Maintenance of over 40 miles of dams and dikes</li> <li>Management of 162 miles of waterways and navigational locks</li> <li>Analysis of samples from 48 water quality monitoring stations</li> <li>Weed regulation to prevent recreational/navigational blockages</li> <li>Mosquito control to prevent the spread of disease</li> <li>Property management for properties along the lakes</li> <li>Management of public recreation areas and 21 boat landings around two lakes</li> </ul>		
Regional Water Systems	<ul> <li>Santee Cooper operates the Santee Cooper Regional Water System on Lake Moultrie and the Lake Marion Regional Water System</li> <li>The Lake Moultrie System started in 1994 and expanded in 2017 and again in 2019. The system serves &gt;190,000 people and has a capacity of 42 million gallons per day (MGD).</li> <li>The Lake Marion System started in 2008 and currently serves over 2,900 people and has a capacity of eight MGD</li> </ul>		

Activity	Description			
	Santee Cooper serves as the primary sponsor of several environmental initiatives:			
	Energy conservation (>200 million kWh saved a year vs. 2008)			
	<ul> <li>&gt;\$50 million in low-interest Smart Energy Loans for efficiency upgrades and renewable generation installations (solar panels)</li> </ul>			
	<ul> <li>Giveaway programs for energy-efficient compact fluorescent light bulbs and LED bulbs</li> </ul>			
	<ul> <li>Free online and in-home energy check-ups to help customers find ways to be more energy efficient and save money on their power bills</li> </ul>			
	<ul> <li>Rebates to help customers install efficient HVAC systems, lighting, refrigeration systems and other energy-efficient products at home and work</li> </ul>			
Environmental	Wildlife support			
Stewardship	<ul> <li>Help manage &gt;18,000 acres of fisheries and state wildlife management areas</li> </ul>			
	o Partnership with S.C.U.T.E. to protect loggerhead sea turtles in Georgetown and			
	Horry counties			
	Recycling			
	<ul> <li>The GOFER program has resulted in the recycling of 31 million gallons of used</li> </ul>			
	motor oil since 1990			
	<ul> <li>Gypsum from SO₂ removal used to produce drywall</li> </ul>			
	<ul> <li>Beneficially used more than 3 million tons of pond ash since 2014</li> </ul>			
	Coal Combustion Products			
	Santee Cooper has committed to beneficially reuse or place in lined landfills			
	Santee Cooper administers numerous educational programs, materials and opportunities			
	for students and educators to learn more about electricity, electrical safety and			
	environmental stewardship			
	Green Power Solar Schools     Callage and university denotions and scholarship support			
	<ul> <li>College and university donations and scholarship support</li> <li>Energy Educators Institute</li> </ul>			
Education	Energy Educators Institute     Old Santee Canal Park			
Education	Line worker education program (through Horry Georgetown and Trident Technical			
	Colleges)			
	Power Associates (through Horry Georgetown and Trident Technical Colleges)			
	Publications for use by teachers			
	Plant tours for students and the community			
	Interactive website for kids (becoming e-SMART)			

### Santee Cooper's Community Support

Through corporate donations, in-kind support, and our employees giving of their own time and resources, the Santee Cooper family supports the communities where we live, work and serve. The list of organizations and activities is extensive with some of the key initiatives outlined below.

Activity	Description
United Way Sponsorships	<ul> <li>Corporate initiative to collect donations through payroll deductions that support counties throughout the State</li> <li>Annual Day of Caring: Event sponsorship and over 100 employee volunteers</li> <li>Employees have donated over \$6 million in the last 12 years to United Way and their funded partners located in Berkeley, Charleston, Dorchester, Georgetown, Horry, and Anderson Counties</li> </ul>

Activity	Description
Holiday Seasons	<ul> <li>Celebrate The Season: Raised over \$800,000 since inception for local charities in Berkeley County, staffed by employee volunteers from Santee Cooper and other local entities</li> <li>Grinding of the Greens: Christmas tree grinding for mulch</li> <li>Assist with holiday lighting for Moncks Corner, St. Stephen, Murrells Inlet, Conway, Loris, and Surfside Beach</li> </ul>
Myrtle Beach Robotics	<ul> <li>Assistance with the annual First Robotics Palmetto Regional Competition in Myrtle Beach by setting up the event floor, in-kind printing donation for program booklets and employee volunteers serving as planning committee members, team mentors, judges, robot inspectors, referees, score keepers, volunteer coordinators and pit management</li> </ul>
School & Ballfield Lighting	<ul> <li>Provide assistance with ballfield lighting in Horry, Georgetown and Berkeley counties.</li> <li>We also assist in our Electric Cooperative service territories when requested.</li> </ul>
Employee Volunteerism	Employees volunteer in the community on average 12,500 hours per year
Fort Fairlawn	<ul> <li>Historic Revolutionary War fort site located inside Old Santee Canal Park</li> <li>Santee Cooper secures site with fencing and gate</li> </ul>
Berkeley County Museum & Heritage Center	<ul> <li>Museum is located inside Old Santee Canal Park, but not owned by Santee Cooper</li> <li>2.5-acre property with buildings and exhibits</li> <li>Only access to museum is through Santee Canal Park entrance</li> <li>Ingress &amp; egress easement rights</li> <li>Museum receives 10% of park gate revenue</li> </ul>
Franchise Agreements with Municipalities	<ul> <li>A portion of franchise fees are set aside to fund the conversion from overhead to underground distribution lines</li> <li>Santee Cooper fully matches the underground fund portion of franchise fees for Myrtle Beach, North Myrtle Beach, Loris, Surfside, Conway, Pawleys Island, and Moncks Corner</li> </ul>

### Santee Cooper Currently has Numerous Unique Long-Term Contractual Obligations

In the ordinary course of running its operations, Santee Cooper is exposed to many obligations and considerations. These obligations result in benefits to Santee Cooper's employees and retirees (pensions, healthcare and other benefits), customers (fuel and hedging contracts that help stabilize rates) and the environment (nuclear decommissioning, gypsum and ash pond management, and FERC license renewal). Santee Cooper's Reform Plan and customer pricing projections reflect our commitment to meet these obligations in the ordinary course of business going forward.

Category	Net Exposure	Description & Observations		
<b>Employee Ma</b>	Employee Matters			
Pension	\$343 million <sup>29</sup>	<ul> <li>\$326 million represents the portion of the State's net unfunded pension obligation attributed to Santee Cooper by the state retirement system</li> <li>\$17 million represents non-qualified components of our Supplemental Executive Retirement Plan (SERP)</li> </ul>		
ОРЕВ	\$186.6 million <sup>29</sup>	Represents Santee Cooper's net underfunded OPEB liabilities		

<sup>&</sup>lt;sup>29</sup> As of September 30, 2019.

Category	Net Exposure	Description & Observations		
		Santee Cooper participates in the State's health insurance program for retirees and existing employees (managed by PEBA)		
		• Santee Cooper does not participate in the State's OPEB Trust and is		
		responsible for separately funding its unfunded liability		
Operations				
Nuclear Decom- missioning	\$232.8 million <sup>30</sup> (Internal and External Trust Funding)	<ul> <li>Represents Santee Cooper's accumulated funding to address decommissioning of V.C. Summer Unit 1</li> <li>Santee Cooper funds two accounts, its (i) External Trust to fund the Nuclear Regulatory Commission (NRC) minimum; and its (ii) Internal Fund to fund projected costs in excess of the NRC minimum</li> <li>The funds in these two accounts are projected to be sufficient to cover the future cost of decommissioning the unit</li> </ul>		
Fuel, Transportation & Other Contracts	\$452 million <sup>31</sup>	Santee Cooper has various short- and long-term contracts in place to supply and transport coal and natural gas to its generation facilities		
Hedges	\$54 million <sup>32</sup>	<ul> <li>Santee Cooper has various hedges in place for natural gas and heating oil</li> <li>Santee Cooper has lines of credit (ISDA credit support agreements) in place to cover up to \$100 million of mark-to-market losses</li> </ul>		
American Gypsum	\$1.23 billion <sup>33</sup>	<ul> <li>Santee Cooper has an obligation to supply synthetic gypsum for beneficial reuse to American Gypsum through 2068</li> <li>At the time, this was a cost effective and environmentally friendly method to dispose of a byproduct and supported economic development</li> <li>At recent market prices for natural gas, Santee Cooper's production of gypsum is not sufficient to meet contract minimum requirements</li> <li>To meet minimum requirements, Santee Cooper is purchasing gypsum</li> </ul>		
Ash Ponds	\$317 million <sup>34</sup>	<ul> <li>Represents Santee Cooper's estimated remaining cost associated with the closure of its ash ponds</li> <li>Assumes either beneficial use or disposal in lined landfills</li> </ul>		
FERC License Renewal	\$84 – \$179 million <sup>35</sup>	<ul> <li>Santee Cooper's FERC license for its lake operations expired in 2006 and has been on year-to-year renewals since</li> <li>Based on an executed settlement agreement with multiple stakeholders and additional costs associated with the protection of certain endangered fish species (sturgeon)</li> <li>Santee Cooper will fund the costs associated with its FERC license renewal as the costs are incurred</li> </ul>		

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<sup>&</sup>lt;sup>30</sup> Internal and external trust funding as of September 30, 2019.

<sup>&</sup>lt;sup>31</sup> Coal supply contract exposure for remainder of contract period (2021) as of September 30, 2019. CSX rail contract exposure for remainder of contract period (2021) as of September 30, 2019. Natural Gas Transco Service Agreement exposure for remainder of contract period (2021) as of September 30, 2019. Value of Rainey Service Agreement with GEII as of September 30, 2019. Natural Gas Sequent / TEA Contract exposure for remainder of contract period (November 2017 to December 2020).

Based on NYMEX dated October 10, 2019, the open hedge contracts are reflecting a net loss for natural gas and heating oil instruments.

<sup>&</sup>lt;sup>33</sup> Reflects approximate nominal exposure of remaining contract period.

<sup>&</sup>lt;sup>34</sup> As of September 30, 2019.

<sup>&</sup>lt;sup>35</sup> Costs associated with increased flows not included.

Category	Net Exposure	Description & Observations	
St. Stephen	\$6 million per	• In 2035, Santee Cooper is required to assume responsibility for operation	
Hydro	year	and maintenance of the St. Stephen Hydro facility	

## Santee Cooper and its customers have access to significant risk and cost mitigation options as a result of being a government-owned public power authority

As a public power authority, Santee Cooper has access to programs that benefit its customers by reducing energy procurement risk as well as costs in emergency situations.

Activity	Description
FEMA Funding	<ul> <li>Santee Cooper can employ FEMA funding that is not available to IOUs during and after emergencies such as hurricanes</li> <li>FEMA event designation is based on total losses per county</li> <li>If Santee Cooper is sold to an IOU the new owner's losses may not be included in the county's loss total used to determine FEMA Event designation</li> <li>Santee Cooper's FEMA losses often qualify counties for FEMA assistance</li> <li>Excluding Santee Cooper's losses could mean agencies such as DHEC, DOT, SLED, and other Law Enforcement agencies would not qualify for FEMA funding</li> </ul>
Hydroelectricity	<ul> <li>Santee Cooper currently has access to 300 MW of firm, low-cost hydroelectric capacity through its allocation from Southeastern Power Administration (SEPA) at cost-based wholesale rates. This capacity cannot be assigned to an IOU</li> </ul>
Tax-Exempt Financing	Santee Cooper is able to issue tax-exempt debt to finance infrastructure projects

The activities described in this section demonstrate that Santee Cooper's value to the State is significant, with far reaching impact on both the economy and quality of life for its citizens. We will continue these activities in keeping with our public mission. Under new management or if Santee Cooper is sold, it is unlikely a private company with a for-profit mission would continue all the services and value Santee Cooper provides. Our Reform Plan maintains the services we currently provide and includes new initiatives with even greater value.

### 7 CONCLUSION

In developing this Reform Plan, Santee Cooper has embraced the opportunity offered by the 2019 General Assembly to look critically at each of our major responsibilities and develop new approaches that improve governance, provide a cleaner energy mix, and significantly reduce costs going forward for all of our customers—through leaner operations and aggressive debt reduction.

**Governance:** We will improve governance through new processes offering a more robust and transparent focus on resource planning and pricing principles, and through involving elected officials, customers and other key stakeholders in those processes. Improved governance provides added assurance that Santee Cooper will adhere to the resource development and pricing commitments laid out in the Reform Plan.

**Power Supply Roadmap:** A leaner, greener resource mix will save \$2.7 billion over 20 years (present value), increase our solar generation by more than 800% and reduce carbon emissions by 43% (compared to 2005)—all while maintaining excellent system reliability. This more diverse resource portfolio embraces innovation, is more adaptable to future business conditions, and reduces financial and planning risks through its focus on buying and not building major generating resources.

**Debt:** Santee Cooper will pay off at least \$3.6 billion of principal, equal to what is outstanding from the nuclear project, within 12 years. We will accomplish this through strategic debt refinancings, deployment of savings from the Power Supply Roadmap and other operational changes, and use of other internally generated funds. These initiatives yield debt service savings of \$1.6 billion (present value) over 40 years.

**Pricing:** The Reform Plan provides an operational and financial blueprint that ultimately holds customer prices stable, delivering a dozen years of flat or lower pricing to Central and 13 years of flat pricing to residential customers, all while maintaining healthy financial metrics. Future price increases would be significantly below the rate of inflation for the entire 20-year forecast period. This translates into a growing competitive advantage for Santee Cooper customers compared to those of neighboring investor-owned utilities.

Ultimately, the Santee Cooper Reform Plan builds on Santee Cooper's successes in providing low-cost, reliable electricity, without compromising our ability to deliver meaningful economic development, responsible environmental stewardship, and excellence in customer service, safety and innovation. Because we are state-owned and not beholden to shareholders, we can, and will, continue to focus all our resources on what most benefits our customers and all of South Carolina.



### 8 Appendix



**8.1 Legislative Requirements Appendix** 

### 8.1 LEGISLATIVE REQUIREMENTS APPENDIX

The table below corresponds to the instructions issued by the DOA to Santee Cooper in the process letter dated October 14, 2019 and by reference, section 4(A) of Act 95. The schedule identifies where the specific elements of the required information are situated in the document and the related appendices.

Legislative Requirement	Reform Plan	DOA Conforming Assumptions Case
<ol> <li>Plan for Generation, Po Resources:</li> </ol>	urchased Power and Other	
a. Forecasted Demand	(i) Appendix 8.2.7: Load Forecast	(i) Appendix 8.2.7: Load Forecast
b. Timeline for executing the plan	(i) Appendix 8.2.1: 2020 Reform Plan Resource Planning Timeline	(i) Appendix 8.2.2: DOA Conforming Assumptions Case Resource Planning Timeline
c. Projected financial impact on all customers	<ul> <li>(i) Appendix 8.4.1: 2020 Reform Plan Electric Operations         Financial Forecast, Schedule         E – Projected System         Revenue Requirements (pg 37)</li> <li>(ii) Appendix 8.4.1: 2020 Reform Plan Electric Operations         Financial Forecast, Schedule F – Electric Operating Revenues         Per Kilowatt Hour By Class         (pg 38)</li> </ul>	<ul> <li>(i) Appendix 8.4.2: 2020 DOA         Conforming Assumptions         Case Electric Operations         Financial Forecast, Schedule         E – Projected System         Revenue Requirements (pg         37)</li> <li>(ii) Appendix 8.4.2: 2020 DOA         Conforming Assumptions         Case Electric Operations         Financial Forecast, Schedule         F – Electric Operating         Revenues Per Kilowatt Hour         By Class (pg 38)</li> </ul>
d. Assumptions underlying the plan – additional infrastructure, financial ratios, CIF contribution, inflation/escalation rates, fuel costs, payment to state, projected GAAP financials etc.	<ul> <li>(i) Appendix 8.2.3: Commodity Assumptions</li> <li>(ii) Appendix 8.3: nFront Resource Planning Study, Appendix B – Study Assumptions (p73)</li> <li>(iii) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule A – Financial Metrics: Functionalized Future Debtto-Capitalization (pg 33)</li> <li>(iv) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule</li> </ul>	<ul> <li>(i) Appendix 8.2.3: Commodity         Assumptions</li> <li>(ii) Appendix 8.3: nFront         Resource Planning Study,         Appendix B – Study         Assumptions (p73)</li> <li>(iii) Appendix 8.4.2: 2020 DOA         Conforming Assumptions         Case Electric Operations         Financial Forecast, Schedule         A – Financial Metrics:         Functionalized Future Debtto-Capitalization (pg 33)</li> <li>(iv) Appendix 8.4.2: 2020 DOA         Conforming Assumptions</li> </ul>

Legislative Requirement	Reform Plan	DOA Conforming Assumptions Case
	B: Functionalized Financial Metrics: Debt Service Coverage (pg 34)  (v) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule 10, Fuel Schedule (pg 26)  (vi) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule E – Projected System Revenue Requirements (pg 37)  (vii) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Exhibit X – Statement of Financial Position (pg 11)  (viii) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Exhibit IX – Earnings Statement (pg 10)  (ix) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule C: Cash Flow Statement (pg 35)	Case Electric Operations Financial Forecast, Schedule B: Functionalized Financial Metrics: Debt Service Coverage (pg 34)  (v) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule 10, Fuel Schedule (pg 26)  (vi) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule E – Projected System Revenue Requirements (pg 37)  (vii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Exhibit X – Statement of Financial Position (pg 11)  (viii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Exhibit IX – Earnings Statement (pg 10)  (ix) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Exhibit IX – Earnings Statement (pg 10)  (ix) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule C: Cash Flow Statement (pg 35)  (x) Main body of Reform Plan Section 4: DOA Conforming Assumption Case (pg 70 of main body)
e. Projected Rates and Revenue Requirements	<ul> <li>(i) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule 1 (pg 17 and 18)</li> <li>(ii) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule E – Projected System</li> </ul>	(i) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule 1 (pg 17 and 18) (ii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations

Legislative Requirement	Reform Plan	DOA Conforming
	Revenue Requirements (pg 37)  (iii) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule F – Electric Operating Revenues Per Kilowatt Hour By Class (pg38)	Assumptions Case  Financial Forecast, Schedule E – Projected System Revenue Requirements (pg 37)  (iii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule F – Electric Operating Revenues Per Kilowatt Hour By Class (pg38)
2. Plan for transmission invo		
a. Timeline for executing the plan	(i) Appendix 8.2.6: <i>Transmission Plans</i>	(i) Appendix 8.2.6:  Transmission Plans
b. Projected financial impact on all customers	(i) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule E – Projected System Revenue Requirements (pg 37) (ii) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule F – Electric Operating Revenues Per Kilowatt Hour By Class (pg 38)	(i) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule E – Projected System Revenue Requirements (pg 37) (ii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule F – Electric Operating Revenues Per Kilowatt Hour By Class (pg 38)
c. Assumptions underlying the plan – additional infrastructure, financial ratios, CIF contribution, inflation/escalation rates, fuel costs, payment to state, projected GAAP financials etc.	<ul> <li>(i) Appendix 8.3: nFront         Resource Planning Study,         Appendix A – Analytical         Process and Results (pg 47)</li> <li>(ii) Appendix 8.4.1: 2020 Reform         Plan Electric Operations         Financial Forecast, Schedule         A – Financial Metrics:         Functionalized Future Debt-         to-Capitalization (pg 33)</li> <li>(iii) Appendix 8.4.1: 2020 Reform         Plan Electric Operations         Financial Forecast, Schedule         B: Functionalized Financial         Metrics: Debt Service         Coverage (pg 34)</li> <li>(iv) Appendix 8.4.1: 2020 Reform         Plan Electric Operations</li> </ul>	(i) Appendix 8.3: nFront Resource Planning Study, Appendix A – Analytical Process and Results (pg 47)  (ii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule A – Financial Metrics: Functionalized Future Debt- to-Capitalization (pg 33)  (iii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule B: Functionalized Financial Metrics: Debt Service Coverage (pg 34)

Legislative Requirement	Reform Plan	DOA Conforming
	Financial Forecast, Schedule 10, Fuel Schedule (pg 26) (v) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule E - Projected System Revenue Requirements (pg 37) (vi) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Exhibit X - Statement of Financial Position (pg 11) (vii) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Exhibit IX - Earnings Statement (pg 10) (viii) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule C: Cash Flow Statement (pg 35)	(iv) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule 10, Fuel Schedule (pg 26) (v) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule E – Projected System Revenue Requirements (pg 37) (vi) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Exhibit X – Statement of Financial Position (pg 11) (vii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Exhibit IX – Earnings Statement (pg 10) (viii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Exhibit IX – Earnings Statement (pg 10) (viii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule C: Cash Flow Statement (pg 35)
3. Plans to address V.C. Summer Debt	<ul> <li>(i) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule D: Financial Impact of Nuclear Debt on Customers (pg 36)</li> <li>(ii) Main body of Reform Plan Section 1.2.2: Debt Management (pg 35) of main body)</li> </ul>	(i) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule D: Financial Impact of Nuclear Debt on Customers (pg 36) (ii) Main body of Reform Plan Section 1.2.2: Debt Management (pg 35) of main body)
4. Reform, restructuring and operational changes	<ul> <li>(i) Main body of Reform Plan         Section 1: Reform Plan (pg 13         of main body)</li> <li>(ii) Main body of Reform Plan         Section 2: Governance &amp;</li> </ul>	<ul> <li>(i) Main body of Reform Plan Section 1: Reform Plan (pg 13 of main body)</li> <li>(ii) Main body of Reform Plan Section 2: Governance &amp;</li> </ul>

Legislative Requirement	Reform Plan	DOA Conforming Assumptions Case
	Oversight (pg 53 of main body)  (iii) Main body of Reform Plan Section 3: Central Agreement Proposal (pg 59 of main body)  (iv) Main body of Reform Plan Section 5: Goals & Metrics (pg 72)	Oversight (pg 53 of main body)  (iii) Main body of Reform Plan Section 3: Central Agreement Proposal (pg 59 of main body)  (iv) Main body of Reform Plan Section 5: Goals & Metrics (pg 72)
5. Other information relevant as to future operations as a state asset	<ul> <li>(i) Main body of Reform Plan Section 6: Broad Mission, Unique Considerations &amp; Other Obligations (pg 76 of main body)</li> <li>(ii) Appendix 8.6: Public Power vs. IOU</li> <li>(iii) Main body of Reform Plan Section ii: Overview of Santee Cooper (pg 4 of main body)</li> <li>(iv) Appendix 8.9.2: Economic Impact Consultant's Report</li> </ul>	<ul> <li>(i) Main body of Reform Plan Section 6: Broad Mission, Unique Considerations &amp; Other Obligations (pg 76 of main body)</li> <li>(ii) Appendix 8.6: Public Power vs. IOU</li> <li>(iii) Main body of Reform Plan Section ii: Overview of Santee Cooper (pg 4 of main body)</li> <li>(iv) Appendix 8.9.2: Economic Impact Consultant's Report</li> </ul>
6. Projected financial impact on all customer classes for satisfaction of all debt	<ul> <li>(i) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule B: Financial Metrics: Functionalized Debt Service Coverage (pg 34)</li> <li>(ii) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule E: Projected System Revenue Requirements (pg 37)</li> <li>(iii) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule 1, Cash Flow Statement (pg 17 and 18)</li> <li>(iv) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule 7, Long-Term Debt Service Paid from Revenues (pg 23)</li> <li>(v) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule</li> </ul>	(i) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule B: Financial Metrics: Functionalized Debt Service Coverage (pg 34) (ii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule E: Projected System Revenue Requirements (pg 37) (iii) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule 1, Cash Flow Statement (pg 17 and 18) (iv) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule

Legislative Requirement	Reform Plan	DOA Conforming Assumptions Case
	9, Commercial Paper/Direct Purchase Financing (pg 25)	7, Long-Term Debt Service Paid from Revenues (pg 23)  (v) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule 9, Commercial Paper/Direct Purchase Financing (pg 25)
7. Projection of Santee Cooper jobs	(i) Main body of Reform Plan Section 1.2.1: Human Resources (pg 33 of main body)	(i) Main body of Reform Plan Section 1.2.1: Human Resources (pg 33 of main body)

Legislative Requirement	Reform Plan	DOA Conforming Assumptions Case
	(v) Appendix 8.4.1: 2020 Reform Plan Electric Operations Financial Forecast, Schedule 9, Commercial Paper/Direct Purchase Financing (pg 25)	Case Electric Operations Financial Forecast, Schedule 7, Long-Term Debt Service Paid from Revenues (pg 23) (v) Appendix 8.4.2: 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast, Schedule 9, Commercial Paper/Direct Purchase Financing (pg 25)
7. Projection of Santee Cooper jobs	(i) Main body of Reform Plan Section 1.2.1: <i>Human</i> <i>Resources</i> (pg 33 of main body)	(i) Main body of Reform Plan Section 1.2.1: Human Resources (pg 33 of main body)



### 8.2 Assumptions



### **8.2.1** Reform Plan Resource Planning Timeline

### 8.2.1 Reform Plan - Resource Planning Timeline

The table below presents a detailed schedule of the Reform Plan's envisioned long-term resource roadmap

### **Reform Plan - Resource Planning Timeline (MW)**

	Retirements	Capacity Purchase	Builds <sup>1</sup>	Solar	PPA <sup>2</sup>	DLC <sup>3</sup>	BS <sup>4</sup>
2020						10	
2021						5	
2022						10	
2023	Retire Winyah 3 & 4 (580 MW)	25	Two quick start CTs (50 MW each)			25	
2024				1,000		25	50
2025						25	0
2026						25	50
2027	Retire Winyah 1& 2 (570 MW)		NGCC (500 MW)	250		25	0
2028				100		5	100
2029				75		5	0
2030				75		5	0
2031					35	5	0
2032					55	5	0
2033					50	5	0
2034					55	5	0
2035					55	5	0
2036					60	5	0
2037					55	5	0
2038					60	0	0
2039					65	0	0
	(1,150)	25	600	1,500	490	200	200

<sup>&</sup>lt;sup>1</sup> Reform Plan assumed the CC in 2027 at a Pee Dee site.

<sup>&</sup>lt;sup>2</sup> PPA = Power Purchase Agreement

<sup>&</sup>lt;sup>3</sup> DLC = Direct Load Control

<sup>&</sup>lt;sup>4</sup> BS = Battery Storage



# 8.2.2 DOA Conforming Assumptions Case Resource Planning Timeline

### 8.2.2 DOA Conforming Assumptions Plan - Resource Planning Timeline

The table below presents a detailed schedule of the envisioned long-term resource roadmap for the DOA Conforming Assumptions Case

**DOA Conforming Assumptions Case - Resource Planning Timeline (MW)** 

	Retirements	Capacity Purchase	Builds <sup>1</sup>	Solar	PPA <sup>2</sup>	DLC <sup>3</sup>	BS <sup>4</sup>
2020						10	
2021						5	
2022						10	
2023	Retire Winyah 3 & 4 (580 MW)	25	Two quick start CTs (50 MW each)			25	
2024				1,000		25	50
2025						25	0
2026						25	50
2027	Retire Winyah 1& 2 (570 MW)		NGCC (500 MW) plus Two quick start CTs (50 MW each)	250		25	0
2028				100		5	100
2029				75		5	0
2030				75		5	0
2031						5	0
2032						5	0
2033					40	5	0
2034					55	5	0
2035					55	5	0
2036					60	5	0
2037					55	5	0
2038					60	0	0
2039					65	0	0
	(1,150)	25	700	1,500	390	200	200

<sup>&</sup>lt;sup>1</sup> Conforming Plan assumed the CC in 2027 at a site near V.C. Summer.

<sup>&</sup>lt;sup>2</sup> PPA = Power Purchase Agreement

<sup>&</sup>lt;sup>3</sup> DLC = Direct Load Control

<sup>&</sup>lt;sup>4</sup> BS = Battery Storage



### **8.2.3 Commodity Assumptions**

### **Reform Plan and DOA Conforming Assumption Case Assumptions**

The Reform Plan utilizes different commodity and electric market price assumptions than the DOA Conforming Assumption Case. It also employs different assumptions for solar purchases, demand side management, and PPAs. These assumptions are based on our professional judgment, experience, third-party research, and indicative market pricing.

As part of our planning efforts, we looked at several scenarios to optimize for a cleaner generation mix, reliable service and low rates. To that end, we have presented two of the most relevant scenarios in our proposal — they comprise of the Reform Plan and DOA Conforming Assumption Case. The primary differences between the two scenarios relate to commodity-related assumptions and the tables below lay out the differences between them side-by-side for ease of reference.

### **Coal Assumptions**

Avg.	Delivery	Price	(\$)
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Delivery	Price	(\$/	mm	btu)
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Year	Reform Plan	DOA Conforming Assmuption Case	Difference		Year	Year Reform Plan	DOA Conforming Year Reform Plan Assumption Case
20	\$72.12	\$74.99	(\$2.87)	20	020	\$2.98	\$2.98 \$3.10
21	\$72.19	\$76.28	(\$4.08)	2021		\$2.98	\$2.98 \$3.15
022	\$70.39	\$75.32	(\$4.93)	2022		\$2.90	\$2.90 \$3.07
023	\$72.25	\$77.21	(\$4.96)	2023		\$2.98	\$2.98 \$3.14
024	\$73.58	\$76.01	(\$2.44)	2024		\$3.03	\$3.03 \$3.15
025	\$76.79	\$78.40	(\$1.61)	2025		\$3.16	\$3.16 \$3.25
026	\$77.70	\$80.24	(\$2.54)	2026		\$3.20	\$3.20 \$3.32
027	\$79.11	\$82.68	(\$3.57)	2027		\$3.26	\$3.26 \$3.42
028	\$80.90	\$84.39	(\$3.49)	2028		\$3.33	\$3.33 \$3.49
029	\$82.92	\$87.11	(\$4.19)	2029		\$3.42	\$3.42 \$3.59
30	\$85.30	\$89.81	(\$4.51)	2030		\$3.52	\$3.52 \$3.70
31	\$87.00	\$91.93	(\$4.94)	2031		\$3.59	\$3.59 \$3.79
32	\$88.94	\$94.52	(\$5.58)	2032		\$3.67	\$3.67 \$3.90
033	\$90.86	\$96.42	(\$5.56)	2033		\$3.74	\$3.74 \$3.97
034	\$92.94	\$98.40	(\$5.46)	2034		\$3.83	\$3.83 \$4.06
035	\$94.98	\$100.83	(\$5.85)	2035		\$3.91	\$3.91 \$4.16
36	\$98.53	\$103.41	(\$4.88)	2036		\$4.06	\$4.06 \$4.26
2037	\$102.11	\$105.97	(\$3.85)	2037		\$4.21	\$4.21 \$4.37
38	\$105.70	\$107.66	(\$1.95)	2038		\$4.36	\$4.36 \$4.44
039	\$109.28	\$110.32	(\$1.04)	2039		\$4.50	\$4.50 \$4.55

### **Natural Gas Assumptions**

(\$1.52)

(\$1.62)

(\$1.65)

(\$1.65)

(\$1.68)

### Henry Hub Commodity Price (\$/MMBtu)

	DOA Conforming				
Year	Reform Plan	Assumption Case	Difference		
2020	\$2.48	\$3.21	(\$0.73)		
2021	\$2.44	\$3.18	(\$0.74)		
2022	\$2.50	\$3.25	(\$0.75)		
2023	\$2.57	\$3.46	(\$0.89)		
2024	\$2.64	\$3.72	(\$1.08)		
2025	\$2.78	\$4.06	(\$1.28)		
2026	\$2.85	\$4.22	(\$1.37)		
2027	\$2.96	\$4.34	(\$1.38)		
2028	\$3.25	\$4.52	(\$1.27)		
2029	\$3.36	\$4.63	(\$1.27)		
2030	\$3.46	\$4.77	(\$1.31)		
2031	\$3.56	\$4.85	(\$1.29)		
2032	\$3.71	\$5.12	(\$1.41)		
2033	\$3.86	\$5.30	(\$1.44)		
2034	\$3.99	\$5.47	(\$1.48)		

### Gas Hedge Gain (Loss)

		DOA Conforming	
Year	Reform Plan	Assumption Case	Difference
2020	(\$17,172,601)	\$9,907,985	(\$27,080,586)
2021	(\$15,614,333)	\$11,250,147	(\$26,864,480)
2022	(\$12,450,685)	\$16,164,892	(\$28,615,577)

### Rainey FT Gas Transportation Adder (\$/MMBtu)

\$5.63

\$5.85

\$6.00

\$6.13

\$6.29

2035

2036

2037

2038

2039

\$4.11

\$4.23

\$4.35

\$4.48

\$4.61

Rainey FT Gas Transportation Adder (\$/MMBtu)							
	DOA Conforming						
Year	Reform Plan	Assumption Case	Difference				
2020	\$0.04	\$0.01	\$0.04				
2021	\$0.04	\$0.01	\$0.04				
2022	\$0.04	\$0.01	\$0.04				
2023	\$0.04	\$0.00	\$0.04				
2024	\$0.04	\$0.00	\$0.04				
2025	\$0.04	\$0.01	\$0.03				
2026	\$0.04	\$0.02	\$0.03				
2027	\$0.04	\$0.02	\$0.02				
2028	\$0.04	\$0.03	\$0.02				
2029	\$0.04	\$0.02	\$0.02				
2030	\$0.04	\$0.03	\$0.02				
2031	\$0.04	\$0.03	\$0.02				
2032	\$0.04	\$0.03	\$0.01				
2033	\$0.04	\$0.03	\$0.01				
2034	\$0.04	\$0.04	\$0.01				
2035	\$0.04	\$0.04	\$0.01				
2036	\$0.04	\$0.04	(\$0.00)				
2037	\$0.04	\$0.04	(\$0.00)				
2038	\$0.04	\$0.04	(\$0.00)				
2039	\$0.04	\$0.05	(\$0.00)				

### Rainey IT Gas Transportation Adder (\$/MMBtu)

DOA Conforming					
Year	Reform Plan	Assumption Case	Difference		
2020	\$0.64	\$0.58	\$0.06		
2021	\$0.64	\$0.46	\$0.17		
2022	\$0.64	\$0.35	\$0.29		
2023	\$0.64	\$0.28	\$0.36		
2024	\$0.64	\$0.20	\$0.44		
2025	\$0.64	\$0.19	\$0.45		
2026	\$0.64	\$0.18	\$0.46		
2027	\$0.64	\$0.17	\$0.46		
2028	\$0.64	\$0.16	\$0.47		
2029	\$0.64	\$1.17	(\$0.53)		
2030	\$0.64	\$1.17	(\$0.54)		
2031	\$0.64	\$1.17	(\$0.54)		
2032	\$0.64	\$1.18	(\$0.54)		
2033	\$0.64	\$1.18	(\$0.54)		
2034	\$0.64	\$1.18	(\$0.55)		
2035	\$0.64	\$1.18	(\$0.55)		
2036	\$0.64	\$1.19	(\$0.55)		
2037	\$0.64	\$1.19	(\$0.55)		
2038	\$0.64	\$1.19	(\$0.56)		
2039	\$0.64	\$1.19	(\$0.56)		

### NG 541 CC Gas Transportation Adder (\$/MMBtu)

Fixed	Gas	Transportation	(\$)
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DOA Conforming				DOA Conforming			
Year	Reform Plan	Assumption Case	Difference	Year	Reform Plan	Assumption Case	Difference
2020	(\$0.40)	\$0.67	(\$1.07)	2020	-	-	-
2021	(\$0.44)	\$0.59	(\$1.03)	2021	-	-	-
2022	(\$0.52)	\$0.51	(\$1.03)	2022	-	-	-
2023	(\$0.53)	\$0.49	(\$1.01)	2023	-	-	-
2024	(\$0.53)	\$0.44	(\$0.97)	2024	-	-	-
2025	(\$0.52)	\$0.43	(\$0.95)	2025	-	-	-
2026	(\$0.52)	\$0.42	(\$0.94)	2026	-	-	-
2027	(\$0.53)	\$0.40	(\$0.93)	2027	\$55,649,617	\$24,946,598	\$30,703,018
2028	(\$0.53)	\$0.39	(\$0.92)	2028	\$55,670,707	\$25,037,190	\$30,633,516
2029	(\$0.52)	\$0.41	(\$0.93)	2029	\$55,692,218	\$24,998,667	\$30,693,551
2030	(\$0.52)	\$0.41	(\$0.93)	2030	\$55,714,160	\$25,025,485	\$30,688,675
2031	(\$0.52)	\$0.41	(\$0.93)	2031	\$55,736,541	\$25,052,839	\$30,683,702
2032	(\$0.52)	\$0.42	(\$0.93)	2032	\$55,759,369	\$25,145,556	\$30,613,813
2033	(\$0.51)	\$0.42	(\$0.94)	2033	\$55,782,654	\$25,109,199	\$30,673,455
2034	(\$0.51)	\$0.43	(\$0.94)	2034	\$55,806,405	\$25,138,228	\$30,668,177
2035	(\$0.51)	\$0.43	(\$0.94)	2035	\$55,830,630	\$25,167,837	\$30,662,793
2036	(\$0.51)	\$0.43	(\$0.94)	2036	\$55,855,340	\$25,262,854	\$30,592,486
2037	(\$0.51)	\$0.44	(\$0.94)	2037	\$55,880,545	\$25,228,844	\$30,651,701
2038	(\$0.51)	\$0.44	(\$0.94)	2038	\$55,906,253	\$25,260,265	\$30,645,988
2039	(\$0.50)	\$0.44	(\$0.94)	2039	\$55,932,476	\$25,292,315	\$30,640,161

<sup>\*</sup>The site of the 2027 541 CCU in the DOA Conforming Assumption Plan moves to a near Summer site from the Pee Dee site in the Reform Plan

### **Market Price Assumptions**

### Electric Market (7x24 Hourly Prices, \$/MWh)

Electric Market (7X2 1 Heart) 1 Heas) \$7 Miles						
	DOA Conforming					
Year	Reform Plan	Difference				
2020	\$28.73	\$35.00	(\$6.27)			
2021	\$28.32	\$34.24	(\$5.92)			
2022	\$28.44	\$34.38	(\$5.94)			
2023	\$28.89	\$36.08	(\$7.19)			
2024	\$28.91	\$37.47	(\$8.56)			
2025	\$29.42	\$39.47	(\$10.05)			
2026	\$31.22	\$42.84	(\$11.62)			
2027	\$33.41	\$45.56	(\$12.15)			
2028	\$36.25	\$48.84	(\$12.59)			
2029	\$39.10	\$52.47	(\$13.37)			
2030	\$41.61	\$55.89	(\$14.28)			
2031	\$42.84	\$56.86	(\$14.02)			
2032	\$44.11	\$59.92	(\$15.81)			
2033	\$45.37	\$61.98	(\$16.61)			
2034	\$46.69	\$63.86	(\$17.17)			
2035	\$48.05	\$65.77	(\$17.72)			
2036	\$49.49	\$68.28	(\$18.79)			
2037	\$50.90	\$69.96	(\$19.06)			
2038	\$52.38	\$71.52	(\$19.14)			
2039	\$53.91	\$73.31	(\$19.40)			

<sup>\*\$26</sup> market floor price was used for the Reform Plan



### 8.2.4 Solar RFI



November 20, 2019

Vicky Budreau, Vice President, Fuels Strategy & Supply Carey Salisbury, Manager - HLC Generation South Carolina Public Service Authority 1 Riverwood Drive Moncks Corner, SC 29461

**Subject: Initial Assessment of RFI Submittals** 

Vicky and Carey:

Santee Cooper published a Request for Interest and Indicative Pricing pertaining to Solar Capacity and Energy ("RFI") on October 15, 2019.

The RFI requested written expressions of interest, with indicative pricing and project information, from qualified suppliers of output and other attributes from photovoltaic (PV) solar resources. More specifically, the RFI provided as follows:

- Santee Cooper seeks to obtain information necessary for Santee Cooper's ongoing planning processes
  and identify through the RFI a limited number of parties that would be invited to participate in a byinvitation-only procurement process after the completion of the current H4287 process (the "RFP
  Process");
- 2. Invitations to participate in the future RFP Process will be made based on Santee Cooper's evaluation and ranking of responses to this RFI considering experience, indicative pricing, and other factors as further described in the RFI;
- 3. Through the future RFP Process, Santee Cooper will seek proposals for power purchase agreements ("PPAs") to provide a portion of the 1,000 MW of installed solar capacity targeted by 2024 in Santee Cooper's current load and resource plan;
- 4. Santee Cooper prefers for the total capacity placed under contract through the RFP Process to be sourced from multiple solar projects, located at geographically diverse sites, with each project having an installed capacity in the range of 25 MWac to 125 MWac; and
- 5. Santee Cooper anticipates each solar project would, without limitation, be planned, financed, implemented in all respects, operated, maintained, insured, and retired by the project developer, and its successors, to deliver agreed upon output and other attributes to Santee Cooper under a PPA over an agreed upon 15 to 25 year contract term.

To date, Santee Cooper has received submittals from 25 Respondents. The Respondents have provided a total of approximately 245 options for Santee Cooper's consideration based on 76 different potential solar power projects. The options addressed relate to alternative regarding PPA term length, whether prices would be level or escalating over the term of the PPA, whether Santee Cooper would provide land or bear certain costs of interconnecting the project with the transmission system, whether and the extent to which the project would include energy storage capability, and the number of projects for which Santee Cooper would contract with the same seller.

### **Summary of Initial Assessment of RFI Submittals**

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Overall, most Respondents provided information that demonstrates significant experience in development of solar projects, which lends credibility to the information provided to Santee Cooper in response to the RFI. For instance, most Respondents' teams have developed, financed, or managed between 340 MW to almost 5,000 MW of solar projects and are involved with between 700 MWs to 3,000 MWs of solar capacity in the development pipeline.

The indicative pricing provided by the Respondents supports the reasonableness of Santee Cooper's assumptions regarding the cost of purchasing output from solar plants over the planning period used in developing the Reform Plan.

For instance, Table 1 below shows the most favorable indicative price proposals received for projects totaling 854 MW of solar capacity and energy. As shown on the last line of Table 1, the weighted average of the levelized prices for the listed proposals is approximately 27.90 \$/MWh.

TABLE 1 - INDICATIVE PRICES FOR THE OUTPUT OF SOLAR PROJECTS<sup>1</sup>

Solar Capacity and Energy Projects Indicative 20-Year Level Prices					
Project ID	Transmission Interconnection	Project Capacity (MWac)	Levelized Energy Price (\$/MWh)		
14.4	Southern Company	125	24.95		
22.1	ITN <sup>2</sup>	100	26.00		
16.2	ITN	100	27.85		
18.1 <sup>3</sup>	ITN	100	28.39		
18.3	ITN	100	28.39		
13.5	ITN	40	28.75		
8.2	ITN	75	28.91		
13.8	ITN	20	29.15		
24.15	ITN	74	29.22		
13.2	ITN	45	29.25		
11.13	ITN	75	29.29		
Total (Rounded)	ITN	854	27.90		

<sup>&</sup>lt;sup>1</sup> Proposals included assume 20-year PPA terms, seller bears all costs of the project including land lease costs, and output of the project is delivered to the Santee Cooper transmission system at seller's cost. Santee Cooper anticipates highest ranked Respondents would participate in a by-invitation-only RFP process through which Santee Cooper would procure approximately 500 MW of solar capacity. The most favorable 854 MW of proposals were included in this analysis for conservatism.

<sup>&</sup>lt;sup>2</sup> "ITN" refers to the Integrated Transmission Network owned by Santee Cooper and Central Electric Power Cooperative, Inc..

<sup>&</sup>lt;sup>3</sup> The indicative prices for Projects 18.1 and 18.3 assume Santee Cooper contracts to purchase output of both projects. Should Santee Cooper choose to contract for only one of the projects, the indicative price would be 28.77 \$/MWh.

### Summary of Initial Assessment of RFI Submittals

Based on our experience with other procurement processes, based on this data, we would expect Santee Cooper to have the opportunity to enter into PPAs priced at levels 5% to 15% below the prices provided by Respondents at this stage in the procurement process. Therefore, the indicative pricing provided to date would imply PPA prices in the range of 23.70 to 26.50 \$/MWh level over the 20-year term of the PPA, which compares favorably to the 25.00 \$/MWh average cost assumption used by Santee Cooper in developing its Reform Plan.

Five (5) of the 25 Respondents also provided information regarding adding energy storage devices to the solar energy projects on which their indicative proposals were based. Four of the 5 Respondents that addressed energy storage provided proposals for 20-year PPAs; the 5<sup>th</sup> Respondent proposed a 15-year PPA.

Table 2 below summarizes information provided by Respondents regarding the additional fixed charges for adding energy storage capability to their proposed solar projects.

The values shown represent the present worth of the monthly charges over the 20-year PPA term proposed by the Respondents. Therefore, the values shown are generally comparable to the investment assumed by Santee Cooper to provide energy storage capability in developing the Reform Plan.

**Indicative Prices for Adding Energy Storage** to Solar Capacity and Energy Projects Project ID No. COD **Storage Hours PV of Proposed** Storage Charges (\$/kWh) 11.21 Jan-22 1 210 3 11.23 Jan-22 215 11.27 Jul-22 3 244 Jul-22 3 11.35 244 11.19 Jul-22 3 249 11.31 Jul-22 3 249 11.25 Jul-22 1 280 Jul-22 11.33 1 280 Jul-22 1 11.17 285 11.29 Jul-22 1 285 4 2.12 Dec-23 329 25.4 4 Apr-22 331 2 25.1 Apr-22 350 19.2 Oct-23 2 375

TABLE 2 - PROPOSED COST OF ADDING ENERGY STORAGE CAPABILITY<sup>4</sup>

By comparison, the assumption made in preparing the Reform Plan was derived from data that projected the upfront capital costs of energy storage would be 288 \$/kWh in 2022. As shown above in Table 2, the

<sup>&</sup>lt;sup>4</sup> The values shown are the cumulative present worth of the monthly indicative prices Respondents attributed to the additional of energy storage capability to their solar projects. The values are computed based on Santee Cooper's assumed cost of capital of 3.76%.

Confidential and Competitive Info for H4287 Proposal (CCIH4287)

nFront Consulting LLC

## **Summary of Initial Assessment of RFI Submittals**

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more favorable proposals indicate a cumulative present worth cost range to Santee Cooper from 210 to 285 \$/kWh for storage capability placed into service in 2022<sup>5</sup>.

Overall, Respondents with significant demonstrated experience in development of solar projects have provided indicative pricing information that supports the reasonableness of the assumptions made by Santee Cooper in preparing the Reform Plan with respect to the cost of purchasing energy from solar projects.

Data provided regarding the cost of adding energy storage capability to those solar projects is more limited, but it also supports the assumptions made as to the capital cost of energy storage capability in the early study years. Costs of energy storage capability is widely expected to decline thereafter due to advances in technology and manufacturing as assumed by Santee Cooper in preparing its Reform Plan.

Respectfully Submitted,

nFront Consulting LLC

John F. Painter

**CEO and Executive Consultant** 

John F. Vainter

<sup>&</sup>lt;sup>5</sup> Charges shown in Table 2 would cover the seller's investment in and annual operating costs for renewals, replacements and maintenance on the storage equipment. Santee Cooper included an allowance for such operating costs in addition to amortization of the assumed investment, in preparing its Reform Plan, which makes this comparison conservative.



**8.2.5** Power Purchase Agreements Term Sheets

#### **Proprietary and Confidential Business Information**

#### **System Power Sale**

**Seller:** Southern Power Company (SPC)

**Buyer:** Santee Cooper

**Primary Source:** SPC resources within Southern Company Balancing Area

**Product:** Up to 300 MW 7x24 Must-Take Block

Note: SPC is willing to provide pricing for other structures as needed by Santee Cooper

**Term:** 10-year: January 1, 2031 – December 31, 2040

**Firmness:** Firmness of supply is equal to that of Southern Company's utility subsidiaries firm

territorial load.

In the event Southern Company is experiencing a system emergency and determines it is necessary to interrupt firm territorial load, then this sale will be interrupted on a pro rata

basis, as needed to preserve the integrity of the system.

**Pricing:** 

Capacity Charge: \$6.00 / kW-month (2031\$), escalating 2% per year

In addition to the capacity price listed above, pricing will include a \$1.33 per kW-month charge for natural gas firm transportation (FT) demand charges. This equates to the current SNG tariff rate of \$7.90/MMBtu/Month for service to SPC's Plant Harris. Pipeline demand charges would be a pass-through to Santee Cooper. If the pipeline tariff rate changes (upward or downward) during the term, the \$1.33 rate would change by the

same percentage as the pipeline tariff rate change.

Energy Price: The Energy Payment (EP) formula is proposed as follows for each hour energy is

delivered:

 $EP = (DE \times VOM_{MWH}) + (GHR \times DE \times GCP)$ 

Where:

DE = Delivered Energy measured in MWh VOM<sub>MWH</sub> = Variable O&M Energy Rate

GHR = Guaranteed Heat Rate = 7.0 MMBtus/MWh

GCP = Gas Commodity Price

Variable O&M Energy

Rate:

\$3.34 / MWh (2031\$), escalating annually on January 1st at the Consumer Price Index

(CPI).

Gas Commodity Price: The Gas Commodity Price (GCP) will be, for each MMBtu of gas delivered hereunder,

an amount equal to the Gas Daily Midpoint price in \$/MMBtu as published by Platts in Gas Daily in the Daily Price Survey section under the Midpoint Column for Southern

#### **Proprietary and Confidential Business Information**

## **System Power Sale**

Natural, Louisiana, plus \$0.02 ("Gas Daily Price"), plus Southern Natural Gas Pipeline's (SNG) Zone 0 to Zone 2 variable firm transportation charges, fuel retention charges, surcharges and taxes, if applicable.

**Transmission:** 

Transmission service up to the Delivery Point will be at Seller's sole responsibility and expense. Transmission service at and beyond the Delivery Point will be at Buyer's sole responsibility and expense. As such, Buyer will make all arrangements as are necessary with providers of transmission services to schedule the delivery of the capacity and energy at and beyond the Delivery Point. Buyer will bear all risk of transmission inadequacy and curtailments at and beyond the Delivery Point. Buyer and Seller's obligations to perform are contingent on obtaining the necessary firm transmission reservations.

**Delivery Point:** 

The Delivery Point will be defined as the point where a specified generating unit interconnects with the Southern Company transmission system.

Change in Law Provision:

Buyer will be responsible for all costs and expenses (in the aggregate, including fixed and variable operating costs and capital expenditures) resulting from complying with, recognizing, or acting in response to changes in laws or regulations, or interpretations thereof, enacted or adopted after August 15, 2019 that are associated with: (i) the facilities serving Buyer under the agreement and the fuel utilized by such facilities; (ii) the capacity and energy provided under the agreement; and (iii) Seller's performance under the agreement. In the event capital expenditures result from a change in law or regulation, Buyer will be responsible for an appropriate pro rata share of the cost associate with the capital investment over the remaining years of the agreement. Such costs and expenses will be reflected as an adjustment to the Capacity Charge and/or Energy Price, as appropriate.

Allowance and Emission Fees: Buyer will be responsible for all Emissions Costs associate with: (i) the facilities serving Buyer under the agreement; and (ii) the capacity and energy provided to Buyer under the agreement. "Emissions Costs" include all costs and expenses that result from complying with, recognizing, or acting in response to current and future laws and regulations pertaining to environmental emissions [including, but not limited to Cross-State Air Pollution Rule (CSAPR) and Acid Rain Program (ARP)], including costs of emissions fees, taxes, offsets, credits, allowances, variable and fixed operation and maintenance costs, and costs and expenses associated with capital additions and installing environmental controls. Emissions Costs also include all costs that result from complying with all future carbon and greenhouse emissions requirements. Such costs and expenses will be reflected either as an additional surcharge or as an adjustment to the Capacity Charge and/or Energy Price, as appropriate. If a government authority allocates to Seller at no cost any emissions allowances for the facilities serving Buyer, Seller will provide Buyer with an appropriate benefit of such allowances for Buyer's schedules.

#### **Proprietary and Confidential Business Information**

#### **Unit Power Sale**

**Seller:** Southern Power Company (SPC)

**Buyer:** Santee Cooper

**Primary Source:** Plant Rowan Combined Cycle

**Product:** Unit Contingent – MWs listed by year below

2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
136	133	129	126	122	200	200	200	200	200

**Term:** 10-year: January 1, 2031 – December 31, 2040

Firmness: Unit Contingent

**Pricing:** 

Capacity Charge: \$6.25 / kW-month (2031\$), escalating 2% per year

In addition to the capacity price listed above, pricing will include a \$2.48 per kW-month charge for natural gas firm transportation (FT) demand charges. This equates to the current Transco tariff rate of \$13.99/MMBtu/Month for service to SPC's Plant Rowan. Pipeline demand charges would be a pass-through to Santee Cooper. If the pipeline tariff rate changes (upward or downward) during the term, the \$2.48 rate would change by the

same percentage as the pipeline tariff rate change.

Energy Price: The Energy Payment (EP) formula is proposed as follows for each hour energy is

delivered:

 $EP = (DE \times VOM_{MWH}) + (GHR \times DE \times GCP) + SC$ 

Where:

DE = Delivered Energy measured in MWh VOM<sub>MWH</sub> = Variable O&M Energy Rate

GHR = Guaranteed Heat Rate = (see scheduling)

GCP = Gas Commodity Price

SC = Start Charges, including any start up fuel

Variable O&M Energy \$3.75 / MWh (2031\$), escalating annually on January 1<sup>st</sup> at the Consumer Price Index

Rate: (CPI). Note: VOM and SC are based on baseload run-profile in current market conditions

Start Charge: \$21.50 / MW / Start (2031\$); escalating annually on January 1st at CPI

#### **Proprietary and Confidential Business Information**

#### **Unit Power Sale**

#### Fuel:

Gas Commodity Price:

The Gas Commodity Price (GCP) will be, for each MMBtu of gas delivered hereunder, an amount equal to the Gas Daily Midpoint price in \$/MMBtu as published by Platts in Gas Daily in the Daily Price Survey for Transco Zone 4, plus \$0.03, plus the then effective Transcontinental Gas Pipe Line Corporation ("Transco") FT variable charges ("FT Commodity Rate") and fuel rates ("FT Fuel Rate") from Zone 4 to Zone 5, as defined in Transco's FERC Gas Tariff, for the date(s) of natural gas flow, plus any applicable taxes.

#### **Scheduling:**

Initial Schedule:

7:00 a.m. CPT business day prior to Scheduling Day. All schedules must begin at the top of the hour.

Intraday Schedule Change:

Two (2) hour notice for any change to a previously submitted schedule; provided, however, that Buyer will be limited to two (2) intra-day schedule changes per day, with the following limitations:

- 1. Maximum schedule change is +/- 100 MW in any hour. If schedule change is to decrease schedule to zero, this limitation does not apply.
- 2. Once intra-day schedule is taken to zero, no additional changes would be allowed for the remainder of the day.

Scheduling Increments & Guaranteed Heat Rates:

1) Santee Cooper may schedule in 50 MW increments											
2) Corresponding heat rates are outlined below.											
Block 1	50 MW	7.3 MMBtus/MWh									
Block 2	100 MW	7.2 MMBtus/MWh									
Block 3	100-200 MW	7.0 MMBtus/MWh									

Minimum Duration of Schedule:

Each schedule requires a minimum run time of twelve (12) consecutive hours.

Minimum Down Time:

There will be a minimum of eight (8) consecutive hours between schedules.

#### **Transmission:**

Transmission service up to the Delivery Point will be at Seller's sole responsibility and expense. Transmission service at and beyond the Delivery Point will be at Buyer's sole responsibility and expense. As such, Buyer will make all arrangements as are necessary with providers of transmission services to schedule the delivery of the capacity and energy at and beyond the Delivery Point. Buyer will bear all risk of transmission inadequacy and curtailments at and beyond the Delivery Point.

Buyer and Seller's obligations to perform are contingent on obtaining the necessary firm transmission reservations.

#### **Proprietary and Confidential Business Information**

#### **Unit Power Sale**

**Delivery Point:** 

Busbar; point of electrical interconnection between the Facility and the Duke Energy Carolina's transmission system to which the Facility is interconnected.

Change in Law Provision:

Buyer will be responsible for all costs and expenses (in the aggregate, including fixed and variable operating costs and capital expenditures) resulting from complying with, recognizing, or acting in response to changes in laws or regulations, or interpretations thereof, enacted or adopted after August 15, 2019 that are associated with: (i) the facilities serving Buyer under the agreement and the fuel utilized by such facilities; (ii) the capacity and energy provided under the agreement; and (iii) Seller's performance under the agreement. In the event capital expenditures result from a change in law or regulation, Buyer will be responsible for an appropriate pro rata share of the cost associate with the capital investment over the remaining years of the agreement. Such costs and expenses will be reflected as an adjustment to the Capacity Charge and/or Energy Price, as appropriate.

Allowance and Emission Fees: Buyer will be responsible for all Emissions Costs associate with: (i) the facilities serving Buyer under the agreement; and (ii) the capacity and energy provided to Buyer under the agreement. "Emissions Costs" include all costs and expenses that result from complying with, recognizing, or acting in response to current and future laws and regulations pertaining to environmental emissions [including, but not limited to Cross-State Air Pollution Rule (CSAPR) and Acid Rain Program (ARP)], including costs of emissions fees, taxes, offsets, credits, allowances, variable and fixed operation and maintenance costs, and costs and expenses associated with capital additions and installing environmental controls. Emissions Costs also include all costs that result from complying with all future carbon and greenhouse emissions requirements. Such costs and expenses will be reflected either as an additional surcharge or as an adjustment to the Capacity Charge and/or Energy Price, as appropriate. If a government authority allocates to Seller at no cost any emissions allowances for the facilities serving Buyer, Seller will provide Buyer with an appropriate benefit of such allowances for Buyer's schedules.



# **8.2.6 Transmission Plans**

## 8.2.6 Transmission Plans

The transmission capital improvement plans are developed through assessments required by NERC Reliability Standard TPL-001, which sets a minimum set of standards for the performance of the transmission system under various contingency scenarios. The Power Supply Roadmap was optimized to reduce overall costs associated with new resources, including transmission system improvements. The transmission system improvements identified in this reform proposal include projects that support the Power Supply Roadmap, meet specific customer needs, and address reliability associated with expected system load growth over the 20-year study period. The specific projects identified for this study period, along with their planned in-service date are listed below:

#### **Reform Plan**

Project Title	Planned ISD
Berkeley Shredding 115-12.47 kV Service	8/1/2019
Sandy Run 230-115 kV Substation	12/1/2019
Bucksville 230-115 kV Substation: Add Transformer	12/1/2019
Watson's Riverside Delivery Point 115 kV Service	12/1/2019
Nexton 115 kV Delivery Point	4/1/2020
Latta 69 kV Switching Station: Dillon IP 69 kV Terminal Addition	4/1/2020
Briggs Road 115 kV Tie Line	5/30/2020
Bluffton-Market Place 115 kV Line #2: Phase I Bluffton - Buckingham	6/1/2020
Carnes Crossroads-Harleys Bridge 115 kV Line via McQueen Phase 2	6/1/2020
Cobblestone Park 69 kV Delivery Point	6/1/2020
Hwy 905 115 kV Delivery Point	6/1/2020
Clarendon County Industrial Park Delivery Point 115 kV Service	7/1/2020
Islandton Delivery Point 69 kV Service	9/1/2020
R.E. Gandy Delivery Point	10/1/2020
New Sheep Island Delivery Point 115 kV Service	11/1/2020
Add Redundant Bus Differential Relays for the Winyah 230 kV Buses	12/1/2020
Bluffton 230-115 kV Substation: Add 115 kV Interconnection Metering Point	12/1/2020
Cross - Jefferies 230 kV Line Bus Section Replacement (Jefferies 230 kV Switching Station)	12/1/2020
Pomaria-Orangeburg 230 kV Line	12/15/2020
Series Bus Tie Breakers Hemingway 230 kV	6/1/2021
Carnes Crossroads Transformer #3	6/1/2021
Purrysburg 230 kV Add Redundant Bus Differential Relays and Add Series Bus Tie Breakers	12/1/2021
JW Aluminum Phase II: Rebuild North Chareston-Goose Creek 115 kV Line Section	12/1/2021
Replace Camden - South Bethune 69 kV Line Relaying at Camden Substation	12/1/2021
Upgrade Relays on Lugoff - Camden 69 kV Line	12/1/2021
Replace Lugoff - Dalzell 69 kV Line Relaying at Lugoff Substation	12/1/2021
Replace Dalzell - Pinewood 69 kV Line Relaying at Dalzell Substation	12/1/2021
Lick Fork Delivery Point 115 kV Service	12/31/2021
Johns Island - Queensboro Interconnection	12/31/2021
Charity - BP Amoco 230 kV #2 Line	12/31/2021
Aiken 230 kV Tie Line	12/31/2021

Replace Capacitor Bank ACIs at Carnes Crossroads 230-115 kV Substation	12/31/2021
Red Hill Delivery Point	6/1/2022
Tillman Delivery Point	12/1/2022
Replace Switches at Yemassee 230 kV Switching Station	12/1/2022
New Varnville 230-115 kV Substation Site Acquisition	12/1/2022
Cross - Kingstree #1 and #2 Breaker and Switch Replacement	12/1/2022
Quickstart Generator Interconnections	12/1/2022
Chime Bell 115 kV Switching Station	12/1/2022
Aiken 230-115 kV Transformer Addition	11/1/2023
Conway 230 kV Switching Station	12/1/2025
Marion-Conway 230 kV Line	12/1/2025
Pee Dee 230 kV Switchyard	12/1/2026
Conway - Perry Road 230 kV Line	12/1/2026
Varnville to Robertville 69 kV Rebuild to 115 kV	12/1/2028
Nixons Crossroads - Red Bluff #1 115 kV Line (via Brooksville)	6/1/2029
Carolina Forest 230-115 kV Substation: Add Transformer	6/1/2030
Bucksville - Conway 230 kV Line	12/1/2030
Replace relaying on Lugoff - Blythewood #1 69 kV Line (Lugoff end)	12/1/2031
Add Carnes Redundant Bus Differential Protection Relaying	12/1/2031
Wassamassaw 230-115 kV Substation	12/1/2032
Wassamassaw-Pringletown #1 115 kV Line	12/1/2033
Cross - Wassamassaw 230 kV #2 Line	12/1/2034
Pee Dee - Conway 230 kV Line	12/1/2035
Lugoff 230-69 kV Substation: Add Transformer	6/1/2036
Jefferies - Wassamassaw 230 kV Line	12/1/2036
Hemingway 230-115 kV Substation Rebuild for Breaker-and-half	12/1/2038
Rebuild Perry Road - Myrtle Beach #2 115 kV Line	12/1/2038
Georgetown - Arcadia 115 kV Line	5/1/2039

## **DOA Conforming Assumptions Case**

	- Luca
Project Title  Berkeley Shredding 115-12.47 kV Service	Planned ISD
Sandy Run 230-115kv Substation	8/1/2019 12/1/2019
Bucksville 230-115 kV Substation: Add Transformer	12/1/2019
Watson's Riverside Delivery Point 115 kV Service	12/1/2019
Nexton 115 kV Delivery Point	4/1/2020
Latta 69 kV Switching Station: Dillon IP 69 kV Terminal Addition	4/1/2020
Briggs Road 115 kV Tie Line with Dominion	5/30/2020
Bluffton-Market Place 115 kV Line #2: Phase I Bluffton - Buckingham	6/1/2020
Carnes Crossroads-Harleys Bridge 115 kV Line via McQueen Phase 2	6/1/2020
Cobblestone Park 69 kV Delivery Point	6/1/2020
Hwy 905 115 kV Delivery Point	6/1/2020
Clarendon County Industrial Park Delivery Point 115 kV Service	7/1/2020
Islandton Delivery Point 69 kV Service	9/1/2020
R.E. Gandy Delivery Point	10/1/2020
New Sheep Island Delivery Point 115 kV Service	11/1/2020
Add Redundant Bus Differential Relays for the Winyah 230 kV Buses	12/1/2020
Bluffton 230-115 kV Substation: Add 115 kV Interconnection Metering Point	12/1/2020
Cross - Jefferies 230 kV Line Bus Section Replacement (Jefferies 230 kV Switching Station)	12/1/2020
Pomaria-Orangeburg 230kv Line	12/15/2020
Series Bus Tie Breakers Hemingway 230 kV	6/1/2021
Carnes Crossroads Transformer #3	6/1/2021
Purrysburg 230 kV Add Redundant Bus Differential Relays and Add Series Bus Tie Breakers	12/1/2021
JW Aluminum Phase II: Rebuild North Chareston-Goose Creek 115 kV Line Section	12/1/2021
Replace Camden - South Bethune 69 kV Line Relaying at Camden Substation	12/1/2021
Upgrade Relays on Lugoff - Camden 69 kV Line	12/1/2021
Replace Lugoff - Dalzell 69 kV Line Relaying at Lugoff Substation	12/1/2021
Replace Dalzell - Pinewood 69 kV Line Relaying at Dalzell Substation	12/1/2021
Lick Fork Delivery Point 115 kV Service	12/31/2021
SCE&G-SCPSA Johns Island - Queensboro Interconnection	12/31/2021
Charity - BP Amoco 230 kV #2 Line	12/31/2021
Aiken 230 kV Tie Line with Dominion	12/31/2021
Replace Capacitor Bank ACIs at Carnes Crossroads 230-115 kV Substation Red Hill Delivery Point	12/31/2021 6/1/2022
Tillman Delivery Point	12/1/2022
Replace Switches at Yemassee 230 kV Switching Station	12/1/2022
New Varnville 230-115 kV Substation Site Acquisition	12/1/2022
Cross - Kingstree #1 and #2 Breaker and Switch Replacement	12/1/2022
Quickstart Generator Interconnections	12/1/2022
Chime Bell 115 kV Switching Station	12/1/2022
Jefferies - Georgetown #2 115 kV Replace Jumpers	12/1/2022
Aiken 230-115 kV Transformer Addition	11/1/2023
Kingstree 230 kV Series Bus Tie Breakers	12/1/2023
Marion 230 kV Series Bus Tie Breakers	12/1/2024
Install two 30 MVar Capacitor Banks on 115 kV Bus at Charity 230-115 kV	12/1/2024
Kingstree - Hemingway 230 kV #2 Line	12/1/2024

Marion-Red Bluff 230 kV Line  Pee Dee 230 kV Switchyard  Conway - Perry Road 230 kV Line  Dalzell - Lake City 230 kV Line  Add New Terminal and Reconductor Columbia - Lyles 115 kV Line  Varnville to Robertville 69 kV Rebuild to 115 kV  Rebuild Blythewood - Lugoff #1 69 kV	/2025 /2025 /2026 /2026 /2026 /2027 /2028 /2028
Pee Dee 230 kV Switchyard  Conway - Perry Road 230 kV Line  Dalzell - Lake City 230 kV Line  Add New Terminal and Reconductor Columbia - Lyles 115 kV Line  Varnville to Robertville 69 kV Rebuild to 115 kV  Rebuild Blythewood - Lugoff #1 69 kV  Nixons Crossroads - Red Bluff #1 115 kV Line (via Brooksville)	/2026 /2026 /2026 /2027 /2028 /2028
Conway - Perry Road 230 kV Line 12/1/ Dalzell - Lake City 230 kV Line 12/1/ Add New Terminal and Reconductor Columbia - Lyles 115 kV Line 12/1/ Varnville to Robertville 69 kV Rebuild to 115 kV 12/1/ Rebuild Blythewood - Lugoff #1 69 kV 12/1/ Nixons Crossroads - Red Bluff #1 115 kV Line (via Brooksville) 6/1/2	/2026 /2026 /2027 /2028 /2028 /2029
Dalzell - Lake City 230 kV Line  Add New Terminal and Reconductor Columbia - Lyles 115 kV Line  Varnville to Robertville 69 kV Rebuild to 115 kV  Rebuild Blythewood - Lugoff #1 69 kV  Nixons Crossroads - Red Bluff #1 115 kV Line (via Brooksville)	/2026 /2027 /2028 /2028 /2029
Add New Terminal and Reconductor Columbia - Lyles 115 kV Line  Varnville to Robertville 69 kV Rebuild to 115 kV  Rebuild Blythewood - Lugoff #1 69 kV  Nixons Crossroads - Red Bluff #1 115 kV Line (via Brooksville)	/2027 /2028 /2028 /2029
Varnville to Robertville 69 kV Rebuild to 115 kV  Rebuild Blythewood - Lugoff #1 69 kV  Nixons Crossroads - Red Bluff #1 115 kV Line (via Brooksville)  6/1/2	/2028 /2028 /2029
Rebuild Blythewood - Lugoff #1 69 kV 12/1/ Nixons Crossroads - Red Bluff #1 115 kV Line (via Brooksville) 6/1/2	/2028 /2029
Nixons Crossroads - Red Bluff #1 115 kV Line (via Brooksville) 6/1/2	2029
Darlington - Lake City 69 kV (Darlington end) replace relays and substation switches 12/1/	
	/2029
Carolina Forest 230-115 kV Substation: Add Transformer 6/1/2	2030
Pee Dee - Conway 230 kV Line 12/1/	/2030
Bucksville - Conway 230 kV Line 12/1/	/2030
Taylors Chapel 230-69 kV Substation 12/1/	/2030
Taylors Chapel - Blythewood 230 kV Line (rebuild Taylors Chapel - Blythewood 69 kV #1 for double circuit) 12/1/	/2030
Reconductor Charity - Jefferies 230 kV Line 12/1/	/2030
Replace relaying on Lugoff - Blythewood #1 69 kV Line (Lugoff end) 12/1/	/2031
Add Carnes Redundant Bus Differential Protection Relaying 12/1/	/2031
Wassamassaw 230-115 kV Substation (High Reliability) 12/1/	/2032
Wassamassaw-Pringletown #1 115 kV Line 12/1/	/2033
Cross - Wassamassaw 230 kV #2 Line 12/1/	/2034
Lugoff 230-69 kV Substation: Add Transformer 6/1/2	2036
Jefferies - Wassamassaw 230 kV Line 12/1/	/2036
Hemingway 230-115 kV Substation Rebuild for Breaker-and-half 12/1/	/2038
Rebuild Perry Road - Myrtle Beach #2 115 kV Line 12/1/	/2038
Georgetown - Arcadia 115 kV Line 5/1/2	2039



# 8.2.7 Load Forecast



2019 Load Forecast (LF1902) for Calendar Years 2019 – 2038

The information contained herein is considered competitively sensitive and is therefore CONFIDENTIAL to Santee Cooper. This information shall not be disclosed to any third party without prior approval of Executive Management.

# Santee Cooper 2019 Load Forecast (LF1902)

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# Santee Cooper 2019 Load Forecast (LF1902)

## **Executive Summary**

LF1902 was prepared by Santee Cooper, Central Electric Power Cooperative, Inc. (Central), and GDS Associates, Inc., a consulting firm based in Marietta, Georgia. LF1902 incorporates updates of the Authority's end-use/econometric models developed by GDS. The forecast reflects current economic outlooks, projected retail price increases, and normal weather conditions for the Santee Cooper service area. The forecast for Santee Cooper's industrial customers reflects any additions and changes to existing contracts as well as known probable future changes. LF1902 includes off-system sales to the Navy Yard, PMPA, AMEA, Seneca and Waynesville and includes estimated demand and energy savings from energy efficiency programs by Santee Cooper and Central.

#### 1. Authority Demand Forecasting

GDS used an econometric model to forecast the Santee Cooper direct-served retail peak demand. The peak forecast is based on weather adjusted kWh sales and peak day temperature.

#### 2. Authority Energy Forecasting

GDS uses statistically adjusted end-use (SAE) and econometric models to forecast the number of customers and average use per customer for the Authority's residential and commercial classes. Energy sales are computed as the product of number of customers and average use per customer. The forecasting models incorporate the impacts of key influences including number of households, household characteristics, retail electricity price, household income, number of appliances, appliance efficiencies, and federal lighting standards. Projected appliance efficiencies were based on the Energy Information Administration's 2019 Annual Energy Outlook.

#### 3. Industrial Forecast

Demand and Energy requirements for Santee Cooper's industrial customers were adjusted to reflect current operations and contract changes through 2021. Thereafter, requirements are held constant for the remainder of the forecast.

#### 4. Central Forecast

Central's forecast is prepared by Central staff and is based on statistically adjusted end-use (SAE) and econometric models and represents the aggregate 20-year forecast for 15 of Central's 20 member cooperatives. Central's forecast includes load billed under Santee Cooper's L-Rate.

Load Forecast LF1902 is based on assumptions and conditions or events assumed to take place at a future date. Santee Cooper can give no assurance that such conditions or events will actually occur. The forecast results can be expected to change for any difference in actual conditions and events from assumptions herein.

# ANNUAL ENERGY (GWh) FORECAST SUMMARY

ANNUAL ENERGY FORECAST (	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Distribution Energy:			-	-		-														
Total Residential	1,878	1,900	1,901	1,916	1,918	1,937	1,966	1,994	2,019	2,039	2,059	2,080	2,099	2,118	2,139	2,161	2,183	2,204	2,225	2,249
Total Commercial	2,183	2,214	2,211	2,223	2,244	2,262	2,271	2,283	2,288	2,287	2,281	2,287	2,309	2,329	2,350	2,370	2,391	2,412	2,433	2,454
Existing Energy Efficiency Savings	(239)	(239)	(227)	(214)	(186)	(169)	(142)	(121)	(95)	(62)	(27)	(7)	(2)	0	0	0	0	0	0	0
Future Energy Efficiency Savings	(10)	(21)	(33)	(37)	(42)	(46)	(50)	(53)	(57)	(60)	(63)	(65)	(60)	(51)	(42)	(40)	(38)	(37)	(35)	(34)
Total Distribution	3,786	3,827	3,837	3,884	3,934	3,984	4,046	4,102	4,156	4,205	4,251	4,295	4,346	4,396	4,446	4,491	4,535	4,579	4,623	4,669
Distribution Losses	133	134	134	136	138	139	142	144	145	147	149	150	152	154	156	157	159	160	162	163
Subtotal Distribution	3,919	3,961	3,971	4,020	4,071	4,124	4,188	4,246	4,301	4,352	4,400	4,446	4,498	4,550	4,602	4,648	4,694	4,739	4,785	4,832
Transmission/Transformation Losses	67	67	68	68	69	70	71	72	73	74	75	76	76	77	78	79	80	81	81	82
Total Distribution Incl. Losses	3,985	4,028	4,039	4,088	4,141	4,194	4,259	4,318	4,374	4,426	4,474	4,521	4,574	4,627	4,680	4,727	4,774	4,820	4,866	4,914
Industrial Energy:																				
Firm	1,152	1,234	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257	1,257
Economy Power	2,384	2,400	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398	2,398
Interruptible  Total Industrial	648 4.184	654 4.288	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
Transmission/Transformation Losses	4,184 71	4,288 73	4,310 73																	
Total Industrial Incl. Losses	4,255	4,361	4,384	4,384	4,384	4,384	4,384	4,384	4,384	4,384	4,384	4,384	4,384	4.384	4,384	4.384	4,384	4.384	4,384	4,384
Century Energy:	4,200	4,501	4,004	4,004	4,504	4,504	4,004	4,504	4,004	4,504	4,004	4,504	4,504	4,004	4,504	4,004	4,504	4,004	4,004	4,004
Firm	417	420	420	420	420	420	420	420	420	420	0	0	0	0	0	0	0	0	0	0
Supplemental	1,320	1,314	1,314	1,314	1,314	1,314	1,314	1,314	1,314	1,314	0	0	0	0	0	0	0	0	0	0
Total Century	1,737	1,734	1,734	1,734	1,734	1,734	1,734	1,734	1,734	1,734	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	30	29	29	29	29	29	29	29	29	29	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	1,766	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764	0	0	0	0	0	0	0	0	0	0
Municipal Energy:																				
Total Municipal	186	185	185	185	184	184	184	183	183	183	182	182	182	182	182	181	181	181	181	181
Transmission/Transformation Losses	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Total Municipal Incl. Losses	189	188	188	188	187	187	187	186	186	186	186	185	185	185	185	184	184	184	184	184
Central Energy:																				
Total Central	14,093	14,614	14,775	14,900	14,994	15,143	15,230	15,347	15,473	15,645	15,749	15,863	15,992	16,165	16,264	16,408	16,559	16,758	16,878	17,036
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	129	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133
L-Rate Interruptible Other Substations	46 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0	48 0
Total Central Served	14,268	14,795	14,957	15,082	15,175	15,325	15,411	15,528	15,654	15,827	15,931	16,044	16,173	16,346	16,445	16,590	16,741	16,940	17,060	17,218
Santee Cooper Transmission Losses	188	14,795	197	199	200	202	203	205	207	209	210	212	213	216	217	219	221	224	225	227
Total Central Served Incl. Losses	14,457	14,990	15,154	15,281	15,375	15,527	15,615	15,733	15,861	16,036	16,141	16,256	16,387	16,562	16,662	16,809	16,962	17.164	17,285	17.445
Total Energy:	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,
Total Territorial	24,161	24,830	25,023	25,195	25,338	25,538	25,685	25,858	26,038	26,259	24,674	24,832	25,011	25,234	25,383	25,572	25,767	26,010	26,174	26,378
Total Distribution Losses	133	134	134	136	138	139	142	144	145	147	149	150	152	154	156	157	159	160	162	163
Subtotal Territorial	24,293	24,964	25,158	25,331	25,475	25,677	25,827	26,002	26,183	26,406	24,823	24,983	25,163	25,388	25,539	25,729	25,926	26,171	26,336	26,541
Total Transmission/Transformation Losses	359	368	371	373	375	378	380	383	386	389	361	364	366	369	372	374	377	381	383	386
Total Territorial Incl. Losses	24,652	25,332	25,529	25,704	25,851	26,056	26,208	26,385	26,569	26,795	25,185	25,346	25,529	25,757	25,911	26,104	26,303	26,551	26,719	26,927
Off-System Sales	735	731	739	754	769	550	457	369	273	287	302	309	322	337	355	374	384	393	414	432
Transmission Losses	9	8	9	9	9	6	5	3	2	2	2	2	2	2	3	3	3	3	3	3
Total Requirements	25,396	26,072	26,276	26,467	26,628	26,612	26,669	26,757	26,844	27,084	25,488	25,657	25,854	26,096	26,268	26,481	26,690	26,947	27,136	27,362

# ANNUAL PEAK DEMAND (MW) FORECAST SUMMARY

2019 SANTEE COOPER LOAD FORECAST (LF1902)
ANNUAL SUMMER COINCIDENTAL PEAK DEMAND (MW) FORECAST FOR CALENDAR YEARS 2019 - 2038

ANNUAL SUMMER COINCIDE	2019	2020	2021	2022	2023	2024	2025	.ENDAI 2026	2027	2028 2028	9 - ∠U38 2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Distribution:																				
Peak	902	915	922	935	935	945	956	965	974	980	984	991	1,001	1,012	1,023	1,034	1,046	1,057	1,069	1,081
Existing DSM/EE Projections	(54)	(54)	(54)	(53)	(40)	(37)	(32)	(28)	(23)	(16)	(8)	(2)	(1)	(0)	0	0	0	0	0	0
Future DSM/EE Projections	(3)	(7)	(11)	(12)	(13)	(14)	(16)	(17)	(18)	(19)	(20)	(21)	(19)	(16)	(13)	(13)	(13)	(12)	(12)	(12)
Total Distribution Peak	845	854	858	870	882	894	908	921	933	945	957	968	981	995	1,010	1,021	1,033	1,045	1,057	1,069
Distribution Losses	30	30	30	30	31	31	32	32	33	33	33	34	34	35	35	36	36	37	37	37
Subtotal Distribution	874	884	888	901	913	925	940	953	966	978	990	1,002	1,016	1,030	1,045	1,057	1,070	1,082	1,094	1,106
Transmission/Transformation Losses	17	17	17	17	17	18	18	18	18	19	19	19	19	20	20	20	20	21	21	21
Total Distribution Incl. Losses	891	901	905	918	930	943	957	971	984	997	1,009	1,021	1,035	1,050	1,065	1,077	1,090	1,102	1,115	1,127
Industrial:											1,000	.,	.,	.,	.,	.,	.,	.,	.,	-,
Firm	140	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151
Economy Power	314	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315
Interruptible	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Total Industrial Peak	530	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541
Transmission/Transformation Losses	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	540	551	551	551	551	551	551	551	551	551	551	551	551	551	551	551	551	551	551	551
Century:	040	331	551	551	551	001	001	551	331	551	331	551	551	551	551	551	551	331	331	331
Firm	48	48	48	48	48	48	48	48	48	48	0	0	0	0	0	0	0	0	0	0
Supplemental	150	150	150	150	150	150	150	150	150	150	0	0	0	0	0	0	0	0	0	0
Total Century Peak	198	198	198	198	198	198	198	198	198	198	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	0	0	0	0	0	0	0	0	0	0
Municipal:	202	202	202	202	202	202	202	202	202	202	U	U	U	U	U	U	U	U	U	U
Total Municipal Peak	36	36	36	36	36	36	36	35	35	35	35	35	35	35	35	35	35	25	35	25
•	1	30 1	1	1	1	1	1	1	35 1	1	35 1	35 1	1	1	1	1	33 1	35 1	35 1	35 1
Transmission/Transformation Losses  Total Municipal Incl. Losses	37	37	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Central Electric:	31	31	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Central Peak	0.774	0.040	0.000	0.000	0.000	2.929	0.050	0.070	0.000	3.032	3.065	3.089	0.447	0.440	0.470	0.000	0.044	0.070	0.040	0.040
	2,771	2,846 0	2,869 0	2,890 0	2,908 0	2,929	2,956 0	2,979 0	3,006 0	3,032	3,065	3,089	3,117 0	3,143 0	3,176 0	3,208 0	3,241	3,273 0	3,312 0	3,348 0
Existing DSM/EE Projections	0	0	-	-	•	-	-	0	0	0	-	0	0	0	0	-	0	•		
Future DSM/EE Projections	0 18	18	0 18	0	0	0 18	0 18	18	18	18	0 18	18	ŭ	ŭ	ŭ	0	0	0	0	0
L-Rate Firm	18	18	18	18 6	18 6	18	6	18	6	6	6	6	18 6	18 6	18 6	18 6	18 6	18 6	18 6	18
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Other Substations  Total Central Served Peak	2,795	2,870	2,893	2,913	2,932	2,952	2,979	3,003	3,029	3,055	3,089	3,113	3,140	3,167	3,200	3,231	3,265	3,297	3,336	2 272
	,			,	,		,	,	,		,	,		,			,			3,372
Santee Cooper Transmission Losses	43	44	45	45	45	46	46	47	47	47	48	48	49	49	50	50	51	51	52	52
Total Central Served Incl. Losses	2,838	2,914	2,938	2,959	2,977	2,998	3,026	3,050	3,076	3,103	3,137	3,161	3,189	3,216	3,249	3,281	3,315	3,348	3,387	3,424
Total System Peak:	4 400	4 400	4.500	4.550	4.500	4.004	4 000	4 000	4 707	4 775	4 000	4.057	4 000	4 700	4 705	4 000	4.074	4.040	4.000	5.047
Total Territorial Peak	4,403	4,498	4,526	4,558	4,588	4,621	4,662	4,698	4,737	4,775	4,622	4,657	4,698	4,738	4,785	4,829	4,874	4,918	4,969	5,017
Total Distribution Losses	30	30	30	30	31	31	32	32	33	33	33	34	34	35	35	36	36	37	37	37
Subtotal Territorial	4,433	4,528	4,556	4,589	4,619	4,652	4,693	4,730	4,770	4,808	4,655	4,691	4,732	4,773	4,821	4,865	4,910	4,954	5,006	5,054
Transmission/Transformation Losses	74	76	76	77	78	78	79	79	80	81	78	78	79	80	80	81	82	83	83	84
Total Territorial Incl. Losses	4,507	4,604	4,632	4,666	4,697	4,730	4,772	4,810	4,850	4,889	4,733	4,769	4,811	4,852	4,901	4,946	4,992	5,037	5,089	5,138
Off-System Peak	298	281	288	295	302	260	235	241	232	239	245	251	257	263	270	276	282	288	295	301
Transmission Losses	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total Requirements	4,809	4,888	4,923	4,964	5,002	4,993	5,009	5,052	5,084	5,129	4,979	5,022	5,070	5,118	5,173	5,224	5,276	5,327	5,386	5,441

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2019 SANTEE COOPER LOAD FORECAST (LF1902)
ANNUAL WINTER COINCIDENTAL PEAK DEMAND (MW) FORECAST FOR CALENDAR YEARS 2019 - 2038

ANNOAL WINTER COINCIDEN	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Distribution:																				
Peak	922	936	943	951	941	948	955	962	967	971	972	976	984	992	1,001	1,010	1,020	1,029	1,038	1,047
Existing DSM/EE Projections	(66)	(66)	(65)	(65)	(44)	(40)	(35)	(30)	(25)	(18)	(9)	(3)	(1)	(0)	0	0	0	0	0	0
Future DSM/EE Projections	(3)	(7)	(11)	(12)	(13)	(14)	(16)	(17)	(18)	(19)	(20)	(21)	(19)	(16)	(13)	(13)	(13)	(12)	(12)	(12)
Total Distribution Peak	853	863	867	875	884	894	904	915	925	934	943	952	963	975	988	997	1,007	1,016	1,026	1,036
Distribution Losses	30	30	30	31	31	31	32	32	32	33	33	33	34	34	35	35	35	36	36	36
Subtotal Distribution	883	893	897	905	915	925	936	947	957	967	976	986	997	1,010	1,022	1,032	1,042	1,052	1,062	1,072
Transmission/Transformation Losses	17	17	17	17	17	18	18	18	18	18	19	19	19	19	19	20	20	20	20	20
Total Distribution Incl. Losses	900	910	914	923	933	942	954	965	975	985	995	1,004	1,016	1,029	1,042	1,052	1,062	1,072	1,082	1,092
Industrial:																				
Firm	131	132	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144
Economy Power	313	311	311	311	311	311	311	311	311	311	311	311	311	311	311	311	311	311	311	311
Interruptible	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Total Industrial Peak	521	520	532	532	532	532	532	532	532	532	532	532	532	532	532	532	532	532	532	532
Transmission/Transformation Losses	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	531	530	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542
Century:																				
Firm	48	48	48	48	48	48	48	48	48	48	0	0	0	0	0	0	0	0	0	0
Supplemental	150	150	150	150	150	150	150	150	150	150	0	0	0	0	0	0	0	0	0	0
Total Century Peak	198	198	198	198	198	198	198	198	198	198	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	0	0	0	0	0	0	0	0	0	0
Municipal:																				
Total Municipal Peak	36	36	36	36	36	36	36	35	35	35	35	35	35	35	35	35	35	35	35	35
Transmission/Transformation Losses	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total Municipal Incl. Losses	37	37	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Central Electric:																				
Central Peak	3,287	3,335	3,380	3,408	3,431	3,463	3,491	3,522	3,554	3,592	3,625	3,652	3,681	3,715	3,745	3,781	3,818	3,861	3,898	3,938
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
L-Rate Interruptible	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,307	3,355	3,400	3,428	3,452	3,483	3,512	3,542	3,574	3,612	3,646	3,673	3,701	3,735	3,765	3,801	3,838	3,881	3,918	3,958
Santee Cooper Transmission Losses	51	52	53	53	53	54	54	55	55	56	57	57	57	58	58	59	59	60	61	61
Total Central Served Incl. Losses	3,358	3,407	3,453	3,481	3,505	3,537	3,566	3,597	3,630	3,668	3,702	3,729	3,759	3,793	3,824	3,860	3,898	3,941	3,979	4,020
Total System Peak:																				
Total Territorial Peak	4,915	4,972	5,033	5,068	5,101	5,142	5,181	5,222	5,264	5,311	5,156	5,192	5,231	5,278	5,320	5,365	5,412	5,464	5,511	5,561
Total Distribution Losses	30	30	30	31	31	31	32	32	32	33	33	33	34	34	35	35	35	36	36	36
Subtotal Territorial	4,945	5,003	5,063	5,099	5,132	5,174	5,213	5,254	5,296	5,344	5,189	5,225	5,265	5,312	5,354	5,400	5,447	5,500	5,547	5,597
Transmission/Transformation Losses	82	83	84	85	85	86	87	87	88	89	86	86	87	88	89	89	90	91	92	92
Total Territorial Incl. Losses	5,027	5,086	5,147	5,183	5,217	5,260	5,300	5,341	5,385	5,433	5,275	5,312	5,352	5,399	5,443	5,489	5,538	5,591	5,639	5,689
Off-System Peak	196	202	183	189	195	152	159	141	125	130	136	141	146	152	157	162	168	173	179	184
Transmission Losses	2	2	2	2	2	1	2	1	1	1_	1	1_	1	1	1	1	11	1	1	1
Total Requirements	5,225	5,290	5,333	5,375	5,415	5,413	5,460	5,483	5,510	5,564	5,411	5,454	5,500	5,552	5,601	5,653	5,707	5,765	5,818	5,875

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# MONTHLY ENERGY (MWh) FORECAST DETAIL

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	188,506	165,520	142,880	111,844	124,040	173,932	219,038	200,133	155,476	116,573	110,557	169,819	1,878,317
Total Commercial	169,328	147,935	154,748	157,597	189,629	220,388	233,593	225,291	187,085	166,121	162,957	168,247	2,182,920
Existing Energy Efficiency Savings	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(238,782)
Future Energy Efficiency Savings	(792)	(792)	(792)	(792)	(792)	(792)	(792)	(792)	(792)	(792)	(792)	(792)	(9,500)
Total Distribution	334,902	290,523	274,696	246,509	290,737	371,388	429,699	402,491	319,629	259,763	250,582	315,134	3,786,053
Distribution Losses	11,722	10,168	9,614	8,628	10,176	12,999	15,039	14,087	11,187	9,092	8,770	11,030	132,512
Subtotal Distribution	346,623	300,691	284,310	255,137	300,913	384,387	444,738	416,579	330,816	268,854	259,352	326,163	3,918,565
Transmission/Transformation Losses	5,893	5,112	4,833	4,337	5,116	6,535	7,561	7,082	5,624	4,571	4,409	5,545	66,616
<b>Total Distribution Incl. Losses</b>	352,516	305,803	289,144	259,474	306,029	390,922	452,299	423,660	336,440	273,425	263,761	331,708	3,985,180
Industrial Energy:													
Firm	94,179	85,046	95,832	95,117	99,594	97,918	102,251	102,111	93,313	97,231	93,908	95,616	1,152,117
Economy Power	160,004	180,562	247,323	231,222	166,700	201,055	208,453	205,750	176,992	227,530	198,512	179,934	2,384,036
Interruptible	54,293	39,797	50,436	55,856	55,592	54,683	55,446	57,970	52,585	60,700	54,829	55,431	647,618
Total Industrial	308,476	305,405	393,591	382,195	321,887	353,656	366,150	365,830	322,890	385,462	347,249	330,980	4,183,770
Transmission/Transformation Losses	5,244	5,192	6,691	6,497	5,472	6,012	6,225	6,219	5,489	6,553	5,903	5,627	71,124
Total Industrial Incl. Losses	313,720	310,597	400,282	388,692	327,359	359,668	372,375	372,049	328,379	392,014	353,152	336,607	4,254,894
Century Energy:													
Firm	34,121	30,400	35,712	34,560	35,712	34,560	35,712	35,712	34,560	35,712	34,560	35,712	417,033
Supplemental	114,576	103,488	111,600	108,000	111,600	108,000	111,600	111,600	108,000	111,600	108,000	111,600	1,319,664
Total Century	148,697	133,888	147,312	142,560	147,312	142,560	147,312	147,312	142,560	147,312	142,560	147,312	1,736,697
Transmission/Transformation Losses	2,528	2,276	2,504	2,424	2,504	2,424	2,504	2,504	2,424	2,504	2,424	2,504	29,524
Total Century Incl. Losses	151,225	136,164	149,816	144,984	149,816	144,984	149,816	149,816	144,984	149,816	144,984	149,816	1,766,221
Municipal Energy:													
Total Municipal	16,135	13,738	13,532	12,574	14,988	17,714	19,711	19,326	16,081	13,627	13,072	15,035	185,533
Transmission/Transformation Losses	274	234	230	214	255	301	335	329	273	232	222	256	3,154
Total Municipal Incl. Losses	16,410	13,972	13,762	12,787	15,242	18,016	20,046	19,655	16,354	13,858	13,294	15,291	188,687
Central Energy:													
Total Central	1,355,495	1,149,545	1,063,075	929,004	1,052,510	1,247,485	1,392,116	1,353,045	1,151,046	990,119	1,086,623	1,322,884	14,092,948
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	9,907	8,868	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	129,497
L-Rate Firm	3,174	2,158	4,176	4,101	4,655	5,186	4,523	5,200	3,198	2,779	4,327	2,532	46,009
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,368,576	1,160,571	1,078,420	944,118	1,069,539	1,264,786	1,409,371	1,370,929	1,163,474	1,004,862	1,100,506	1,333,302	14,268,453
Santee Cooper Transmission Losses	18,065	15,320	14,235	12,462	14,118	16,695	18,604	18,096	15,358	13,264	14,527	17,600	188,344
Total Central Served Incl. Losses	1,386,641	1,175,890	1,092,655	956,580	1,083,657	1,281,481	1,427,975	1,389,025	1,178,832	1,018,127	1,115,032	1,350,901	14,456,797
Total Energy:													
Total Territorial	2,176,786	1,904,125	1,907,551	1,727,955	1,844,463	2,150,104	2,372,244	2,305,889	1,964,633	1,811,025	1,853,968	2,141,762	24,160,506
Total Distribution Losses	11,722	10,168	9,614	8,628	10,176	12,999	15,039	14,087	11,187	9,092	8,770	11,030	132,512
Subtotal Territorial	2,188,508	1,914,293	1,917,165	1,736,583	1,854,639	2,163,103	2,387,283	2,319,976	1,975,820	1,820,117	1,862,738	2,152,792	24,293,018
Total Transmission/Transformation Losses	32,004	28,133	28,494	25,934	27,465	31,967	35,228	34,230	29,168	27,124	27,485	31,531	358,761
Total Territorial Incl. Losses	2,220,512	1,942,426	1,945,659	1,762,517	1,882,103	2,195,069	2,422,511	2,354,206	2,004,988	1,847,240	1,890,223	2,184,323	24,651,779
Off-System Sales	54,852	44,661	44,566	41,691	52,052	79,226	103,936	91,213	75,460	50,729	47,943	49,016	735,344
Transmission Losses	684	583	580	544	638	848	1,054	954	813	628	624	638	8,587
Total Requirements	2,276,047	1,987,670	1,990,806	1,804,752	1,934,793	2,275,143	2,527,501	2,446,373	2,081,261	1,898,597	1,938,790	2,233,977	25,395,710

, ,	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	191,096	167,581	144,424	112,691	125,134	176,083	222,133	202,802	157,180	117,442	111,291	171,797	1,899,655
Total Commercial	173,652	150,683	157,607	160,404	192,748	223,783	236,573	227,869	189,067	167,725	164,326	169,501	2,213,938
Existing Energy Efficiency Savings	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(19,899)	(238,782)
Future Energy Efficiency Savings	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(21,000)
Total Distribution	340,858	294,374	278,140	249,204	293,992	375,976	434,816	406,781	322,356	261,277	251,727	317,407	3,826,909
Distribution Losses	11,930	10,303	9,735	8,722	10,290	13,159	15,219	14,237	11,282	9,145	8,810	11,109	133,942
Subtotal Distribution	352,788	304,677	287,875	257,926	304,282	389,135	450,034	421,018	333,639	270,422	260,538	328,517	3,960,850
Transmission/Transformation Losses	5,997	5,180	4,894	4,385	5,173	6,615	7,651	7,157	5,672	4,597	4,429	5,585	67,334
Total Distribution Incl. Losses	358,785	309,857	292,769	262,311	309,455	395,750	457,685	428,175	339,311	275,019	264,967	334,101	4,028,185
Industrial Energy:													
Firm	95,891	90,131	97,474	103,147	107,920	105,906	110,539	110,521	101,026	105,534	102,021	104,003	1,234,113
Economy Power	176,428	183,135	237,917	231,273	167,864	201,129	208,403	207,246	178,102	227,160	200,202	181,367	2,400,225
Interruptible	57,013	42,786	50,415	55,833	55,502	54,714	55,564	58,044	52,580	60,983	54,910	55,669	654,012
Total Industrial	329,332	316,052	385,806	390,252	331,287	361,749	374,505	375,811	331,708	393,677	357,132	341,039	4,288,350
Transmission/Transformation Losses	5,599	5,373	6,559	6,634	5,632	6,150	6,367	6,389	5,639	6,693	6,071	5,798	72,902
Total Industrial Incl. Losses	334,930	321,425	392,365	396,886	336,919	367,899	380,872	382,199	337,347	400,369	363,204	346,837	4,361,252
Century Energy:													
Firm	35,712	32,256	35,712	34,560	35,712	34,560	35,712	35,712	34,560	35,712	34,560	35,712	420,480
Supplemental	111,600	100,800	111,600	108,000	111,600	108,000	111,600	111,600	108,000	111,600	108,000	111,600	1,314,000
Total Century	147,312	133,056	147,312	142,560	147,312	142,560	147,312	147,312	142,560	147,312	142,560	147,312	1,734,480
Transmission/Transformation Losses	2,504	2,262	2,504	2,424	2,504	2,424	2,504	2,504	2,424	2,504	2,424	2,504	29,486
Total Century Incl. Losses	149,816	135,318	149,816	144,984	149,816	144,984	149,816	149,816	144,984	149,816	144,984	149,816	1,763,966
Municipal Energy:													
Total Municipal	16,119	13,724	13,518	12,561	14,972	17,696	19,691	19,306	16,064	13,613	13,058	15,019	185,340
Transmission/Transformation Losses	274	233	230	214	255	301	335	328	273	231	222	255	3,151
Total Municipal Incl. Losses	16,393	13,957	13,748	12,774	15,227	17,997	20,025	19,635	16,337	13,844	13,280	15,275	188,491
Central Energy:													
Total Central	1,388,573	1,216,042	1,102,075	969,919	1,098,764	1,295,982	1,442,743	1,400,546	1,192,148	1,026,875	1,122,945	1,356,909	14,613,522
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,403,732	1,230,968	1,117,420	985,033	1,115,793	1,313,282	1,459,998	1,418,430	1,204,576	1,043,167	1,135,279	1,367,326	14,795,005
Santee Cooper Transmission Losses	18,529	16,249	14,750	13,002	14,728	17,335	19,272	18,723	15,900	13,770	14,986	18,049	195,294
Total Central Served Incl. Losses	1,422,261	1,247,217	1,132,170	998,035	1,130,521	1,330,617	1,479,270	1,437,153	1,220,476	1,056,937	1,150,265	1,385,375	14,990,299
Total Energy:													
Total Territorial	2,237,352	1,988,174	1,942,197	1,779,610	1,903,356	2,211,263	2,436,322	2,367,639	2,017,264	1,859,045	1,899,757	2,188,104	24,830,084
Total Distribution Losses	11,930	10,303	9,735	8,722	10,290	13,159	15,219	14,237	11,282	9,145	8,810	11,109	133,942
Subtotal Territorial	2,249,282	1,998,478	1,951,932	1,788,332	1,913,646	2,224,422	2,451,540	2,381,877	2,028,547	1,868,190	1,908,568	2,199,213	24,964,026
Total Transmission/Transformation Losses	32,904	29,296	28,937	26,659	28,292	32,825	36,128	35,102	29,908	27,795	28,132	32,191	368,167
Total Territorial Incl. Losses	2,282,186	2,027,774	1,980,869	1,814,990	1,941,938	2,257,247	2,487,668	2,416,979	2,058,455	1,895,985	1,936,699	2,231,404	25,332,193
Off-System Sales	56,642	45,741	45,521	42,539	54,396	78,651	104,160	92,388	73,954	47,818	44,253	45,355	731,420
Transmission Losses	699	597	590	552	648	837	1,047	952	796	593	576	587	8,474
Total Requirements	2,339,527	2,074,112	2,026,980	1,858,082	1,996,982	2,336,735	2,592,876	2,510,319	2,133,205	1,944,396	1,981,528	2,277,346	26,072,088

` '	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	191,417	167,743	144,428	112,480	125,008	176,302	222,664	203,203	157,271	117,264	111,071	171,987	1,900,838
Total Commercial	173,528	150,298	157,253	160,034	192,441	223,531	236,295	227,640	188,822	167,565	164,271	169,614	2,211,292
Existing Energy Efficiency Savings	(18,925)	(18,925)	(18,925)	(18,925)	(18,925)	(18,925)	(18,925)	(18,925)	(18,925)	(18,925)	(18,925)	(18,925)	(227,096)
Future Energy Efficiency Savings	(2,708)	(2,708)	(2,708)	(2,708)	(2,708)	(2,708)	(2,708)	(2,708)	(2,708)	(2,708)	(2,708)	(2,708)	(32,500)
Total Distribution	341,995	295,090	278,731	249,563	294,499	376,883	436,009	407,892	323,143	261,878	252,392	318,650	3,836,725
Distribution Losses	11,970	10,328	9,756	8,735	10,307	13,191	15,260	14,276	11,310	9,166	8,834	11,153	134,285
Subtotal Distribution	353,965	305,419	288,486	258,298	304,806	390,074	451,269	422,168	334,453	271,044	261,226	329,803	3,971,011
Transmission/Transformation Losses	6,017	5,192	4,904	4,391	5,182	6,631	7,672	7,177	5,686	4,608	4,441	5,607	67,507
Total Distribution Incl. Losses	359,982	310,611	293,391	262,689	309,988	396,705	458,941	429,345	340,138	275,652	265,667	335,410	4,038,518
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	35,712	32,256	35,712	34,560	35,712	34,560	35,712	35,712	34,560	35,712	34,560	35,712	420,480
Supplemental	111,600	100,800	111,600	108,000	111,600	108,000	111,600	111,600	108,000	111,600	108,000	111,600	1,314,000
Total Century	147,312	133,056	147,312	142,560	147,312	142,560	147,312	147,312	142,560	147,312	142,560	147,312	1,734,480
Transmission/Transformation Losses	2,504	2,262	2,504	2,424	2,504	2,424	2,504	2,504	2,424	2,504	2,424	2,504	29,486
Total Century Incl. Losses	149,816	135,318	149,816	144,984	149,816	144,984	149,816	149,816	144,984	149,816	144,984	149,816	1,763,966
Municipal Energy:													
Total Municipal	16,084	13,694	13,489	12,533	14,940	17,658	19,648	19,265	16,029	13,583	13,030	14,987	184,939
Transmission/Transformation Losses	273	233	229	213	254	300	334	327	272	231	222	255	3,144
Total Municipal Incl. Losses	16,357	13,927	13,718	12,746	15,194	17,958	19,982	19,592	16,302	13,814	13,251	15,242	188,083
Central Energy:													
Total Central	1,421,685	1,207,273	1,126,947	989,213	1,115,310	1,309,573	1,453,665	1,410,567	1,201,145	1,036,679	1,134,004	1,369,411	14,775,472
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,436,844	1,222,198	1,142,293	1,004,327	1,132,339	1,326,873	1,470,920	1,428,451	1,213,572	1,052,971	1,146,338	1,379,829	14,956,955
Santee Cooper Transmission Losses	18,966	16,133	15,078	13,257	14,947	17,515	19,416	18,856	16,019	13,899	15,132	18,214	197,432
Total Central Served Incl. Losses	1,455,810	1,238,331	1,157,371	1,017,584	1,147,286	1,344,388	1,490,336	1,447,306	1,229,591	1,066,870	1,161,470	1,398,043	15,154,387
Total Energy:													
Total Territorial	2,280,100	1,987,515	1,975,728	1,798,922	1,920,126	2,225,389	2,448,096	2,378,732	2,026,179	1,869,360	1,911,494	2,201,765	25,023,406
Total Distribution Losses	11,970	10,328	9,756	8,735	10,307	13,191	15,260	14,276	11,310	9,166	8,834	11,153	134,285
Subtotal Territorial	2,292,070	1,997,843	1,985,484	1,807,656	1,930,434	2,238,580	2,463,357	2,393,008	2,037,489	1,878,526	1,920,328	2,212,918	25,157,692
Total Transmission/Transformation Losses	33,505	29,319	29,413	26,914	28,514	33,014	36,288	35,253	30,026	27,934	28,289	32,376	370,844
Total Territorial Incl. Losses	2,325,575	2,027,162	2,014,896	1,834,570	1,958,948	2,271,594	2,499,644	2,428,261	2,067,515	1,906,459	1,948,617	2,245,294	25,528,536
Off-System Sales	56,082	44,242	44,187	41,864	55,120	81,404	107,663	94,758	75,463	47,283	44,717	46,300	739,082
Transmission Losses	688	575	573	539	652	859	1,075	972	809	591	581	596	8,510
Total Requirements	2,382,344	2,071,979	2,059,657	1,876,973	2,014,720	2,353,857	2,608,382	2,523,991	2,143,786	1,954,334	1,993,915	2,292,190	26,276,128

,	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	192,368	168,522	145,182	113,117	126,029	178,170	225,283	205,537	158,923	118,218	111,636	173,203	1,916,187
Total Commercial	173,546	150,304	157,532	160,544	193,462	225,036	238,064	229,412	190,166	168,721	165,385	170,770	2,222,942
Existing Energy Efficiency Savings	(17,793)	(17,793)	(17,793)	(17,793)	(17,793)	(17,793)	(17,793)	(17,793)	(17,793)	(17,793)	(17,793)	(17,793)	(213,513)
Future Energy Efficiency Savings	(3,083)	(3,083)	(3,083)	(3,083)	(3,083)	(3,083)	(3,083)	(3,083)	(3,083)	(3,083)	(3,083)	(3,083)	(37,000)
Total Distribution	344,645	297,557	281,445	252,393	298,222	381,937	442,078	413,680	327,819	265,670	255,753	322,704	3,883,901
Distribution Losses	12,063	10,415	9,851	8,834	10,438	13,368	15,473	14,479	11,474	9,298	8,951	11,295	135,937
Subtotal Distribution	356,707	307,972	291,295	261,226	308,660	395,305	457,550	428,159	339,293	274,968	264,704	333,998	4,019,838
Transmission/Transformation Losses	6,064	5,236	4,952	4,441	5,247	6,720	7,778	7,279	5,768	4,674	4,500	5,678	68,337
Total Distribution Incl. Losses	362,771	313,207	296,247	265,667	313,907	402,025	465,329	435,438	345,061	279,642	269,204	339,676	4,088,175
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	35,712	32,256	35,712	34,560	35,712	34,560	35,712	35,712	34,560	35,712	34,560	35,712	420,480
Supplemental	111,600	100,800	111,600	108,000	111,600	108,000	111,600	111,600	108,000	111,600	108,000	111,600	1,314,000
Total Century	147,312	133,056	147,312	142,560	147,312	142,560	147,312	147,312	142,560	147,312	142,560	147,312	1,734,480
Transmission/Transformation Losses	2,504	2,262	2,504	2,424	2,504	2,424	2,504	2,504	2,424	2,504	2,424	2,504	29,486
Total Century Incl. Losses	149,816	135,318	149,816	144,984	149,816	144,984	149,816	149,816	144,984	149,816	144,984	149,816	1,763,966
Municipal Energy:													
Total Municipal	16,051	13,666	13,461	12,508	14,909	17,621	19,608	19,225	15,996	13,555	13,003	14,956	184,559
Transmission/Transformation Losses	273	232	229	213	253	300	333	327	272	230	221	254	3,138
Total Municipal Incl. Losses	16,324	13,898	13,690	12,720	15,162	17,921	19,941	19,552	16,268	13,786	13,224	15,210	187,696
Central Energy:													
Total Central	1,435,205	1,218,813	1,138,088	999,254	1,125,399	1,319,973	1,464,576	1,421,478	1,210,556	1,044,499	1,142,653	1,379,751	14,900,245
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,450,364	1,233,739	1,153,433	1,014,368	1,142,428	1,337,273	1,481,831	1,439,361	1,222,984	1,060,791	1,154,987	1,390,169	15,081,728
Santee Cooper Transmission Losses	19,145	16,285	15,225	13,390	15,080	17,652	19,560	19,000	16,143	14,002	15,246	18,350	199,079
Total Central Served Incl. Losses	1,469,509	1,250,025	1,168,658	1,027,757	1,157,508	1,354,925	1,501,391	1,458,361	1,239,127	1,074,793	1,170,232	1,408,519	15,280,806
Total Energy:													
Total Territorial	2,296,236	2,001,494	1,989,555	1,811,766	1,933,908	2,240,807	2,465,036	2,395,391	2,040,234	1,880,943	1,923,476	2,216,128	25,194,974
Total Distribution Losses	12,063	10,415	9,851	8,834	10,438	13,368	15,473	14,479	11,474	9,298	8,951	11,295	135,937
Subtotal Territorial	2,308,299	2,011,909	1,999,406	1,820,600	1,944,346	2,254,175	2,480,508	2,409,870	2,051,708	1,890,241	1,932,427	2,227,422	25,330,910
Total Transmission/Transformation Losses	33,730	29,514	29,607	27,096	28,713	33,239	36,538	35,498	30,232	28,103	28,462	32,584	373,315
Total Territorial Incl. Losses	2,342,028	2,041,423	2,029,012	1,847,695	1,973,059	2,287,414	2,517,046	2,445,368	2,081,940	1,918,344	1,960,890	2,260,006	25,704,225
Off-System Sales	56,920	44,975	45,608	41,953	57,395	83,003	109,504	97,354	76,551	47,265	45,627	47,582	753,738
Transmission Losses	696	583	585	541	670	873	1,091	993	819	593	590	608	8,644
Total Requirements	2,399,644	2,086,980	2,075,206	1,890,190	2,031,124	2,371,290	2,627,641	2,543,716	2,159,310	1,966,202	2,007,107	2,308,196	26,466,606

, ,	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	192,445	168,400	145,042	112,875	126,029	178,746	226,418	206,417	159,273	118,053	111,063	173,137	1,917,898
Total Commercial	175,226	151,632	158,989	162,060	195,402	227,319	240,450	231,653	191,888	170,216	166,817	172,229	2,243,881
Existing Energy Efficiency Savings	(15,532)	(15,532)	(15,532)	(15,532)	(15,532)	(15,532)	(15,532)	(15,532)	(15,532)	(15,532)	(15,532)	(15,532)	(186,386)
Future Energy Efficiency Savings	(3,458)	(3,458)	(3,458)	(3,458)	(3,458)	(3,458)	(3,458)	(3,458)	(3,458)	(3,458)	(3,458)	(3,458)	(41,500)
Total Distribution	348,658	301,020	285,018	255,923	302,419	387,052	447,856	419,058	332,149	269,257	258,867	326,353	3,933,631
Distribution Losses	12,203	10,536	9,976	8,957	10,585	13,547	15,675	14,667	11,625	9,424	9,060	11,422	137,677
Subtotal Distribution	360,861	311,556	294,994	264,881	313,003	400,599	463,531	433,725	343,774	278,681	267,928	337,776	4,071,308
Transmission/Transformation Losses	6,135	5,296	5,015	4,503	5,321	6,810	7,880	7,373	5,844	4,738	4,555	5,742	69,212
Total Distribution Incl. Losses	366,996	316,852	300,009	269,384	318,324	407,409	471,411	441,098	349,618	283,418	272,482	343,518	4,140,520
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	35,712	32,256	35,712	34,560	35,712	34,560	35,712	35,712	34,560	35,712	34,560	35,712	420,480
Supplemental	111,600	100,800	111,600	108,000	111,600	108,000	111,600	111,600	108,000	111,600	108,000	111,600	1,314,000
Total Century	147,312	133,056	147,312	142,560	147,312	142,560	147,312	147,312	142,560	147,312	142,560	147,312	1,734,480
Transmission/Transformation Losses	2,504	2,262	2,504	2,424	2,504	2,424	2,504	2,504	2,424	2,504	2,424	2,504	29,486
Total Century Incl. Losses	149,816	135,318	149,816	144,984	149,816	144,984	149,816	149,816	144,984	149,816	144,984	149,816	1,763,966
Municipal Energy:													
Total Municipal	16,019	13,639	13,435	12,483	14,880	17,587	19,569	19,188	15,965	13,529	12,978	14,927	184,199
Transmission/Transformation Losses	272	232	228	212	253	299	333	326	271	230	221	254	3,131
Total Municipal Incl. Losses	16,292	13,871	13,663	12,695	15,133	17,886	19,902	19,514	16,236	13,759	13,198	15,181	187,330
Central Energy:													
Total Central	1,444,836	1,226,904	1,145,229	1,005,477	1,132,081	1,327,590	1,472,932	1,429,745	1,217,851	1,051,175	1,150,375	1,389,451	14,993,647
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,459,994	1,241,830	1,160,575	1,020,591	1,149,110	1,344,890	1,490,188	1,447,628	1,230,278	1,067,467	1,162,709	1,399,869	15,175,130
Santee Cooper Transmission Losses	19,272	16,392	15,320	13,472	15,168	17,753	19,670	19,109	16,240	14,091	15,348	18,478	200,312
Total Central Served Incl. Losses	1,479,266	1,258,222	1,175,894	1,034,062	1,164,278	1,362,643	1,509,858	1,466,737	1,246,518	1,081,558	1,178,057	1,418,347	15,375,442
Total Energy:	0.000.040	0.040.004	0.000.044	1 001 105	4 044 750	0.050.504	0.470.400	0.400.000	0.054.007	1 001 100	4 004 000	0.000.440	05 007 745
Total Territorial	2,309,849	2,013,021	2,000,244	1,821,495	1,944,758	2,253,504	2,479,132	2,408,998	2,051,827	1,891,180	1,934,288	2,229,448	25,337,745
Total Distribution Losses	12,203	10,536	9,976	8,957	10,585	13,547	15,675	14,667	11,625	9,424	9,060	11,422	137,677
Subtotal Territorial	2,322,052	2,023,557	2,010,220	1,830,453	1,955,343	2,267,051	2,494,807	2,423,665	2,063,453	1,900,604	1,943,348	2,240,871	25,475,423
Total Transmission/Transformation Losses	2,355,979	29,682	29,764	27,239	28,874	33,429	36,749	35,701 2,459,366	30,404 2,093,856	28,254	28,619	32,775	375,417
Total Territorial Incl. Losses			2,039,983	1,857,692	1,984,217	2,300,480	2,531,556			1,928,858	1,971,967	2,273,646	25,850,839
Off-System Sales Transmission Losses	57,922 706	46,361 595	45,819 589	42,996 551	57,746 675	85,848 896	112,553 1,116	99,134 1,009	77,409 827	48,253 602	46,342 597	48,349 615	768,733 8,780
	2,414,607	2,100,194	2,086,391	1,901,239	2,042,638	2,387,225	2,645,226	2,559,509	2,172,093	1,977,714	2,018,906	2,322,610	26,628,351
Total Requirements	2,414,007	2,100,194	۷,000,39 ا	1,901,239	2,042,038	2,301,225	2,040,220	2,339,509	2,172,093	1,977,714	2,010,900	2,322,010	20,028,331

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Distribution Energy:													
Total Residential	193,913	169,669	146,298	114,023	127,427	180,744	229,005	208,769	161,103	119,382	112,005	174,645	1,936,983
Total Commercial	176,527	152,620	160,120	163,274	197,062	229,356	242,629	233,707	193,425	171,519	168,053	173,491	2,261,782
Existing Energy Efficiency Savings	(14,071)	(14,071)	(14,071)	(14,071)	(14,071)	(14,071)	(14,071)	(14,071)	(14,071)	(14,071)	(14,071)	(14,071)	(168,856)
Future Energy Efficiency Savings	(3,792)	(3,792)	(3,792)	(3,792)	(3,792)	(3,792)	(3,792)	(3,792)	(3,792)	(3,792)	(3,792)	(3,792)	(45,500)
Total Distribution	352,578	304,427	288,556	259,436	306,627	392,238	453,772	424,614	336,666	273,039	262,196	330,274	3,984,422
Distribution Losses	12,340	10,655	10,099	9,080	10,732	13,728	15,882	14,861	11,783	9,556	9,177	11,560	139,455
Subtotal Distribution	364,918	315,082	298,655	268,516	317,359	405,966	469,654	439,476	348,450	282,596	271,373	341,833	4,123,877
Transmission/Transformation Losses	6,204	5,356	5,077	4,565	5,395	6,901	7,984	7,471	5,924	4,804	4,613	5,811	70,106
Total Distribution Incl. Losses	371,122	320,438	303,732	273,081	322,754	412,868	477,638	446,947	354,373	287,400	275,986	347,644	4,193,983
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	35,712	32,256	35,712	34,560	35,712	34,560	35,712	35,712	34,560	35,712	34,560	35,712	420,480
Supplemental	111,600	100,800	111,600	108,000	111,600	108,000	111,600	111,600	108,000	111,600	108,000	111,600	1,314,000
Total Century	147,312	133,056	147,312	142,560	147,312	142,560	147,312	147,312	142,560	147,312	142,560	147,312	1,734,480
Transmission/Transformation Losses	2,504	2,262	2,504	2,424	2,504	2,424	2,504	2,504	2,424	2,504	2,424	2,504	29,486
Total Century Incl. Losses	149,816	135,318	149,816	144,984	149,816	144,984	149,816	149,816	144,984	149,816	144,984	149,816	1,763,966
Municipal Energy:													
Total Municipal	15,990	13,614	13,410	12,460	14,852	17,554	19,533	19,152	15,935	13,504	12,954	14,899	183,857
Transmission/Transformation Losses	272	231	228	212	252	298	332	326	271	230	220	253	3,126
Total Municipal Incl. Losses	16,261	13,846	13,638	12,672	15,105	17,853	19,865	19,478	16,206	13,733	13,174	15,152	186,983
Central Energy:													
Total Central	1,456,371	1,273,099	1,153,804	1,012,649	1,140,272	1,337,259	1,483,727	1,440,246	1,226,802	1,058,955	1,159,328	1,400,823	15,143,333
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,471,529	1,288,024	1,169,149	1,027,762	1,157,300	1,354,559	1,500,982	1,458,129	1,239,230	1,075,247	1,171,663	1,411,240	15,324,816
Santee Cooper Transmission Losses	19,424	17,002	15,433	13,566	15,276	17,880	19,813	19,247	16,358	14,193	15,466	18,628	202,288
Total Central Served Incl. Losses	1,490,953	1,305,026	1,184,582	1,041,329	1,172,577	1,372,440	1,520,795	1,477,377	1,255,587	1,089,440	1,187,128	1,429,869	15,527,104
Total Energy:													
Total Territorial	2,325,274	2,062,597	2,012,331	1,832,156	1,957,129	2,268,327	2,495,806	2,425,020	2,065,266	1,902,717	1,946,546	2,244,712	25,537,882
Total Distribution Losses	12,340	10,655	10,099	9,080	10,732	13,728	15,882	14,861	11,783	9,556	9,177	11,560	139,455
Subtotal Territorial	2,337,614	2,073,252	2,022,431	1,841,237	1,967,861	2,282,055	2,511,688	2,439,881	2,077,050	1,912,274	1,955,722	2,256,272	25,677,337
Total Transmission/Transformation Losses	34,148	30,351	29,939	27,396	29,056	33,648	36,995	35,937	30,601	28,423	28,795	32,994	378,280
Total Territorial Incl. Losses	2,371,761	2,103,603	2,052,369	1,868,632	1,996,917	2,315,703	2,548,683	2,475,818	2,107,650	1,940,696	1,984,517	2,289,266	26,055,617
Off-System Sales	38,981	28,595	28,022	24,850	37,205	67,992	93,776	81,249	60,163	30,221	28,568	30,743	550,365
Transmission Losses	450	364	351	314	412	653	859	758	584	358	359	379	5,841
Total Requirements	2,411,193	2,132,561	2,080,742	1,893,796	2,034,534	2,384,348	2,643,318	2,557,825	2,168,397	1,971,275	2,013,445	2,320,388	26,611,823

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Distribution Energy:													
Total Residential	196,292	171,747	148,273	115,780	129,587	183,882	233,039	212,408	163,878	121,307	113,413	176,880	1,966,485
Total Commercial	177,175	152,941	160,568	163,791	198,004	230,652	244,050	234,996	194,208	172,072	168,539	174,000	2,270,997
Existing Energy Efficiency Savings	(11,837)	(11,837)	(11,837)	(11,837)	(11,837)	(11,837)	(11,837)	(11,837)	(11,837)	(11,837)	(11,837)	(11,837)	(142,045)
Future Energy Efficiency Savings	(4,125)	(4,125)	(4,125)	(4,125)	(4,125)	(4,125)	(4,125)	(4,125)	(4,125)	(4,125)	(4,125)	(4,125)	(49,500)
Total Distribution	357,506	308,727	292,881	263,610	311,629	398,573	461,128	431,443	342,125	277,418	265,991	334,918	4,045,948
Distribution Losses	12,513	10,805	10,251	9,226	10,907	13,950	16,139	15,101	11,974	9,710	9,310	11,722	141,608
Subtotal Distribution	370,018	319,533	303,132	272,836	322,536	412,523	477,267	446,543	354,099	287,127	275,301	346,641	4,187,557
Transmission/Transformation Losses	6,290	5,432	5,153	4,638	5,483	7,013	8,114	7,591	6,020	4,881	4,680	5,893	71,188
Total Distribution Incl. Losses	376,309	324,965	308,285	277,474	328,019	419,536	485,381	454,135	360,119	292,008	279,981	352,534	4,258,745
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	35,712	32,256	35,712	34,560	35,712	34,560	35,712	35,712	34,560	35,712	34,560	35,712	420,480
Supplemental	111,600	100,800	111,600	108,000	111,600	108,000	111,600	111,600	108,000	111,600	108,000	111,600	1,314,000
Total Century	147,312	133,056	147,312	142,560	147,312	142,560	147,312	147,312	142,560	147,312	142,560	147,312	1,734,480
Transmission/Transformation Losses	2,504	2,262	2,504	2,424	2,504	2,424	2,504	2,504	2,424	2,504	2,424	2,504	29,486
Total Century Incl. Losses	149,816	135,318	149,816	144,984	149,816	144,984	149,816	149,816	144,984	149,816	144,984	149,816	1,763,966
Municipal Energy:													
Total Municipal	15,962	13,590	13,386	12,438	14,826	17,524	19,499	19,118	15,907	13,480	12,931	14,873	183,535
Transmission/Transformation Losses	271	231	228	211	252	298	331	325	270	229	220	253	3,120
Total Municipal Incl. Losses	16,233	13,821	13,614	12,650	15,078	17,822	19,830	19,443	16,178	13,709	13,151	15,126	186,655
Central Energy:													
Total Central	1,468,832	1,247,091	1,163,242	1,020,707	1,149,333	1,348,009	1,495,632	1,451,679	1,236,493	1,067,219	1,168,763	1,412,707	15,229,708
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,483,991	1,262,017	1,178,588	1,035,820	1,166,361	1,365,310	1,512,888	1,469,562	1,248,921	1,083,511	1,181,097	1,423,125	15,411,191
Santee Cooper Transmission Losses	19,589	16,659	15,557	13,673	15,396	18,022	19,970	19,398	16,486	14,302	15,590	18,785	203,428
Total Central Served Incl. Losses	1,503,579	1,278,675	1,194,145	1,049,493	1,181,757	1,383,332	1,532,858	1,488,960	1,265,407	1,097,814	1,196,687	1,441,910	15,614,619
Total Energy:													
Total Territorial	2,342,635	2,040,866	2,026,071	1,844,366	1,971,166	2,285,382	2,515,034	2,443,248	2,080,388	1,915,336	1,959,752	2,261,215	25,685,460
Total Distribution Losses	12,513	10,805	10,251	9,226	10,907	13,950	16,139	15,101	11,974	9,710	9,310	11,722	141,608
Subtotal Territorial	2,355,148	2,051,671	2,036,322	1,853,593	1,982,073	2,299,332	2,531,173	2,458,348	2,092,363	1,925,046	1,969,062	2,272,938	25,827,069
Total Transmission/Transformation Losses	34,398	30,083	30,139	27,575	29,263	33,900	37,281	36,208	30,824	28,608	28,986	33,232	380,498
Total Territorial Incl. Losses	2,389,546	2,081,754	2,066,461	1,881,168	2,011,336	2,333,232	2,568,454	2,494,556	2,123,187	1,953,654	1,998,048	2,306,170	26,207,566
Off-System Sales	40,159	30,102	29,593	26,073	40,302	70,078	74,433	62,553	41,823	14,767	12,392	14,560	456,836
Transmission Losses	462	378	365	326	438	672	589	501	348	154	146	164	4,542
Total Requirements	2,430,168	2,112,234	2,096,419	1,907,566	2,052,076	2,403,982	2,643,476	2,557,611	2,165,359	1,968,576	2,010,586	2,320,893	26,668,945

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Distribution Energy:													
Total Residential	198,546	173,732	150,194	117,532	131,629	186,652	236,498	215,561	166,363	123,138	114,775	178,904	1,993,525
Total Commercial	178,041	153,492	161,242	164,531	199,159	232,156	245,678	236,497	195,215	172,851	169,254	174,737	2,282,854
Existing Energy Efficiency Savings	(10,119)	(10,119)	(10,119)	(10,119)	(10,119)	(10,119)	(10,119)	(10,119)	(10,119)	(10,119)	(10,119)	(10,119)	(121,426)
Future Energy Efficiency Savings	(4,417)	(4,417)	(4,417)	(4,417)	(4,417)	(4,417)	(4,417)	(4,417)	(4,417)	(4,417)	(4,417)	(4,417)	(53,000)
Total Distribution	362,053	312,690	296,902	267,529	316,253	404,274	467,641	437,524	347,044	281,455	269,494	339,107	4,101,968
Distribution Losses	12,672	10,944	10,392	9,364	11,069	14,150	16,367	15,313	12,147	9,851	9,432	11,869	143,569
Subtotal Distribution	374,725	323,634	307,294	276,893	327,322	418,424	484,009	452,837	359,190	291,306	278,927	350,975	4,245,537
Transmission/Transformation Losses	6,370	5,502	5,224	4,707	5,564	7,113	8,228	7,698	6,106	4,952	4,742	5,967	72,174
Total Distribution Incl. Losses	381,096	329,136	312,518	281,600	332,887	425,537	492,237	460,535	365,297	296,258	283,668	356,942	4,317,711
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	35,712	32,256	35,712	34,560	35,712	34,560	35,712	35,712	34,560	35,712	34,560	35,712	420,480
Supplemental	111,600	100,800	111,600	108,000	111,600	108,000	111,600	111,600	108,000	111,600	108,000	111,600	1,314,000
Total Century	147,312	133,056	147,312	142,560	147,312	142,560	147,312	147,312	142,560	147,312	142,560	147,312	1,734,480
Transmission/Transformation Losses	2,504	2,262	2,504	2,424	2,504	2,424	2,504	2,504	2,424	2,504	2,424	2,504	29,486
Total Century Incl. Losses	149,816	135,318	149,816	144,984	149,816	144,984	149,816	149,816	144,984	149,816	144,984	149,816	1,763,966
Municipal Energy:													
Total Municipal	15,935	13,568	13,364	12,418	14,802	17,495	19,467	19,087	15,881	13,458	12,909	14,848	183,230
Transmission/Transformation Losses	271	231	227	211	252	297	331	324	270	229	219	252	3,115
Total Municipal Incl. Losses	16,206	13,798	13,591	12,629	15,053	17,792	19,797	19,411	16,151	13,686	13,129	15,101	186,345
Central Energy:													
Total Central	1,481,286	1,257,104	1,172,358	1,028,475	1,158,136	1,358,588	1,507,290	1,462,721	1,245,590	1,074,751	1,177,239	1,423,367	15,346,906
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,496,444	1,272,030	1,187,704	1,043,589	1,175,164	1,375,889	1,524,546	1,480,605	1,258,017	1,091,043	1,189,573	1,433,785	15,528,389
Santee Cooper Transmission Losses	19,753	16,791	15,678	13,775	15,512	18,162	20,124	19,544	16,606	14,402	15,702	18,926	204,975
Total Central Served Incl. Losses	1,516,197	1,288,821	1,203,381	1,057,365	1,190,677	1,394,050	1,544,670	1,500,149	1,274,623	1,105,445	1,205,275	1,452,711	15,733,364
Total Energy:													
Total Territorial	2,359,610	2,054,820	2,039,187	1,856,034	1,984,569	2,301,632	2,533,172	2,460,340	2,094,377	1,926,883	1,971,711	2,276,039	25,858,373
Total Distribution Losses	12,672	10,944	10,392	9,364	11,069	14,150	16,367	15,313	12,147	9,851	9,432	11,869	143,569
Subtotal Territorial	2,372,281	2,065,764	2,049,578	1,865,398	1,995,638	2,315,782	2,549,540	2,475,653	2,106,524	1,936,734	1,981,143	2,287,907	26,001,942
Total Transmission/Transformation Losses	34,642	30,284	30,330	27,746	29,460	34,140	37,549	36,460	31,030	28,779	29,159	33,446	383,025
Total Territorial Incl. Losses	2,406,924	2,096,048	2,079,908	1,893,144	2,025,098	2,349,922	2,587,089	2,512,113	2,137,554	1,965,513	2,010,302	2,321,353	26,384,967
Off-System Sales	23,854	13,914	13,486	10,577	24,700	53,112	77,741	64,580	43,873	15,498	12,723	14,913	368,969
Transmission Losses	237	160	150	121	227	432	613	516	363	160	148	166	3,295
Total Requirements	2,431,014	2,110,122	2,093,545	1,903,842	2,050,025	2,403,466	2,665,442	2,577,209	2,181,790	1,981,171	2,023,173	2,336,433	26,757,231

ENERGY FORECAST (MWII) FOR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	200,604	175,538	151,944	119,124	133,531	189,299	239,843	218,567	168,676	124,787	115,935	180,685	2,018,533
Total Commercial	178,393	153,541	161,408	164,760	199,785	233,119	246,760	237,458	195,704	173,121	169,461	174,967	2,288,478
Existing Energy Efficiency Savings	(7,896)	(7,896)	(7,896)	(7,896)	(7,896)	(7,896)	(7,896)	(7,896)	(7,896)	(7,896)	(7,896)	(7,896)	(94,755)
Future Energy Efficiency Savings	(4,708)	(4,708)	(4,708)	(4,708)	(4,708)	(4,708)	(4,708)	(4,708)	(4,708)	(4,708)	(4,708)	(4,708)	(56,500)
Total Distribution	366,392	316,475	300,748	271,280	320,712	409,813	473,999	443,421	351,776	285,304	272,792	343,048	4,155,760
Distribution Losses	12,824	11,077	10,526	9,495	11,225	14,343	16,590	15,520	12,312	9,986	9,548	12,007	145,452
Subtotal Distribution	379,216	327,552	311,274	280,775	331,937	424,157	490,589	458,941	364,088	295,289	282,340	355,055	4,301,211
Transmission/Transformation Losses	6,447	5,568	5,292	4,773	5,643	7,211	8,340	7,802	6,189	5,020	4,800	6,036	73,121
Total Distribution Incl. Losses	385,663	333,120	316,566	285,548	337,580	431,368	498,929	466,743	370,277	300,309	287,140	361,091	4,374,332
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:	05.740	00.050	05.740	04.500	05.740	04.500	05.740	05.740	04.500	05.740	04.500	05.740	400 400
Firm	35,712 111,600	32,256 100,800	35,712 111,600	34,560 108,000	35,712 111,600	34,560 108,000	35,712	35,712 111,600	34,560	35,712 111,600	34,560 108,000	35,712	420,480
Supplemental  Total Century	147,312	133,056	147,312	142,560	147,312	142,560	111,600 147,312	147,312	108,000 142,560	147,312	142,560	111,600 147,312	1,314,000 1,734,480
Transmission/Transformation Losses	2,504	2,262	2,504	2,424	2,504	2,424	2,504	2,504	2,424	2,504	2,424	2,504	29,486
Total Century Incl. Losses	149,816	135,318	149,816	144,984	149,816	144,984	149,816	149,816	144,984	149,816	144,984	149,816	1,763,966
Municipal Energy:	143,010	100,010	140,010	144,504	143,010	144,504	143,010	140,010	144,504	143,010	144,304	140,010	1,700,500
Total Municipal	15,910	13,546	13,343	12,398	14,778	17,467	19,436	19,057	15,856	13,437	12,889	14,825	182,943
Transmission/Transformation Losses	270	230	227	211	251	297	330	324	270	228	219	252	3,110
Total Municipal Incl. Losses	16,181	13,777	13,570	12,609	15,030	17,764	19,766	19,381	16,126	13,665	13,108	15,077	186,053
Central Energy:	,	,	,	,	ŕ	ŕ	,	,	,	ŕ	,	,	ŕ
Total Central	1,493,288	1,267,530	1,181,644	1,036,484	1,167,559	1,370,089	1,520,257	1,475,140	1,255,838	1,083,172	1,186,634	1,435,130	15,472,764
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,508,446	1,282,456	1,196,989	1,051,598	1,184,588	1,387,390	1,537,512	1,493,023	1,268,265	1,099,464	1,198,968	1,445,548	15,654,247
Santee Cooper Transmission Losses	19,911	16,928	15,800	13,881	15,637	18,314	20,295	19,708	16,741	14,513	15,826	19,081	206,636
Total Central Served Incl. Losses	1,528,358	1,299,384	1,212,790	1,065,479	1,200,225	1,405,703	1,557,807	1,512,731	1,285,006	1,113,977	1,214,795	1,464,629	15,860,884
Total Energy:													
Total Territorial	2,375,926	2,069,009	2,052,297	1,867,774	1,998,428	2,318,645	2,552,466	2,478,625	2,109,332	1,939,132	1,984,383	2,291,720	26,037,736
Total Distribution Losses	12,824	11,077	10,526	9,495	11,225	14,343	16,590	15,520	12,312	9,986	9,548	12,007	145,452
Subtotal Territorial	2,388,749	2,080,085	2,062,823	1,877,269	2,009,653	2,332,989	2,569,056	2,494,145	2,121,644	1,949,117	1,993,931	2,303,726	26,183,188
Total Transmission/Transformation Losses	34,877	30,488	30,519	27,918	29,663	34,389	37,831	36,727	31,249	28,957	29,341	33,670	385,628
Total Territorial Incl. Losses	2,423,626	2,110,574	2,093,342	1,905,187	2,039,315	2,367,377	2,606,887	2,530,872	2,152,893	1,978,074	2,023,272	2,337,397	26,568,816
Off-System Sales Transmission Losses	14,559 105	5,024 36	4,192 30	3,533 25	15,668 113	46,422 334	71,757 517	58,720 423	35,944 259	7,284 52	3,661 26	6,693 48	273,457 1,969
													26,844,242
Total Requirements	2,438,290	2,115,633	2,097,564	1,908,745	2,055,096	2,414,134	2,679,161	2,590,015	2,189,096	1,985,411	2,026,959	2,344,138	20,844,242

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	202,301	177,004	153,381	120,443	135,094	191,455	242,580	221,017	170,558	126,127	116,817	182,095	2,038,873
Total Commercial	178,201	153,058	161,038	164,448	199,853	233,506	247,256	237,828	195,612	172,810	169,083	174,602	2,287,296
Existing Energy Efficiency Savings	(5,164)	(5,164)	(5,164)	(5,164)	(5,164)	(5,164)	(5,164)	(5,164)	(5,164)	(5,164)	(5,164)	(5,164)	(61,973)
Future Energy Efficiency Savings	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(59,500)
Total Distribution	370,380	319,940	304,296	274,768	324,824	414,838	479,714	448,723	356,048	288,814	275,777	346,574	4,204,695
Distribution Losses	12,963	11,198	10,650	9,617	11,369	14,519	16,790	15,705	12,462	10,108	9,652	12,130	147,164
Subtotal Distribution	383,343	331,138	314,947	284,385	336,193	429,357	496,504	464,428	368,509	298,922	285,429	358,704	4,351,860
Transmission/Transformation Losses	6,517	5,629	5,354	4,835	5,715	7,299	8,441	7,895	6,265	5,082	4,852	6,098	73,982
Total Distribution Incl. Losses	389,860	336,767	320,301	289,219	341,908	436,656	504,944	472,323	374,774	304,004	290,281	364,802	4,425,841
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	35,712	32,256	35,712	34,560	35,712	34,560	35,712	35,712	34,560	35,712	34,560	35,712	420,480
Supplemental	111,600	100,800	111,600	108,000	111,600	108,000	111,600	111,600	108,000	111,600	108,000	111,600	1,314,000
Total Century	147,312	133,056	147,312	142,560	147,312	142,560	147,312	147,312	142,560	147,312	142,560	147,312	1,734,480
Transmission/Transformation Losses	2,504	2,262	2,504	2,424	2,504	2,424	2,504	2,504	2,424	2,504	2,424	2,504	29,486
Total Century Incl. Losses	149,816	135,318	149,816	144,984	149,816	144,984	149,816	149,816	144,984	149,816	144,984	149,816	1,763,966
Municipal Energy:													
Total Municipal	15,887	13,526	13,323	12,380	14,757	17,441	19,407	19,029	15,833	13,417	12,870	14,803	182,672
Transmission/Transformation Losses	270	230	226	210	251	297	330	323	269	228	219	252	3,105
Total Municipal Incl. Losses	16,157	13,756	13,550	12,590	15,007	17,738	19,737	19,352	16,102	13,645	13,089	15,055	185,778
Central Energy:													
Total Central	1,506,043	1,316,069	1,191,585	1,045,143	1,177,755	1,382,652	1,534,456	1,488,672	1,266,903	1,092,059	1,196,464	1,447,335	15,645,137
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,521,202	1,330,995	1,206,931	1,060,257	1,194,784	1,399,952	1,551,711	1,506,556	1,279,330	1,108,351	1,208,798	1,457,753	15,826,620
Santee Cooper Transmission Losses  Total Central Served Incl. Losses	20,080	17,569	15,931 1,222,862	13,995 1,074,252	15,771	18,479	20,483 1,572,194	19,887 1,526,442	16,887	14,630 1,122,981	15,956	19,242 1,476,995	208,911
Total Energy:	1,541,262	1,348,564	1,222,002	1,074,252	1,210,555	1,418,432	1,572,194	1,520,442	1,296,217	1,122,901	1,224,755	1,476,995	16,035,531
Total Territorial	2,392,645	2,120,993	2,065,767	1,879,902	2,012,714	2,336,207	2,572,351	2,497,431	2,124,646	1,951,509	1,997,179	2,307,429	26,258,774
Total Territorial  Total Distribution Losses	12,963	11,198	10,650	9,617	11,369	14,519	16,790	15,705	12,462	10,108	9,652	12,130	147,164
Subtotal Territorial	2,405,609	2,132,191	2,076,417	1,889,519	2,024,083	2,350,726	2,589,141	2,513,137	2,137,107	1,961,618	2,006,831	2,319,559	26,405,938
Total Transmission/Transformation Losses	35,115	31,189	30,713	28,093	29,869	34,643	38,119	36,998	31,469	29,136	29,523	33,893	388,760
Total Territorial Incl. Losses	2,440,723	2,163,380	2,107,130	1,917,612	2,053,952	2,385,369	2,627,260	2,550,135	2,168,577	1,990,753	2,036,354	2,353,452	26,794,698
Off-System Sales	15,011	4,109	6,565	3,875	16,950	48,367	73,957	61,210	38,379	6,406	4,351	8,248	287,426
Transmission Losses	108	4,109	47	28	122	348	532	441	276	46	4,331	59	2,069
Total Requirements	2,455,842	2,167,519	2,113,742	1,921,515	2,071,024	2,434,083	2,701,750	2,611,786	2,207,232	1,997,205	2,040,736	2,361,760	27,084,193
rotar roquiromonto	2,100,042	2,107,010	2,110,172	1,021,010	2,011,027	2,101,000	2,701,700	2,011,700	2,201,202	1,001,200	2,010,700	2,001,700	21,007,100

,	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	203,911	178,413	154,794	121,774	136,677	193,622	245,350	223,518	172,513	127,554	117,793	183,577	2,059,498
Total Commercial	177,590	152,168	160,244	163,702	199,451	233,393	247,243	237,706	195,075	172,079	168,298	173,838	2,280,787
Existing Energy Efficiency Savings	(2,253)	(2,253)	(2,253)	(2,253)	(2,253)	(2,253)	(2,253)	(2,253)	(2,253)	(2,253)	(2,253)	(2,253)	(27,038)
Future Energy Efficiency Savings	(5,208)	(5,208)	(5,208)	(5,208)	(5,208)	(5,208)	(5,208)	(5,208)	(5,208)	(5,208)	(5,208)	(5,208)	(62,500)
Total Distribution	374,039	323,120	307,577	278,015	328,667	419,554	485,132	453,762	360,126	292,172	278,629	349,954	4,250,747
Distribution Losses	13,091	11,309	10,765	9,731	11,503	14,684	16,980	15,882	12,604	10,226	9,752	12,248	148,776
Subtotal Distribution	387,131	334,430	318,342	287,745	340,170	434,238	502,111	469,644	372,731	302,398	288,381	362,202	4,399,523
Transmission/Transformation Losses	6,581	5,685	5,412	4,892	5,783	7,382	8,536	7,984	6,336	5,141	4,902	6,157	74,792
<b>Total Distribution Incl. Losses</b>	393,712	340,115	323,754	292,637	345,953	441,620	510,647	477,628	379,067	307,539	293,284	368,359	4,474,315
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Energy:													
Total Municipal	15,864	13,508	13,305	12,363	14,736	17,417	19,380	19,002	15,811	13,398	12,852	14,783	182,418
Transmission/Transformation Losses	270	230	226	210	251	296	329	323	269	228	218	251	3,101
Total Municipal Incl. Losses	16,134	13,737	13,531	12,573	14,987	17,713	19,710	19,325	16,079	13,626	13,071	15,034	185,519
Central Energy:													
Total Central	1,519,340	1,289,631	1,201,768	1,054,147	1,188,458	1,395,988	1,549,622	1,503,230	1,278,789	1,101,510	1,206,783	1,460,090	15,749,355
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,534,499	1,304,557	1,217,113	1,069,260	1,205,487	1,413,288	1,566,878	1,521,113	1,291,216	1,117,802	1,219,117	1,470,508	15,930,838
Santee Cooper Transmission Losses	20,255	17,220	16,066	14,114	15,912	18,655	20,683	20,079	17,044	14,755	16,092	19,411	210,287
Total Central Served Incl. Losses	1,554,754	1,321,777	1,233,179	1,083,374	1,221,399	1,431,943	1,587,561	1,541,192	1,308,260	1,132,557	1,235,210	1,489,918	16,141,125
Total Energy:													
Total Territorial	2,262,267	1,964,660	1,931,899	1,749,576	1,879,927	2,211,674	2,445,597	2,369,689	1,998,028	1,816,987	1,867,773	2,176,231	24,674,309
Total Distribution Losses	13,091	11,309	10,765	9,731	11,503	14,684	16,980	15,882	12,604	10,226	9,752	12,248	148,776
Subtotal Territorial	2,275,359	1,975,970	1,942,664	1,759,306	1,891,431	2,226,358	2,462,577	2,385,571	2,010,633	1,827,213	1,877,525	2,188,479	24,823,085
Total Transmission/Transformation Losses	32,850	28,634	28,400	25,845	27,573	32,478	35,910	34,774	29,274	26,815	27,285	31,616	361,455
Total Territorial Incl. Losses	2,308,209	2,004,604	1,971,065	1,785,151	1,919,004	2,258,836	2,498,486	2,420,346	2,039,907	1,854,028	1,904,810	2,220,095	25,184,540
Off-System Sales	16,106	6,293	7,020	5,318	17,803	50,253	75,920	63,554	37,932	5,597	5,642	10,221	301,659
Transmission Losses	116	45	51	38	128	362	547	458	273	40	41	74	2,172
Total Requirements	2,324,431	2,010,942	1,978,135	1,790,508	1,936,935	2,309,451	2,574,952	2,484,357	2,078,111	1,859,665	1,910,493	2,230,390	25,488,371

,	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	205,461	179,783	156,200	123,136	138,304	195,825	248,055	225,962	174,425	128,933	118,696	184,941	2,079,724
Total Commercial	178,044	152,371	160,546	164,058	200,145	234,373	248,326	238,685	195,652	172,466	168,629	174,186	2,287,480
Existing Energy Efficiency Savings	(563)	(563)	(563)	(563)	(563)	(563)	(563)	(563)	(563)	(563)	(563)	(563)	(6,755)
Future Energy Efficiency Savings	(5,417)	(5,417)	(5,417)	(5,417)	(5,417)	(5,417)	(5,417)	(5,417)	(5,417)	(5,417)	(5,417)	(5,417)	(65,000)
Total Distribution	377,525	326,175	310,766	281,215	332,470	424,219	490,402	458,668	364,097	295,420	281,346	353,147	4,295,450
Distribution Losses	13,213	11,416	10,877	9,843	11,636	14,848	17,164	16,053	12,743	10,340	9,847	12,360	150,341
Subtotal Distribution	390,739	337,591	321,643	291,058	344,106	439,067	507,566	474,721	376,840	305,759	291,193	365,507	4,445,790
Transmission/Transformation Losses	6,643	5,739	5,468	4,948	5,850	7,464	8,629	8,070	6,406	5,198	4,950	6,214	75,578
Total Distribution Incl. Losses	397,381	343,330	327,111	296,006	349,956	446,531	516,195	482,791	383,247	310,957	296,143	371,721	4,521,369
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Energy:													
Total Municipal	15,844	13,490	13,287	12,346	14,717	17,394	19,355	18,977	15,790	13,381	12,835	14,763	182,180
Transmission/Transformation Losses	269	229	226	210	250	296	329	323	268	227	218	251	3,097
Total Municipal Incl. Losses	16,113	13,719	13,513	12,556	14,967	17,690	19,684	19,300	16,058	13,608	13,054	15,014	185,277
Central Energy:													
Total Central	1,531,432	1,299,308	1,210,342	1,061,106	1,196,502	1,406,029	1,561,051	1,514,179	1,287,688	1,108,758	1,215,359	1,471,173	15,862,928
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,546,591	1,314,234	1,225,688	1,076,220	1,213,530	1,423,330	1,578,307	1,532,063	1,300,116	1,125,050	1,227,693	1,481,591	16,044,411
Santee Cooper Transmission Losses	20,415	17,348	16,179	14,206	16,019	18,788	20,834	20,223	17,162	14,851	16,206	19,557	211,786
Total Central Served Incl. Losses	1,567,006	1,331,582	1,241,867	1,090,426	1,229,549	1,442,118	1,599,140	1,552,286	1,317,277	1,139,900	1,243,898	1,501,148	16,256,197
Total Energy:													
Total Territorial	2,277,825	1,977,374	1,943,646	1,759,720	1,891,755	2,226,358	2,462,271	2,385,520	2,010,878	1,827,465	1,879,048	2,190,488	24,832,346
Total Distribution Losses	13,213	11,416	10,877	9,843	11,636	14,848	17,164	16,053	12,743	10,340	9,847	12,360	150,341
Subtotal Territorial	2,291,038	1,988,791	1,954,522	1,769,562	1,903,391	2,241,206	2,479,435	2,401,573	2,023,621	1,837,805	1,888,895	2,202,848	24,982,687
Total Transmission/Transformation Losses	33,071	28,815	28,569	25,993	27,746	32,692	36,153	35,005	29,461	26,967	27,446	31,818	363,737
Total Territorial Incl. Losses	2,324,109	2,017,606	1,983,092	1,795,555	1,931,137	2,273,898	2,515,588	2,436,578	2,053,082	1,864,772	1,916,341	2,234,666	25,346,424
Off-System Sales	16,464	7,338	7,210	4,888	17,319	51,258	77,129	64,727	40,173	7,714	6,119	8,328	308,666
Transmission Losses	119	53	52	35	125	369	555	466	289	56	44	60	2,222
Total Requirements	2,340,692	2,024,996	1,990,354	1,800,478	1,948,581	2,325,525	2,593,272	2,501,771	2,093,545	1,872,542	1,922,503	2,243,054	25,657,312

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	206,853	181,012	157,472	124,380	139,801	197,858	250,642	228,299	176,259	130,266	119,562	186,216	2,098,621
Total Commercial	179,750	153,828	162,093	165,651	202,057	236,554	250,601	240,856	197,438	174,070	170,180	175,754	2,308,831
Existing Energy Efficiency Savings	(195)	(195)	(195)	(195)	(195)	(195)	(195)	(195)	(195)	(195)	(195)	(195)	(2,340)
Future Energy Efficiency Savings	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(4,958)	(59,500)
Total Distribution	381,449	329,686	314,411	284,878	336,704	429,259	496,090	464,002	368,544	299,182	284,589	356,817	4,345,612
Distribution Losses	13,351	11,539	11,004	9,971	11,785	15,024	17,363	16,240	12,899	10,471	9,961	12,489	152,096
Subtotal Distribution	394,800	341,225	325,416	294,849	348,489	444,283	513,453	480,242	381,443	309,653	294,550	369,305	4,497,708
Transmission/Transformation Losses	6,712	5,801	5,532	5,012	5,924	7,553	8,729	8,164	6,485	5,264	5,007	6,278	76,461
Total Distribution Incl. Losses	401,512	347,026	330,948	299,861	354,413	451,836	522,182	488,406	387,928	314,918	299,557	375,584	4,574,169
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Energy:													
Total Municipal	15,824	13,473	13,271	12,331	14,699	17,373	19,331	18,954	15,771	13,364	12,820	14,745	181,957
Transmission/Transformation Losses	269	229	226	210	250	295	329	322	268	227	218	251	3,093
Total Municipal Incl. Losses	16,093	13,702	13,497	12,541	14,949	17,668	19,660	19,276	16,039	13,591	13,038	14,996	185,050
Central Energy:													
Total Central	1,543,809	1,309,686	1,219,181	1,068,613	1,205,794	1,418,198	1,575,146	1,527,745	1,298,585	1,117,014	1,224,675	1,483,229	15,991,675
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,558,967	1,324,612	1,234,527	1,083,727	1,222,823	1,435,498	1,592,401	1,545,629	1,311,013	1,133,306	1,237,009	1,493,647	16,173,158
Santee Cooper Transmission Losses	20,578	17,485	16,296	14,305	16,141	18,949	21,020	20,402	17,305	14,960	16,329	19,716	213,486
Total Central Served Incl. Losses	1,579,546	1,342,097	1,250,822	1,098,032	1,238,964	1,454,447	1,613,421	1,566,031	1,328,318	1,148,265	1,253,338	1,513,363	16,386,644
Total Energy:	0.004.400	4 004 047	4 050 444	4 770 074	4 005 000	0.040.545	0.400.000	0.404.007	0.000.000	1 000 107	4 004 500	0.000.400	05 044 000
Total Territorial	2,294,106	1,991,247	1,956,114	1,770,874	1,905,263	2,243,545	2,482,029	2,404,397	2,026,202	1,839,467	1,891,592	2,206,196	25,011,033
Total Distribution Losses	13,351	11,539	11,004	9,971	11,785	15,024	17,363	16,240	12,899	10,471	9,961	12,489	152,096
Subtotal Territorial	2,307,457	2,002,786	1,967,118	1,780,845	1,917,048	2,258,569	2,499,392	2,420,637	2,039,102	1,849,939	1,901,552	2,218,685	25,163,130
Total Transmission/Transformation Losses	2,340,760	29,014	28,750	26,156	27,943	32,941 2,291,510	36,439 2,535,831	35,277	29,683 2,068,784	27,142	27,626 1,929,178	32,042	366,315 25,529,445
Total Territorial Incl. Losses		2,031,800	1,995,868	1,807,001	1,944,991			2,455,914		1,877,081		2,250,726	, ,
Off-System Sales Transmission Losses	18,020 130	8,277 60	7,831 56	5,219 38	17,862 129	54,093 389	80,125 577	67,529 486	39,545 285	7,955 57	6,070 44	9,518	322,044 2,319
	2,358,909	2,040,137	2,003,755	1,812,258	1,962,981	2,345,993	2,616,533	2,523,930	2,108,615	1,885,093	1,935,292	2,260,313	25,853,808
Total Requirements	2,330,909	2,040,137	2,003,735	1,012,208	1,902,901	2,340,993	2,010,003	2,323,930	2,100,015	1,000,093	1,930,292	2,200,313	25,055,008

ENERGY FORECAST (MWII) FOR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	208,265	182,276	158,791	125,688	141,334	199,859	253,158	230,582	178,095	131,658	120,505	187,509	2,117,719
Total Commercial	181,350	155,198	163,552	167,159	203,872	238,634	252,779	242,946	199,165	175,626	171,693	177,293	2,329,267
Existing Energy Efficiency Savings	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(26)
Future Energy Efficiency Savings	(4,271)	(4,271)	(4,271)	(4,271)	(4,271)	(4,271)	(4,271)	(4,271)	(4,271)	(4,271)	(4,271)	(4,271)	(51,250)
Total Distribution	385,342	333,201	318,071	288,574	340,933	434,220	501,664	469,255	372,987	303,011	287,926	360,528	4,395,711
Distribution Losses	13,487	11,662	11,132	10,100	11,933	15,198	17,558	16,424	13,055	10,605	10,077	12,618	153,850
Subtotal Distribution	398,829	344,863	329,203	298,674	352,866	449,417	519,222	485,679	386,041	313,616	298,003	373,147	4,549,561
Transmission/Transformation Losses	6,780	5,863	5,596	5,077	5,999	7,640	8,827	8,257	6,563	5,331	5,066	6,343	77,343
Total Distribution Incl. Losses	405,609	350,725	334,800	303,751	358,865	457,057	528,049	493,936	392,604	318,947	303,069	379,490	4,626,903
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Energy:													
Total Municipal	15,806	13,458	13,256	12,317	14,682	17,353	19,309	18,932	15,753	13,349	12,805	14,728	181,749
Transmission/Transformation Losses	269	229	225	209	250	295	328	322	268	227	218	250	3,090
Total Municipal Incl. Losses	16,075	13,687	13,481	12,527	14,932	17,648	19,637	19,254	16,020	13,576	13,023	14,979	184,838
Central Energy:													
Total Central	1,556,741	1,359,654	1,228,564	1,076,644	1,215,545	1,430,745	1,589,513	1,541,567	1,309,773	1,125,653	1,234,413	1,495,858	16,164,670
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,571,899	1,374,580	1,243,910	1,091,757	1,232,573	1,448,046	1,606,769	1,559,451	1,322,200	1,141,945	1,246,747	1,506,275	16,346,153
Santee Cooper Transmission Losses	20,749	18,144	16,420	14,411	16,270	19,114	21,209	20,585	17,453	15,074	16,457	19,883	215,769
Total Central Served Incl. Losses	1,592,648	1,392,724	1,260,329	1,106,168	1,248,843	1,467,160	1,627,978	1,580,036	1,339,653	1,157,019	1,263,204	1,526,158	16,561,922
Total Energy:													
Total Territorial	2,310,913	2,044,714	1,969,141	1,782,586	1,919,226	2,261,034	2,501,949	2,423,450	2,041,814	1,851,920	1,904,652	2,222,519	25,233,919
Total Distribution Losses	13,487	11,662	11,132	10,100	11,933	15,198	17,558	16,424	13,055	10,605	10,077	12,618	153,850
Subtotal Territorial	2,324,400	2,056,376	1,980,273	1,792,686	1,931,159	2,276,231	2,519,508	2,439,874	2,054,869	1,862,526	1,914,729	2,235,137	25,387,769
Total Transmission/Transformation Losses	33,542	29,735	28,938	26,327	28,146	33,193	36,726	35,552	29,908	27,324	27,813	32,273	369,477
Total Territorial Incl. Losses	2,357,941	2,086,111	2,009,211	1,819,013	1,959,305	2,309,425	2,556,233	2,475,426	2,084,777	1,889,849	1,942,542	2,267,411	25,757,245
Off-System Sales	19,925	6,635	8,834	6,229	20,132	55,706	83,076	69,267	40,669	6,881	7,786	11,489	336,627
Transmission Losses	143	48	64	45	145	401	598	499	293	50	56	83	2,424
Total Requirements	2,378,009	2,092,794	2,018,109	1,825,287	1,979,582	2,365,532	2,639,908	2,545,192	2,125,739	1,896,779	1,950,383	2,278,983	26,096,296

ENERGY FORECAST (MWII) FOR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	209,893	183,750	160,312	127,190	143,049	202,022	255,835	233,025	180,099	133,238	121,645	188,994	2,139,052
Total Commercial	182,925	156,550	164,996	168,654	205,681	240,715	254,966	245,048	200,903	177,191	173,216	178,842	2,349,688
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Energy Efficiency Savings	(3,521)	(3,521)	(3,521)	(3,521)	(3,521)	(3,521)	(3,521)	(3,521)	(3,521)	(3,521)	(3,521)	(3,521)	(42,250)
Total Distribution	389,296	336,779	321,787	292,324	345,209	439,217	507,281	474,553	377,482	306,908	291,340	364,316	4,446,490
Distribution Losses	13,625	11,787	11,263	10,231	12,082	15,373	17,755	16,609	13,212	10,742	10,197	12,751	155,627
Subtotal Distribution	402,922	348,566	333,049	302,555	357,292	454,590	525,035	491,162	390,694	317,650	301,537	377,067	4,602,118
Transmission/Transformation Losses	6,850	5,926	5,662	5,143	6,074	7,728	8,926	8,350	6,642	5,400	5,126	6,410	78,236
Total Distribution Incl. Losses	409,771	354,491	338,711	307,699	363,366	462,318	533,961	499,512	397,336	323,050	306,663	383,477	4,680,354
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Energy:													
Total Municipal	15,789	13,444	13,242	12,304	14,666	17,335	19,289	18,912	15,736	13,335	12,791	14,713	181,555
Transmission/Transformation Losses	268	229	225	209	249	295	328	322	268	227	217	250	3,086
Total Municipal Incl. Losses	16,058	13,672	13,467	12,513	14,916	17,629	19,617	19,234	16,003	13,561	13,009	14,963	184,642
Central Energy:													
Total Central	1,570,517	1,331,806	1,238,523	1,085,094	1,225,761	1,443,707	1,604,229	1,555,604	1,321,099	1,134,451	1,244,260	1,508,562	16,263,615
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	400.040
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations		0		1 100 200			0	0	0		0	0	10.445.000
Total Central Served	1,585,676	1,346,732	1,253,869	1,100,208	1,242,790	1,461,007	1,621,485	1,573,487	1,333,527	1,150,743	1,256,594	1,518,980	16,445,098
Santee Cooper Transmission Losses	20,931	17,777	16,551	14,523	16,405	19,285	21,404	20,770	17,603	15,190	16,587	20,051	217,075
Total Central Served Incl. Losses	1,606,607	1,364,509	1,270,420	1,114,731	1,259,195	1,480,292	1,642,888	1,594,257	1,351,129	1,165,933	1,273,181	1,539,031	16,662,173
Total Energy:	2 220 626	2 020 420	4 000 000	4 704 774	4 022 702	0.070.074	0.500.004	0.440.764	2.057.640	1 004 000	4 047 000	2 220 000	25 202 450
Total Pietribution Legace	2,328,626	2,020,430	1,982,802	1,794,774	1,933,703	2,278,974	2,522,261	2,442,764	2,057,619	1,864,602	1,917,899	2,238,996	25,383,450
Total Distribution Losses Subtotal Territorial	13,625 2,342,252	11,787 2,032,217	11,263 1,994,064	10,231 1,805,005	12,082 1,945,785	15,373 2,294,346	17,755 2,540,016	16,609 2,459,374	13,212 2,070,831	10,742 1,875,343	10,197 1,928,096	12,751 2,251,747	155,627 25,539,077
Total Transmission/Transformation Losses		29,430	1,994,064			2,294,346	2,540,016 37,019					32,508	
Total Territorial Incl. Losses	33,793			26,504	28,356			35,830	30,137	27,508 1,902,851	28,003		371,673
	2,376,045	2,061,648	2,023,199 10,680	1,831,509 6,382	1,974,141	2,327,799 57,742	2,577,034	2,495,204	2,100,968	7,237	1,956,099 8,149	2,284,255 13,089	25,910,750
Off-System Sales Transmission Losses	21,021 151	11,375 82	77	6,382 46	20,811 150	57,742 416	86,407 622	71,448 514	40,831 294	7,237 52	8,149 59	13,089	355,172 2,557
						2.385.956							
Total Requirements	2,397,217	2,073,104	2,033,955	1,837,938	1,995,102	2,385,956	2,664,063	2,567,166	2,142,093	1,910,141	1,964,307	2,297,438	26,268,480

, ,	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	211,601	185,295	161,894	128,739	144,802	204,221	258,550	235,499	182,132	134,851	122,821	190,535	2,160,939
Total Commercial	184,508	157,909	166,445	170,154	207,494	242,803	257,160	247,156	202,644	178,755	174,737	180,392	2,370,158
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Energy Efficiency Savings	(3,354)	(3,354)	(3,354)	(3,354)	(3,354)	(3,354)	(3,354)	(3,354)	(3,354)	(3,354)	(3,354)	(3,354)	(40,250)
Total Distribution	392,754	339,849	324,985	295,538	348,942	443,670	512,357	479,301	381,421	310,252	294,204	367,573	4,490,847
Distribution Losses	13,746	11,895	11,374	10,344	12,213	15,528	17,932	16,776	13,350	10,859	10,297	12,865	157,180
Subtotal Distribution	406,501	351,744	336,359	305,882	361,155	459,198	530,289	496,077	394,771	321,111	304,501	380,438	4,648,027
Transmission/Transformation Losses	6,911	5,980	5,718	5,200	6,140	7,806	9,015	8,433	6,711	5,459	5,177	6,467	79,016
Total Distribution Incl. Losses	413,411	357,724	342,077	311,082	367,295	467,005	539,304	504,510	401,482	326,570	309,678	386,905	4,727,043
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Energy:													
Total Municipal	15,774	13,430	13,229	12,292	14,652	17,318	19,270	18,894	15,720	13,322	12,779	14,698	181,376
Transmission/Transformation Losses	268	228	225	209	249	294	328	321	267	226	217	250	3,083
Total Municipal Incl. Losses	16,042	13,659	13,454	12,501	14,901	17,612	19,597	19,215	15,988	13,548	12,996	14,948	184,460
Central Energy:													
Total Central	1,584,676	1,343,369	1,249,044	1,094,100	1,236,585	1,457,364	1,619,703	1,570,315	1,332,964	1,143,686	1,254,552	1,521,773	16,408,130
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	100.010
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035 0	4,176	4,101	4,655	5,186 0	4,523	5,200	3,198	4,327 0	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations  Total Central Served	1,599,834	1,358,295		<del>_</del>	<del>_</del>	<del>_</del>				1,159,978	1,266,886	1,532,191	16,589,613
Santee Cooper Transmission Losses	21,118	17,929	1,264,389 16,690	1,109,214 14,642	1,253,614 16,548	1,474,665 19,466	1,636,958 21,608	1,588,198 20,964	1,345,392	15,312	16,723	20,225	
Total Central Served Incl. Losses	1,620,952	1,376,224	1,281,079	1,123,855	1,270,161	1,494,130	1,658,566	1,609,162	17,759 1,363,151	1,175,289	1,283,609	1,552,416	218,983 16,808,595
Total Energy:	1,020,952	1,376,224	1,201,079	1,123,655	1,270,161	1,494,130	1,000,000	1,609,162	1,303,131	1,175,269	1,203,609	1,552,410	10,000,595
Total Territorial	2,346,227	2,035,050	1,996,507	1,806,982	1,948,245	2,297,067	2,542,791	2,462,205	2,073,408	1,877,167	1,931,042	2,255,449	25,572,142
Total Distribution Losses	13,746	11,895	11,374	10,344	12,213	15,528	17,932	16,776	13,350	10,859	10,297	12,865	157,180
Subtotal Territorial	2,359,974	2,046,945	2,007,881	1,817,326	1,960,458	2,312,596	2,560,724	2,478,980	2,086,758	1,888,026	1,941,339	2,268,314	25,729,322
Total Transmission/Transformation Losses	34,040	29,637	29,329	26,680	28,564	33,710	37,312	36,108	30,362	27,689	28,189	32,739	374,358
Total Territorial Incl. Losses	2,394,014	2,076,582	2,037,211	1,844,006	1,989,022	2,346,306	2,598,036	2,515,088	2,117,120	1,915,714	1,969,528	2,301,053	26,103,680
Off-System Sales	2,394,014	12,832	12,085	8,339	22,013	60,773	88,704	74,798	41,637	7,390	9,100	14,170	374,251
Transmission Losses	161	92	12,065	60	158	438	639	74,796 539	300	7,390 53	9,100	102	2,695
Total Requirements	2,416,586	2,089,506	2,049,383	1,852,405	2,011,194	2,407,517	2,687,379	2,590,424	2,159,057	1,923,157	1,978,694	2,315,325	26,480,625
i otai ivequiremente	2,410,500	2,009,000	2,040,000	1,002,400	2,011,134	2,407,017	2,001,019	2,000,424	2,100,007	1,323,137	1,310,034	2,010,020	20,400,023

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	213,208	186,757	163,430	130,282	146,567	206,440	261,274	238,000	184,202	136,493	124,010	192,087	2,182,751
Total Commercial	186,095	159,271	167,898	171,656	209,313	244,901	259,368	249,279	204,398	180,331	176,272	181,959	2,390,740
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Energy Efficiency Savings	(3,188)	(3,188)	(3,188)	(3,188)	(3,188)	(3,188)	(3,188)	(3,188)	(3,188)	(3,188)	(3,188)	(3,188)	(38,250)
Total Distribution	396,116	342,841	328,140	298,750	352,692	448,154	517,455	484,091	385,413	313,637	297,094	370,858	4,535,241
Distribution Losses	13,864	11,999	11,485	10,456	12,344	15,685	18,111	16,943	13,489	10,977	10,398	12,980	158,733
Subtotal Distribution	409,980	354,841	339,625	309,206	365,037	463,839	535,566	501,035	398,902	324,614	307,493	383,838	4,693,974
Transmission/Transformation Losses	6,970	6,032	5,774	5,257	6,206	7,885	9,105	8,518	6,781	5,518	5,227	6,525	79,798
Total Distribution Incl. Losses	416,949	360,873	345,399	314,463	371,242	471,724	544,670	509,552	405,683	330,133	312,720	390,363	4,773,772
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Energy:													
Total Municipal	15,760	13,418	13,217	12,281	14,639	17,302	19,252	18,876	15,706	13,309	12,767	14,685	181,211
Transmission/Transformation Losses	268	228	225	209	249	294	327	321	267	226	217	250	3,081
Total Municipal Incl. Losses	16,027	13,646	13,441	12,490	14,887	17,596	19,579	19,197	15,973	13,536	12,984	14,934	184,292
Central Energy:													
Total Central	1,599,279	1,355,854	1,260,021	1,103,548	1,247,929	1,471,692	1,635,943	1,585,718	1,345,314	1,153,265	1,265,177	1,535,319	16,559,060
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,614,438	1,370,780	1,275,366	1,118,662	1,264,958	1,488,992	1,653,199	1,603,602	1,357,742	1,169,557	1,277,511	1,545,737	16,740,543
Santee Cooper Transmission Losses	21,311	18,094	16,835	14,766	16,697	19,655	21,822	21,168	17,922	15,438	16,863	20,404	220,975
Total Central Served Incl. Losses	1,635,749	1,388,874	1,292,201	1,133,428	1,281,655	1,508,647	1,675,021	1,624,769	1,375,664	1,184,996	1,294,374	1,566,141	16,961,518
Total Energy:													
Total Territorial	2,364,178	2,050,515	2,010,627	1,819,631	1,963,326	2,315,863	2,564,112	2,482,382	2,089,736	1,890,119	1,944,546	2,272,267	25,767,302
Total Distribution Losses	13,864	11,999	11,485	10,456	12,344	15,685	18,111	16,943	13,489	10,977	10,398	12,980	158,733
Subtotal Territorial	2,378,042	2,062,514	2,022,112	1,830,087	1,975,671	2,331,548	2,582,223	2,499,325	2,103,225	1,901,096	1,954,945	2,285,247	25,926,035
Total Transmission/Transformation Losses	34,292	29,854	29,530	26,861	28,780	33,978	37,616	36,395	30,595	27,874	28,380	32,975	377,129
Total Territorial Incl. Losses	2,412,334	2,092,368	2,051,642	1,856,948	2,004,450	2,365,526	2,619,839	2,535,720	2,133,820	1,928,971	1,983,324	2,318,222	26,303,163
Off-System Sales	24,035	14,049	11,170	7,629	22,469	61,658	91,436	78,250	41,110	5,343	10,485	15,974	383,608
Transmission Losses	173	101	80	55	162	444	658	563	296	38	75	115	2,762
Total Requirements	2,436,542	2,106,518	2,062,892	1,864,631	2,027,081	2,427,628	2,711,933	2,614,533	2,175,227	1,934,352	1,993,884	2,334,312	26,689,534

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	214,719	188,151	164,925	131,807	148,318	208,640	263,971	240,481	186,261	138,128	125,187	193,606	2,204,193
Total Commercial	187,705	160,655	169,374	173,182	211,162	247,036	261,615	251,437	206,177	181,924	177,821	183,539	2,411,628
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Energy Efficiency Savings	(3,063)	(3,063)	(3,063)	(3,063)	(3,063)	(3,063)	(3,063)	(3,063)	(3,063)	(3,063)	(3,063)	(3,063)	(36,750)
Total Distribution	399,362	345,744	331,237	301,926	356,417	452,614	522,523	488,855	389,376	316,990	299,946	374,082	4,579,071
Distribution Losses	13,978	12,101	11,593	10,567	12,475	15,841	18,288	17,110	13,628	11,095	10,498	13,093	160,267
Subtotal Distribution	413,340	357,845	342,830	312,493	368,892	468,455	540,811	505,965	403,004	328,084	310,444	387,175	4,739,339
Transmission/Transformation Losses	7,027	6,083	5,828	5,312	6,271	7,964	9,194	8,601	6,851	5,577	5,278	6,582	80,569
<b>Total Distribution Incl. Losses</b>	420,366	363,928	348,658	317,806	375,163	476,419	550,005	514,566	409,855	333,662	315,721	393,757	4,819,908
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Energy:													
Total Municipal	15,746	13,407	13,206	12,270	14,626	17,287	19,236	18,861	15,693	13,298	12,757	14,672	181,060
Transmission/Transformation Losses	268	228	224	209	249	294	327	321	267	226	217	249	3,078
Total Municipal Incl. Losses	16,014	13,635	13,430	12,479	14,875	17,581	19,563	19,181	15,960	13,524	12,973	14,922	184,138
Central Energy:													
Total Central	1,614,206	1,409,074	1,271,487	1,113,499	1,259,979	1,486,911	1,653,259	1,602,164	1,358,506	1,163,497	1,276,411	1,549,492	16,758,485
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,629,364	1,424,000	1,286,832	1,128,613	1,277,008	1,504,212	1,670,514	1,620,047	1,370,933	1,179,789	1,288,745	1,559,910	16,939,968
Santee Cooper Transmission Losses	21,508	18,797	16,986	14,898	16,857	19,856	22,051	21,385	18,096	15,573	17,011	20,591	223,608
Total Central Served Incl. Losses	1,650,872	1,442,797	1,303,819	1,143,510	1,293,864	1,524,067	1,692,565	1,641,432	1,389,030	1,195,363	1,305,757	1,580,500	17,163,575
Total Energy:													
Total Territorial	2,382,338	2,106,627	2,025,180	1,832,747	1,979,089	2,335,528	2,586,480	2,503,575	2,106,877	1,903,693	1,958,621	2,289,651	26,010,405
Total Distribution Losses	13,978	12,101	11,593	10,567	12,475	15,841	18,288	17,110	13,628	11,095	10,498	13,093	160,267
Subtotal Territorial	2,396,315	2,118,728	2,036,773	1,843,315	1,991,563	2,351,370	2,604,768	2,520,685	2,120,505	1,914,787	1,969,119	2,302,744	26,170,672
Total Transmission/Transformation Losses	34,546	30,607	29,735	27,048	29,004	34,257	37,933	36,695	30,839	28,068	28,578	33,219	380,530
Total Territorial Incl. Losses	2,430,861	2,149,335	2,066,508	1,870,362	2,020,567	2,385,627	2,642,701	2,557,380	2,151,344	1,942,855	1,997,697	2,335,963	26,551,202
Off-System Sales	25,318	12,339	12,564	7,198	20,694	64,225	93,502	80,065	43,276	7,330	11,101	15,486	393,099
Transmission Losses	182	89	90	52	149	462	673	576	312	53	80	112	2,830
Total Requirements	2,456,361	2,161,763	2,079,162	1,877,612	2,041,411	2,450,315	2,736,876	2,638,022	2,194,932	1,950,238	2,008,878	2,351,561	26,947,132

ENERGY FORECAST (MWII) FOR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	216,244	189,551	166,424	133,338	150,073	210,832	266,631	242,926	188,292	139,742	126,339	195,092	2,225,484
Total Commercial	189,358	162,070	170,877	174,731	213,037	249,200	263,890	253,620	207,976	183,533	179,385	185,135	2,432,811
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Energy Efficiency Savings	(2,938)	(2,938)	(2,938)	(2,938)	(2,938)	(2,938)	(2,938)	(2,938)	(2,938)	(2,938)	(2,938)	(2,938)	(35,250)
Total Distribution	402,664	348,684	334,363	305,132	360,172	457,095	527,583	493,608	393,330	320,337	302,787	377,290	4,623,046
Distribution Losses	14,093	12,204	11,703	10,680	12,606	15,998	18,465	17,276	13,767	11,212	10,598	13,205	161,807
Subtotal Distribution	416,757	360,887	346,066	315,812	372,778	473,094	546,048	510,885	407,097	331,549	313,385	390,495	4,784,852
Transmission/Transformation Losses	7,085	6,135	5,883	5,369	6,337	8,043	9,283	8,685	6,921	5,636	5,328	6,638	81,342
Total Distribution Incl. Losses	423,842	367,023	351,949	321,180	379,116	481,136	555,331	519,570	414,018	337,185	318,712	397,133	4,866,195
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Energy:													
Total Municipal	15,734	13,397	13,196	12,261	14,615	17,274	19,221	18,846	15,681	13,288	12,747	14,661	180,922
Transmission/Transformation Losses	267	228	224	208	248	294	327	320	267	226	217	249	3,076
Total Municipal Incl. Losses	16,002	13,625	13,420	12,470	14,864	17,568	19,548	19,167	15,947	13,514	12,963	14,911	183,998
Central Energy:	4 000 400	4 004 077	4 000 000	4 400 500	4.070.440	4 500 000	4 070 700	4 040 704	4 074 000	4 470 000	4 007 507	4 500 007	40.070.074
Total Central	1,629,480 0	1,381,377	1,283,039	1,123,536	1,272,149	1,502,299	1,670,780	1,618,794	1,371,833	1,173,800	1,287,597	1,563,387	16,878,071
Existing Energy Efficiency Savings		0 10,891	0 11,169	0 11,013	0	0 12,114	0 12,733	0	0 9,229	0 11,965	0	7,886	133,312
Future Energy Efficiency Savings L-Rate Firm	11,699 3,460	4.035	4,176	4,101	12,374 4,655	5,186	4,523	12,684 5,200	9,229 3,198	4,327	9,555 2,779	2,532	48,171
L-Rate Interruptible	3,460	4,035	4,176	4,101	4,055	0,100	4,525	0,200	3,190	4,327	2,779	2,532	40,171
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,644,639	1,396,302	1,298,384	1,138,650	1,289,178	1,519,599	1,688,036	1,636,677	1,384,261	1,190,092	1,299,931	1,573,805	17,059,554
Santee Cooper Transmission Losses	21,709	18,431	17,139	15,030	17,017	20,059	22,282	21,604	18,272	15,709	17,159	20,774	225,186
Total Central Served Incl. Losses	1,666,348	1,414,734	1,315,523	1,153,680	1,306,195	1,539,658	1,710,318	1,658,282	1,402,533	1,205,801	1,317,090	1,594,579	17,284,740
Total Energy:	1,000,010	1,111,701	1,010,020	1,100,000	1,000,100	1,000,000	1,7 10,010	1,000,202	1,102,000	1,200,001	1,011,000	1,001,010	17,201,710
Total Territorial	2,400,902	2,081,858	2,039,848	1,845,981	1,995,003	2,355,384	2,609,047	2,524,944	2,124,147	1,917,332	1,972,639	2,306,743	26,173,828
Total Distribution Losses	14,093	12,204	11,703	10,680	12,606	15,998	18,465	17,276	13,767	11,212	10,598	13,205	161,807
Subtotal Territorial	2,414,995	2,094,062	2,051,551	1,856,660	2,007,609	2,371,382	2,627,512	2,542,220	2,137,914	1,928,544	1,983,236	2,319,948	26,335,635
Total Transmission/Transformation Losses	34,805	30,293	29,943	27,236	29,230	34,539	38,253	36,998	31,084	28,263	28,775	33,459	382,879
Total Territorial Incl. Losses	2,449,801	2,124,355	2,081,493	1,883,897	2,036,840	2,405,921	2,665,765	2,579,219	2,168,998	1,956,807	2,012,012	2,353,407	26,718,514
Off-System Sales	27,240	17,102	13,562	8,232	22,452	66,468	95,612	82,246	44,247	7,423	11,926	17,716	414,228
Transmission Losses	196	123	98	59	162	479	688	592	319	53	86	128	2,982
Total Requirements	2,477,237	2,141,581	2,095,153	1,892,188	2,059,453	2,472,868	2,762,066	2,662,057	2,213,564	1,964,283	2,024,024	2,371,250	27,135,724
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,	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	ANNUAL
Distribution Energy:													
Total Residential	217,950	191,115	168,076	135,001	151,980	213,242	269,582	245,640	190,536	141,516	127,631	196,782	2,249,048
Total Commercial	190,993	163,472	172,366	176,266	214,897	251,350	266,152	255,792	209,766	185,133	180,943	186,727	2,453,859
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Energy Efficiency Savings	(2,854)	(2,854)	(2,854)	(2,854)	(2,854)	(2,854)	(2,854)	(2,854)	(2,854)	(2,854)	(2,854)	(2,854)	(34,250)
Total Distribution	406,089	351,732	337,588	308,413	364,023	461,738	532,880	498,578	397,448	323,795	305,720	380,654	4,668,657
Distribution Losses	14,213	12,311	11,816	10,794	12,741	16,161	18,651	17,450	13,911	11,333	10,700	13,323	163,403
Subtotal Distribution	420,302	364,043	349,404	319,207	376,764	477,898	551,530	516,028	411,358	335,127	316,420	393,977	4,832,060
Transmission/Transformation Losses	7,145	6,189	5,940	5,427	6,405	8,124	9,376	8,772	6,993	5,697	5,379	6,698	82,145
Total Distribution Incl. Losses	427,447	370,232	355,344	324,634	383,169	486,023	560,906	524,801	418,351	340,824	321,799	400,675	4,914,205
Industrial Energy:													
Firm	104,003	97,586	105,689	103,074	107,871	105,799	110,456	110,545	100,679	105,464	102,021	104,006	1,257,191
Economy Power	176,744	182,850	237,766	231,052	167,742	200,875	208,085	207,159	177,621	226,924	200,173	181,106	2,398,097
Interruptible	57,119	43,040	50,450	55,813	55,424	54,741	55,665	58,109	52,575	61,227	54,980	55,875	655,018
Total Industrial	337,865	323,476	393,904	389,938	331,037	361,415	374,207	375,812	330,875	393,615	357,174	340,987	4,310,306
Transmission/Transformation Losses	5,744	5,499	6,696	6,629	5,628	6,144	6,362	6,389	5,625	6,691	6,072	5,797	73,275
Total Industrial Incl. Losses	343,609	328,975	400,601	396,567	336,665	367,559	380,568	382,201	336,500	400,307	363,246	346,784	4,383,581
Century Energy:													
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Energy:													
Total Municipal	15,723	13,388	13,187	12,253	14,605	17,262	19,208	18,833	15,670	13,279	12,738	14,651	180,797
Transmission/Transformation Losses	267	228	224	208	248	293	327	320	266	226	217	249	3,074
Total Municipal Incl. Losses	15,991	13,615	13,411	12,461	14,853	17,556	19,535	19,153	15,936	13,505	12,955	14,900	183,871
Central Energy:													
Total Central	1,644,263	1,393,459	1,294,241	1,133,337	1,284,039	1,517,390	1,688,079	1,635,386	1,385,253	1,184,249	1,299,016	1,577,696	17,036,408
Existing Energy Efficiency Savings	0	0	0	0	0	0	0	0	0	0	0	0	
Future Energy Efficiency Savings	11,699	10,891	11,169	11,013	12,374	12,114	12,733	12,684	9,229	11,965	9,555	7,886	133,312
L-Rate Firm	3,460	4,035	4,176	4,101	4,655	5,186	4,523	5,200	3,198	4,327	2,779	2,532	48,171
L-Rate Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served	1,659,422	1,408,385	1,309,587	1,148,450	1,301,068	1,534,691	1,705,335	1,653,269	1,397,680	1,200,541	1,311,350	1,588,114	17,217,891
Santee Cooper Transmission Losses	21,904	18,591	17,287	15,160	17,174	20,258	22,510	21,823	18,449	15,847	17,310	20,963	227,276
Total Central Served Incl. Losses	1,681,326	1,426,976	1,326,873	1,163,610	1,318,242	1,554,948	1,727,845	1,675,092	1,416,130	1,216,388	1,328,660	1,609,077	17,445,167
Total Energy:													
Total Territorial	2,419,099	2,096,980	2,054,266	1,859,054	2,010,733	2,375,106	2,631,630	2,546,492	2,141,673	1,931,230	1,986,982	2,324,406	26,377,651
Total Distribution Losses	14,213	12,311	11,816	10,794	12,741	16,161	18,651	17,450	13,911	11,333	10,700	13,323	163,403
Subtotal Territorial	2,433,312	2,109,291	2,066,081	1,869,849	2,023,474	2,391,266	2,650,281	2,563,943	2,155,584	1,942,563	1,997,682	2,337,729	26,541,054
Total Transmission/Transformation Losses	35,061	30,506	30,147	27,423	29,455	34,820	38,574	37,305	31,334	28,462	28,977	33,707	385,770
Total Territorial Incl. Losses	2,468,373	2,139,797	2,096,228	1,897,272	2,052,929	2,426,086	2,688,855	2,601,247	2,186,917	1,971,024	2,026,659	2,371,436	26,926,824
Off-System Sales	28,851	19,117	14,664	9,456	23,872	68,578	98,372	85,106	43,804	7,854	12,897	19,472	432,043
Transmission Losses	208	138	106	68	172	494	708	613	315	57	93	140	3,111
Total Requirements	2,497,432	2,159,052	2,110,998	1,906,796	2,076,973	2,495,158	2,787,935	2,686,966	2,231,036	1,978,934	2,039,649	2,391,048	27,361,978

## MONTHLY PEAK DEMAND (MW) FORECAST DETAIL

PEAR DEMAND FORECAST (MY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	WINTER	SUMMER
Distribution:														
Peak	922	813	688	537	669	862	902	884	754	593	640	752	922	902
Existing DSM/EE Projections	(66)	(66)	(38)	(38)	(38)	(54)	(54)	(54)	(54)	(38)	(38)	(66)	(66)	(54)
Future DSM/EE Projections	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Total Distribution Peak	853	744	648	496	628	805	845	827	696	552	599	683	853	845
Distribution Losses	30	26	23	17	22	28	30	29	24	19	21	24	30	30
Subtotal Distribution	883	770	670	513	650	833	874	856	721	571	620	707	883	874
Transmission/Transformation Losses	17	15	13	10	12	16	17	16	14	11	12	13	17	17
Total Distribution Incl. Losses	900	785	683	523	662	849	891	872	734	582	632	720	900	891
Industrial:														
Firm	131	133	133	137	138	139	140	140	133	137	135	132	131	140
Economy Power	313	324	332	316	319	317	314	316	320	318	314	318	313	314
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	521	537	544	533	532	532	530	534	527	537	526	524	521	530
Transmission/Transformation Losses	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	531	547	554	543	542	542	540	544	537	547	536	534	531	540
Century:														
Firm	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Supplemental	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Total Century Peak	198	198	198	198	198	198	198	198	198	198	198	198	198	198
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Municipal:														
Total Municipal Peak	36	31	27	24	29	34	36	35	31	26	26	29	36	36
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	37	32	27	24	29	35	37	36	32	26	26	29	37	37
Central Electric:														
Central Peak	3,287	3,029	2,774	1,955	2,336	2,643	2,771	2,687	2,512	2,149	2,523	3,040	3,287	2,771
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,307	3,052	2,795	1,976	2,359	2,667	2,795	2,711	2,529	2,172	2,540	3,054	3,307	2,795
Santee Cooper Transmission Losses	51	47	43	31	37	41	43	42	39	34	39	47	51	43
Total Central Served Incl. Losses	3,358	3,099	2,838	2,007	2,395	2,708	2,838	2,753	2,569	2,205	2,580	3,101	3,358	2,838
Total System Peak:														
Total Territorial Peak	4,915	4,562	4,211	3,227	3,745	4,237	4,403	4,305	3,982	3,484	3,889	4,488	4,915	4,403
Total Distribution Losses	30	26	23	17	22	28	30	29	24	19	21	24	30	30
Subtotal Territorial	4,945	4,588	4,234	3,244	3,767	4,265	4,433	4,334	4,007	3,504	3,910	4,511	4,945	4,433
Transmission/Transformation Losses	82	76	71	55	63	72	74	73	67	59	65	75	82	74
Total Territorial Incl. Losses	5,027	4,665	4,305	3,299	3,830	4,336	4,507	4,407	4,074	3,563	3,976	4,586	5,027	4,507
Off-System Peak	196	131	114	108	202	278	298	285	262	189	108	139	196	298
Transmission Losses	2	2	2	2	2	3	3	3	3	2	2	2	2	3
Total Requirements	5,225	4,797	4,421	3,408	4,035	4,617	4,809	4,695	4,339	3,754	4,085	4,728	5,225	4,809

FEAR DEMAND I ORECAST (MI	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	WINTER	SUMMER
Distribution:	-													
Peak	936	825	699	547	679	875	915	896	764	601	648	761	936	915
Existing DSM/EE Projections	(66)	(66)	(38)	(38)	(38)	(54)	(54)	(54)	(54)	(38)	(38)	(66)	(66)	(54)
Future DSM/EE Projections	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
Total Distribution Peak	863	752	654	502	634	813	854	835	702	556	603	688	863	854
Distribution Losses	30	26	23	18	22	28	30	29	25	19	21	24	30	30
Subtotal Distribution	893	778	677	520	657	842	884	864	727	576	624	712	893	884
Transmission/Transformation Losses	17	15	13	10	12	16	17	16	14	11	12	14	17	17
Total Distribution Incl. Losses	910	793	690	529	669	858	901	881	741	587	636	726	910	901
Industrial:														
Firm	132	135	135	147	149	149	151	151	145	148	146	144	132	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	520	536	543	544	543	543	541	545	539	549	538	536	520	541
Transmission/Transformation Losses	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	530	546	553	554	553	554	551	555	550	559	548	546	530	551
Century:														
Firm	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Supplemental	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Total Century Peak	198	198	198	198	198	198	198	198	198	198	198	198	198	198
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Municipal:														
Total Municipal Peak	36	31	27	24	29	34	36	35	31	26	26	29	36	36
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	37	32	27	24	29	35	37	36	32	26	26	29	37	37
Central Electric:														
Central Peak	3,335	3,081	2,835	2,015	2,407	2,718	2,846	2,757	2,578	2,210	2,572	3,087	3,335	2,846
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,355	3,104	2,856	2,037	2,430	2,742	2,870	2,781	2,595	2,232	2,590	3,101	3,355	2,870
Santee Cooper Transmission Losses	52	48	44	32	38	42	44	43	40	35	40	48	52	44
Total Central Served Incl. Losses	3,407	3,152	2,901	2,068	2,467	2,784	2,914	2,825	2,635	2,267	2,630	3,149	3,407	2,914
Total System Peak:														
Total Territorial Peak	4,972	4,621	4,279	3,304	3,834	4,331	4,498	4,395	4,066	3,561	3,955	4,552	4,972	4,498
Total Distribution Losses	30	26	23	18	22	28	30	29	25	19	21	24	30	30
Subtotal Territorial	5,003	4,647	4,302	3,322	3,856	4,360	4,528	4,424	4,091	3,580	3,976	4,576	5,003	4,528
Transmission/Transformation Losses	83	77	72	56	65	73	76	74	69	60	66	76	83	76
Total Territorial Incl. Losses	5,086	4,725	4,373	3,378	3,920	4,433	4,604	4,498	4,159	3,641	4,042	4,652	5,086	4,604
Off-System Peak	202	136	120	112	205	258	281	267	241	165	84	121	202	281
Transmission Losses	2	2	2	2	2	3	3	3	2	2	1	2	2	3
Total Requirements	5,290	4,862	4,495	3,492	4,128	4,693	4,888	4,767	4,403	3,807	4,127	4,775	5,290	4,888

FLAR DEMAND I CIRCAGI (MI	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	WINTER	SUMMER
Distribution:														
Peak	943	831	705	552	685	881	922	903	770	607	654	768	943	922
Existing DSM/EE Projections	(65)	(65)	(37)	(37)	(37)	(54)	(54)	(54)	(54)	(37)	(37)	(65)	(65)	(54)
Future DSM/EE Projections	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)
Total Distribution Peak	867	755	658	505	638	817	858	839	706	560	607	692	867	858
Distribution Losses	30	26	23	18	22	29	30	29	25	20	21	24	30	30
Subtotal Distribution	897	782	681	523	660	846	888	868	730	579	628	716	897	888
Transmission/Transformation Losses	17	15	13	10	13	16	17	16	14	11	12	14	17	17
Total Distribution Incl. Losses	914	796	694	532	672	862	905	885	744	590	640	730	914	905
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Supplemental	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Total Century Peak	198	198	198	198	198	198	198	198	198	198	198	198	198	198
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Municipal:														
Total Municipal Peak	36	31	27	24	29	34	36	35	31	26	26	29	36	36
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	32	27	24	29	35	36	36	32	26	26	29	36	36
Central Electric:														
Central Peak	3,380	3,122	2,874	2,047	2,437	2,746	2,869	2,779	2,599	2,231	2,589	3,104	3,380	2,869
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,400	3,144	2,895	2,069	2,460	2,770	2,893	2,803	2,616	2,253	2,607	3,119	3,400	2,893
Santee Cooper Transmission Losses	53	49	45	32	38	43	45	43	41	35	40	48	53	45
<b>Total Central Served Incl. Losses</b>	3,453	3,193	2,940	2,101	2,498	2,813	2,938	2,847	2,657	2,288	2,647	3,167	3,453	2,938
Total System Peak:														
Total Territorial Peak	5,033	4,676	4,332	3,339	3,867	4,363	4,526	4,420	4,091	3,585	3,975	4,573	5,033	4,526
Total Distribution Losses	30	26	23	18	22	29	30	29	25	20	21	24	30	30
Subtotal Territorial	5,063	4,702	4,355	3,357	3,890	4,391	4,556	4,450	4,115	3,605	3,996	4,598	5,063	4,556
Transmission/Transformation Losses	84	78	73	57	65	74	76	75	69	61	67	76	84	76
Total Territorial Incl. Losses	5,147	4,781	4,427	3,413	3,955	4,465	4,632	4,525	4,184	3,665	4,063	4,674	5,147	4,632
Off-System Peak	183	118	101	92	184	263	288	273	246	165	88	128	183	288
Transmission Losses	2	2	1	1	2	3	3	3	3	2	1	2	2	3
Total Requirements	5,333	4,900	4,530	3,506	4,140	4,730	4,923	4,800	4,433	3,833	4,153	4,803	5,333	4,923

PEAR DEMAND FORECAST (MY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	WINTER	SUMMER
Distribution:										-	-			
Peak	951	839	714	561	695	893	935	916	781	617	664	778	951	935
Existing DSM/EE Projections	(65)	(65)	(36)	(36)	(36)	(53)	(53)	(53)	(53)	(36)	(36)	(65)	(65)	(53)
Future DSM/EE Projections	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)
Total Distribution Peak	875	763	665	513	647	828	870	851	716	569	615	702	875	870
Distribution Losses	31	27	23	18	23	29	30	30	25	20	22	25	31	30
Subtotal Distribution	905	789	689	531	669	857	901	880	741	589	637	726	905	901
Transmission/Transformation Losses	17	15	13	10	13	16	17	17	14	11	12	14	17	17
Total Distribution Incl. Losses	923	804	702	541	682	873	918	897	755	600	649	740	923	918
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Supplemental	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Total Century Peak	198	198	198	198	198	198	198	198	198	198	198	198	198	198
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Municipal:														
Total Municipal Peak	36	31	27	24	28	34	36	35	31	25	25	29	36	36
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	32	27	24	29	35	36	36	32	26	26	29	36	36
Central Electric:														
Central Peak	3,408	3,147	2,897	2,066	2,458	2,767	2,890	2,799	2,618	2,247	2,605	3,123	3,408	2,890
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,428	3,170	2,918	2,088	2,481	2,791	2,913	2,824	2,636	2,270	2,622	3,137	3,428	2,913
Santee Cooper Transmission Losses	53	49	45	32	38	43	45	44	41	35	41	49	53	45
Total Central Served Incl. Losses	3,481	3,219	2,963	2,120	2,520	2,834	2,959	2,867	2,676	2,305	2,663	3,186	3,481	2,959
Total System Peak:														
Total Territorial Peak	5,068	4,709	4,363	3,366	3,897	4,395	4,558	4,452	4,120	3,611	3,999	4,601	5,068	4,558
Total Distribution Losses	31	27	23	18	23	29	30	30	25	20	22	25	31	30
Subtotal Territorial	5,099	4,735	4,386	3,384	3,920	4,423	4,589	4,482	4,145	3,631	4,021	4,626	5,099	4,589
Transmission/Transformation Losses	85	79	73	57	66	74	77	75	70	61	67	77	85	77
Total Territorial Incl. Losses	5,183	4,814	4,459	3,441	3,986	4,498	4,666	4,557	4,215	3,692	4,088	4,703	5,183	4,666
Off-System Peak	189	124	107	96	187	268	295	279	250	166	94	134	189	295
Transmission Losses	2	2	1	1	2	3	3	3	3	2	1	2	2	3
Total Requirements	5,375	4,940	4,567	3,539	4,174	4,768	4,964	4,839	4,468	3,860	4,184	4,839	5,375	4,964

FEAR DEMAND I CRECAST (MI	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	WINTER	SUMMER
Distribution:														
Peak	941	828	723	570	705	892	935	915	779	626	672	768	941	935
Existing DSM/EE Projections	(44)	(44)	(35)	(35)	(35)	(40)	(40)	(40)	(40)	(35)	(35)	(44)	(44)	(40)
Future DSM/EE Projections	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
Total Distribution Peak	884	771	674	522	656	839	882	862	726	578	624	711	884	882
Distribution Losses	31	27	24	18	23	29	31	30	25	20	22	25	31	31
Subtotal Distribution	915	798	698	540	679	868	913	892	751	598	645	736	915	913
Transmission/Transformation Losses	17	15	13	10	13	16	17	17	14	11	12	14	17	17
Total Distribution Incl. Losses	933	814	711	550	692	885	930	909	766	609	658	750	933	930
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Supplemental	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Total Century Peak	198	198	198	198	198	198	198	198	198	198	198	198	198	198
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Municipal:														
Total Municipal Peak	36	31	27	24	28	34	36	35	31	25	25	29	36	36
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	32	27	24	29	35	36	36	32	26	26	29	36	36
Central Electric:														
Central Peak	3,431	3,168	2,916	2,081	2,476	2,785	2,908	2,817	2,636	2,264	2,623	3,144	3,431	2,908
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,452	3,191	2,937	2,102	2,499	2,809	2,932	2,841	2,654	2,287	2,640	3,158	3,452	2,932
Santee Cooper Transmission Losses	53	49	46	33	39	44	45	44	41	35	41	49	53	45
Total Central Served Incl. Losses	3,505	3,240	2,982	2,135	2,537	2,853	2,977	2,885	2,695	2,322	2,681	3,207	3,505	2,977
Total System Peak:														
Total Territorial Peak	5,101	4,739	4,390	3,389	3,924	4,424	4,588	4,481	4,148	3,637	4,025	4,631	5,101	4,588
Total Distribution Losses	31	27	24	18	23	29	31	30	25	20	22	25	31	31
Subtotal Territorial	5,132	4,766	4,414	3,408	3,947	4,453	4,619	4,512	4,173	3,657	4,047	4,656	5,132	4,619
Transmission/Transformation Losses	85	79	74	57	66	75	78	76	70	61	68	77	85	78
Total Territorial Incl. Losses	5,217	4,845	4,487	3,465	4,014	4,528	4,697	4,587	4,243	3,718	4,114	4,733	5,217	4,697
Off-System Peak	195	131	113	101	190	273	302	285	255	167	100	141	195	302
Transmission Losses	2	2	2	1	2	3	3	3	3	2	1	2	2	3
Total Requirements	5,415	4,978	4,602	3,567	4,205	4,803	5,002	4,875	4,501	3,887	4,216	4,876	5,415	5,002

PEAR DEMAND I ORECAST (MI	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	WINTER	SUMMER
Distribution:														
Peak	948	835	730	577	713	901	945	925	788	634	679	775	948	945
Existing DSM/EE Projections	(40)	(40)	(32)	(32)	(32)	(37)	(37)	(37)	(37)	(32)	(32)	(40)	(40)	(37)
Future DSM/EE Projections	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(14)
Total Distribution Peak	894	780	683	531	666	850	894	873	736	587	632	720	894	894
Distribution Losses	31	27	24	19	23	30	31	31	26	21	22	25	31	31
Subtotal Distribution	925	807	707	549	689	880	925	904	762	608	654	745	925	925
Transmission/Transformation Losses	18	15	13	10	13	17	18	17	14	12	12	14	18	18
Total Distribution Incl. Losses	942	823	721	560	703	896	943	921	776	619	667	760	942	943
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Supplemental	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Total Century Peak	198	198	198	198	198	198	198	198	198	198	198	198	198	198
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Municipal:														
Total Municipal Peak	36	31	27	23	28	34	36	35	31	25	25	29	36	36
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	32	27	24	29	35	36	36	32	26	26	29	36	36
Central Electric:														
Central Peak	3,463	3,197	2,940	2,097	2,495	2,806	2,929	2,837	2,657	2,283	2,645	3,171	3,463	2,929
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,483	3,219	2,960	2,118	2,518	2,830	2,952	2,862	2,674	2,306	2,662	3,186	3,483	2,952
Santee Cooper Transmission Losses	54	50	46	33	39	44	46	44	41	36	41	49	54	46
Total Central Served Incl. Losses	3,537	3,269	3,006	2,151	2,557	2,874	2,998	2,906	2,715	2,342	2,703	3,235	3,537	2,998
Total System Peak:														
Total Territorial Peak	5,142	4,776	4,423	3,415	3,954	4,455	4,621	4,513	4,178	3,665	4,056	4,668	5,142	4,621
Total Distribution Losses	31	27	24	19	23	30	31	31	26	21	22	25	31	31
Subtotal Territorial	5,174	4,803	4,447	3,433	3,977	4,485	4,652	4,544	4,204	3,686	4,078	4,693	5,174	4,652
Transmission/Transformation Losses	86	80	74	58	67	75	78	76	71	62	68	78	86	78
Total Territorial Incl. Losses	5,260	4,883	4,521	3,491	4,044	4,560	4,730	4,620	4,275	3,748	4,146	4,772	5,260	4,730
Off-System Peak	152	87	70	56	144	229	260	242	210	118	57	99	152	260
Transmission Losses	1	1	1	1	1	2	2	2	2	1	1	1	1	2
Total Requirements	5,413	4,971	4,591	3,548	4,189	4,791	4,993	4,864	4,487	3,867	4,204	4,871	5,413	4,993

PEAR DEMAND FORECAST (MY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	WINTER	SUMMER
Distribution:										-	-			
Peak	955	841	737	584	721	910	956	935	796	641	685	781	955	956
Existing DSM/EE Projections	(35)	(35)	(28)	(28)	(28)	(32)	(32)	(32)	(32)	(28)	(28)	(35)	(35)	(32)
Future DSM/EE Projections	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)
Total Distribution Peak	904	790	693	540	677	862	908	887	748	597	642	731	904	908
Distribution Losses	32	28	24	19	24	30	32	31	26	21	22	26	32	32
Subtotal Distribution	936	818	718	559	701	893	940	918	774	618	664	756	936	940
Transmission/Transformation Losses	18	16	14	11	13	17	18	17	15	12	13	14	18	18
Total Distribution Incl. Losses	954	833	731	570	714	910	957	935	788	630	677	770	954	957
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Supplemental	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Total Century Peak	198	198	198	198	198	198	198	198	198	198	198	198	198	198
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Municipal:														
Total Municipal Peak	36	31	27	23	28	34	36	35	31	25	25	28	36	36
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	32	27	24	29	35	36	36	32	26	26	29	36	36
Central Electric:														
Central Peak	3,491	3,222	2,961	2,116	2,519	2,832	2,956	2,863	2,682	2,306	2,666	3,197	3,491	2,956
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,512	3,245	2,982	2,138	2,542	2,856	2,979	2,888	2,699	2,328	2,684	3,211	3,512	2,979
Santee Cooper Transmission Losses	54	50	46	33	39	44	46	45	42	36	42	50	54	46
Total Central Served Incl. Losses	3,566	3,295	3,028	2,171	2,582	2,900	3,026	2,933	2,741	2,365	2,725	3,261	3,566	3,026
Total System Peak:														
Total Territorial Peak	5,181	4,811	4,454	3,443	3,989	4,494	4,662	4,552	4,215	3,698	4,087	4,704	5,181	4,662
Total Distribution Losses	32	28	24	19	24	30	32	31	26	21	22	26	32	32
Subtotal Territorial	5,213	4,839	4,478	3,462	4,012	4,524	4,693	4,583	4,241	3,719	4,109	4,729	5,213	4,693
Transmission/Transformation Losses	87	81	75	58	67	76	79	77	71	63	69	79	87	79
Total Territorial Incl. Losses	5,300	4,920	4,553	3,521	4,080	4,600	4,772	4,660	4,312	3,781	4,178	4,808	5,300	4,772
Off-System Peak	159	95	76	61	147	234	235	216	186	100	42	86	159	235
Transmission Losses	2	1	1	11	1	2	2	2	1	1	0	1	2	2
Total Requirements	5,460	5,015	4,630	3,582	4,228	4,836	5,009	4,878	4,499	3,882	4,220	4,895	5,460	5,009

Pack	PEAR DEMAND FORECAST (MV	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	WINTER	SUMMER
Seising DAMEE Projections   0,0   0,0   0,0   0,4   0,4   0,4   0,2   0,0   0,8	Distribution:	•/			7				7.00						
Estension SAMEE Projections   1,00   1,00   1,04   1,04   1,04   1,07	Peak	962	847	744	591	729	919	965	944	803	648	692	788	962	965
Fulse Distriction Peak   17   17   17   17   17   17   17   1	Existing DSM/EE Projections	(30)	(30)				(28)	(28)	(28)	(28)					
Total Distribution Peaks   15	,	, ,		` '	` '	` ,	` ,	. ,	` ,	` ,	` ,	. ,	. ,	` ′	
Distribution Cuesses   12   28   29   39   24   31   32   31   27   21   23   26   32   32   32   32   32   32		. , ,				. ,	. , ,						` ′		
Substitution															
Transmission/Transformation Losses 95 843 474 580 725 922 971 918 18 15 12 13 15 968 971 965 971 Note Total Distribution Incl. Losses 95 843 474 580 725 922 971 918 980 800 640 686 781 965 971 Note Total Distribution Incl. Losses 95 843 874 580 725 922 971 918 918 800 800 800 800 800 800 800 800 800 8															
Total Distribution Incl. Losses   955   843   741   580   725   922   971   948   800   640   686   781   985   971   971   971   971   971   971   972															
Inflicit   Inflicit															
Economy Power   311   322   329   317   320   317   315   316   321   318   314   315   316   315   316   316   315   316   315   316   316   315   316   315   316   316   315   316   315   316   316   315   316   316   315   316   315   316	Industrial:												-		
February   February	Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Interruptable   78	Economy Power	311				320	317	315		321	318	314	318	311	
Total Industrial Peak   532   547   554   544   543   541   545   539   549   538   536   532   541   TransmissionTransformation Loses   10   10   11   10   10   10   10   1	•														
Transmission/Transformation Losses   10   10   11   10   10   10   10   1	•														
Transmission/Transformation Losses   Section   Section															
Firm															
Firm 48 48 48 48 48 48 48 48 48 48 48 48 48		0.2	000	000		000			000	000	000	0.0	0.0	0.2	
Supplemental   150	•	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Total Century Peak															
Transmission/Transformation Losses   4	-														
Total Centrary Incl. Losses   202	•						4							4	
Municipal:   Total Municipal Peak   35   31   27   23   28   34   35   35   31   25   25   28   35   35   35   35   35   35   35   3		202			202	202			202			202			
Total Municipal Peak   35   31   27   23   28   34   35   35   31   25   25   28   35   35     Transmission/Transformation Losses   1   1   1   0   1   1   1   1   1   1													-		
Transmission/Transformation Losses   1	•	35	31	27	23	28	34	35	35	31	25	25	28	35	35
Total Municipal Incl. Losses 36 32 27 24 29 34 36 36 31 26 26 29 36 36 36 Central Electric:  Central Peak 3,522 3,250 2,983 2,133 2,541 2,855 2,979 2,886 2,704 2,326 2,688 3,224 3,522 2,979 Existing DSM/EE Projections 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	•	1				1	1	1	1					1	
Central Peak   3,522   3,250   2,983   2,133   2,541   2,855   2,979   2,886   2,704   2,326   2,688   3,224   3,522   2,979   2,886   2,704   2,326   2,688   3,224   3,522   2,979   2,886   2,704   2,326   2,688   3,224   3,522   2,979   2,886   2,704   2,326   2,688   3,224   3,522   2,979   2,886   2,704   2,326   2,688   3,224   3,522   2,979   2,886   2,704   2,326   2,688   3,224   3,522   2,979   2,886   2,704   2,326   2,688   3,224   3,522   2,979   2,886   2,704   2,326   2,688   3,224   3,522   2,979   2,886   2,704   2,326   2,888   3,224   3,522   2,979   2,886   2,704   2,326   2,888   3,224   3,522   2,979   2,886   2,704   2,326   2,888   3,224   3,522   2,979   2,886   2,704   2,326   2,888   3,224   3,028   2,288	Total Municipal Incl. Losses	36	32	27	24	29	34	36	36	31		26		36	
Existing DSM/EE Projections 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Central Electric:														
Future DSM/EE Projections 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Central Peak	3,522	3,250	2,983	2,133	2,541	2,855	2,979	2,886	2,704	2,326	2,688	3,224	3,522	2,979
L-Rate Firm 16 16 16 15 16 17 17 18 18 18 13 17 13 11 16 18 L-Rate Interruptible 5 6 6 6 6 6 7 6 7 4 6 7 4 6 4 3 5 5 6 0 14 3 5 6 0 14 5 14 14 15 14 15 14 15 14 15 14 15 14 15 14 15 14 15 15 14 15 15 14 15 14 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 14 15 15 15 15 15 14 15 15 15 15 15 14 15 15 15 15 15 15 15 14 15 15 15 15 15 15 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm 16 16 16 15 16 17 17 18 18 18 13 17 13 11 16 18 L-Rate Interruptible 5 6 6 6 6 6 6 7 6 7 4 6 7 4 6 4 3 5 5 6 6 6 6 6 7 6 7 4 6 7 4 6 4 3 5 5 6 6 6 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7	Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Substations         0	L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
Total Central Served Peak         3,542         3,272         3,004         2,154         2,564         2,879         3,003         2,911         2,722         2,349         2,706         3,238         3,542         3,003           Santee Cooper Transmission Losses         55         51         47         33         40         45         47         45         42         36         42         50         55         47           Total Central Served Incl. Losses         3,597         3,323         3,050         2,188         2,603         2,924         3,050         2,956         2,764         2,385         2,748         3,288         3,597         3,050           Total System Peak:         Total Territorial Peak         5,222         4,848         4,485         3,470         4,020         4,528         4,698         4,588         4,248         3,728         4,117         4,740         5,222         4,698           Total Distribution Losses         32         28         25         19         24         31         32         31         27         21         23         26         32         32           Subtotal Territorial         5,254         4,876         4,510         3,489	L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Santee Cooper Transmission Losses         55         51         47         33         40         45         47         45         42         36         42         50         55         47           Total Central Served Incl. Losses         3,597         3,323         3,050         2,188         2,603         2,924         3,050         2,956         2,764         2,385         2,748         3,288         3,597         3,050           Total System Peak:         Total Territorial Peak         5,222         4,848         4,485         3,470         4,020         4,528         4,698         4,588         4,248         3,728         4,117         4,740         5,222         4,698           Total Distribution Losses         32         28         25         19         24         31         32         31         27         21         23         26         32         32           Subtotal Territorial         5,254         4,876         4,510         3,489         4,044         4,559         4,730         4,619         4,275         3,749         4,140         4,766         5,254         4,730           Transmission/Transformation Losses         87         81         75         59 <td< td=""><td>Other Substations</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></td<>	Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Incl. Losses         3,597         3,323         3,050         2,188         2,603         2,924         3,050         2,956         2,764         2,385         2,748         3,288         3,597         3,050           Total System Peak:         Total Territorial Peak         5,222         4,848         4,485         3,470         4,020         4,528         4,698         4,588         4,248         3,728         4,117         4,740         5,222         4,698           Total Distribution Losses         32         28         25         19         24         31         32         31         27         21         23         26         32         32           Subtotal Territorial         5,254         4,876         4,510         3,489         4,044         4,559         4,730         4,619         4,275         3,749         4,140         4,766         5,254         4,730           Transmission/Transformation Losses         87         81         75         59         68         77         79         78         72         63         69         79         87         79           Total Territorial Incl. Losses         5,341         4,957         4,585         3,548	Total Central Served Peak	3,542	3,272	3,004	2,154	2,564	2,879	3,003	2,911	2,722	2,349	2,706	3,238	3,542	3,003
Total System Peak:         Total Territorial Peak         5,222         4,848         4,485         3,470         4,020         4,528         4,698         4,588         4,248         3,728         4,117         4,740         5,222         4,698           Total Distribution Losses         32         28         25         19         24         31         32         31         27         21         23         26         32         32           Subtotal Territorial         5,254         4,876         4,510         3,489         4,044         4,559         4,730         4,619         4,275         3,749         4,140         4,766         5,254         4,730           Transmission/Transformation Losses         87         81         75         59         68         77         79         78         72         63         69         79         87         79           Total Territorial Incl. Losses         5,341         4,957         4,585         3,548         4,112         4,636         4,810         4,697         4,346         3,812         4,209         4,846         5,341         4,810           Off-System Peak         14         1         1         1         0         1         <	Santee Cooper Transmission Losses	55	51	47	33	40	45	47	45	42	36	42	50	55	47
Total Territorial Peak         5,222         4,848         4,485         3,470         4,020         4,528         4,698         4,588         4,248         3,728         4,117         4,740         5,222         4,698           Total Distribution Losses         32         28         25         19         24         31         32         31         27         21         23         26         32         32           Subtotal Territorial         5,254         4,876         4,510         3,489         4,044         4,559         4,730         4,619         4,275         3,749         4,140         4,766         5,254         4,730           Transmission/Transformation Losses         87         81         75         59         68         77         79         78         72         63         69         79         87         79           Total Territorial Incl. Losses         5,341         4,957         4,585         3,548         4,112         4,636         4,810         4,697         4,346         3,812         4,209         4,846         5,341         4,810           Off-System Peak         141         75         61         43         125         206         241         221<	Total Central Served Incl. Losses	3,597	3,323	3,050	2,188	2,603	2,924	3,050	2,956	2,764	2,385	2,748	3,288	3,597	3,050
Total Distribution Losses         32         28         25         19         24         31         32         31         27         21         23         26         32         32           Subtotal Territorial         5,254         4,876         4,510         3,489         4,044         4,559         4,730         4,619         4,275         3,749         4,140         4,766         5,254         4,730           Transmission/Transformation Losses         87         81         75         59         68         77         79         78         72         63         69         79         87         79           Total Territorial Incl. Losses         5,341         4,957         4,585         3,548         4,112         4,636         4,810         4,697         4,346         3,812         4,209         4,846         5,341         4,810           Off-System Peak         141         75         61         43         125         206         241         221         189         100         47         92         141         24           Transmission Losses         1         1         1         0         1         2         2         2         1         1	Total System Peak:														
Subtotal Territorial         5,254         4,876         4,510         3,489         4,044         4,559         4,730         4,619         4,275         3,749         4,140         4,766         5,254         4,730           Transmission/Transformation Losses         87         81         75         59         68         77         79         78         72         63         69         79         87         79           Total Territorial Incl. Losses         5,341         4,957         4,585         3,548         4,112         4,636         4,810         4,697         4,346         3,812         4,209         4,846         5,341         4,810           Off-System Peak         141         75         61         43         125         206         241         221         189         100         47         92         141         241           Transmission Losses         1         1         1         0         1         2         2         2         1         1         0         1         2	Total Territorial Peak	5,222	4,848	4,485	3,470	4,020	4,528	4,698	4,588	4,248	3,728	4,117	4,740	5,222	4,698
Transmission/Transformation Losses         87         81         75         59         68         77         79         78         72         63         69         79         87         79           Total Territorial Incl. Losses         5,341         4,957         4,585         3,548         4,112         4,636         4,810         4,697         4,346         3,812         4,209         4,846         5,341         4,810           Off-System Peak         141         75         61         43         125         206         241         221         189         100         47         92         141         241           Transmission Losses         1         1         1         0         1         2         2         2         1         1         0         1         2	Total Distribution Losses	32	28	25	19	24	31	32	31	27	21	23	26	32	32
Total Territorial Incl. Losses         5,341         4,957         4,585         3,548         4,112         4,636         4,810         4,697         4,346         3,812         4,209         4,846         5,341         4,810           Off-System Peak         141         75         61         43         125         206         241         221         189         100         47         92         141         241           Transmission Losses         1         1         1         0         1         2         2         2         1         1         0         1         2	Subtotal Territorial	5,254	4,876	4,510	3,489	4,044	4,559	4,730	4,619	4,275	3,749	4,140	4,766	5,254	4,730
Total Territorial Incl. Losses         5,341         4,957         4,585         3,548         4,112         4,636         4,810         4,697         4,346         3,812         4,209         4,846         5,341         4,810           Off-System Peak         141         75         61         43         125         206         241         221         189         100         47         92         141         241           Transmission Losses         1         1         1         0         1         2         2         2         1         1         0         1         2	Transmission/Transformation Losses	87	81	75	59	68	77_	79	78	72	63	69	79	87	79
Transmission Losses	Total Territorial Incl. Losses	5,341	4,957	4,585	3,548	4,112	4,636	4,810	4,697	4,346	3,812	4,209	4,846	5,341	4,810
	Off-System Peak	141	75	61	43	125	206	241	221	189	100	47	92	141	241
Total Requirements 5,483 5,032 4,647 3,591 4,238 4,843 5,052 4,920 4,537 3,913 4,257 4,938 5,483 5,052	Transmission Losses	1	1	1	0	1	2	2	2	1	1	0	1	1	2
	Total Requirements	5,483	5,032	4,647	3,591	4,238	4,843	5,052	4,920	4,537	3,913	4,257	4,938	5,483	5,052

FEAR DEMAND I ORECAST (MI	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	WINTER	SUMMER
Distribution:														
Peak	967	851	750	596	735	926	974	951	809	653	697	792	967	974
Existing DSM/EE Projections	(25)	(25)	(20)	(20)	(20)	(23)	(23)	(23)	(23)	(20)	(20)	(25)	(25)	(23)
Future DSM/EE Projections	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
Total Distribution Peak	925	809	712	559	698	886	933	911	769	616	659	750	925	933
Distribution Losses	32	28	25	20	24	31	33	32	27	22	23	26	32	33
Subtotal Distribution	957	837	737	579	722	917	966	943	796	638	682	776	957	966
Transmission/Transformation Losses	18	16	14	11	14	17	18	18	15	12	13	15	18	18
Total Distribution Incl. Losses	975	853	751	590	736	934	984	961	811	650	695	791	975	984
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Supplemental	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Total Century Peak	198	198	198	198	198	198	198	198	198	198	198	198	198	198
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Municipal:														
Total Municipal Peak	35	31	27	23	28	34	35	35	31	25	25	28	35	35
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	32	27	24	29	34	36	36	31	26	26	29	36	36
Central Electric:														
Central Peak	3,554	3,279	3,006	2,152	2,564	2,880	3,006	2,912	2,729	2,349	2,712	3,252	3,554	3,006
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Central Served Peak</b>	3,574	3,301	3,027	2,173	2,587	2,905	3,029	2,936	2,746	2,371	2,729	3,266	3,574	3,029
Santee Cooper Transmission Losses	55	51	47	34	40	45	47	46	43	37	42	51	55	47
Total Central Served Incl. Losses	3,630	3,352	3,074	2,207	2,627	2,950	3,076	2,982	2,789	2,408	2,771	3,317	3,630	3,076
Total System Peak:														
Total Territorial Peak	5,264	4,886	4,518	3,498	4,054	4,566	4,737	4,625	4,284	3,759	4,149	4,778	5,264	4,737
Total Distribution Losses	32	28	25	20	24	31	33	32	27	22	23	26	32	33
Subtotal Territorial	5,296	4,915	4,543	3,517	4,078	4,597	4,770	4,657	4,310	3,781	4,173	4,805	5,296	4,770
Transmission/Transformation Losses	88	82	76	59	68	77	80	78	72	64	70	80	88	80
Total Territorial Incl. Losses	5,385	4,996	4,619	3,577	4,147	4,674	4,850	4,735	4,383	3,845	4,242	4,885	5,385	4,850
Off-System Peak	125	62	50	35	114	195	232	212	179	87	35	81	125	232
Transmission Losses	11	0	0	0	1	1	2	2	1	1	0	1	1	2
Total Requirements	5,510	5,059	4,669	3,612	4,262	4,870	5,084	4,949	4,563	3,932	4,277	4,966	5,510	5,084

FEAR DEMAND I CRECAST (MI	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	WINTER	SUMMER
Distribution:														
Peak	971	854	754	601	740	932	980	957	814	658	700	795	971	980
Existing DSM/EE Projections	(18)	(18)	(14)	(14)	(14)	(16)	(16)	(16)	(16)	(14)	(14)	(18)	(18)	(16)
Future DSM/EE Projections	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)
Total Distribution Peak	934	818	721	568	707	897	945	922	779	625	667	759	934	945
Distribution Losses	33	29	25	20	25	31	33	32	27	22	23	27	33	33
Subtotal Distribution	967	846	746	588	732	928	978	954	806	647	691	785	967	978
Transmission/Transformation Losses	18	16	14	11	14	18	19	18	15	12	13	15	18	19
Total Distribution Incl. Losses	985	862	761	599	746	946	997	973	821	659	704	800	985	997
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Supplemental	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Total Century Peak	198	198	198	198	198	198	198	198	198	198	198	198	198	198
Transmission/Transformation Losses	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Century Incl. Losses	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Municipal:														
Total Municipal Peak	35	31	27	23	28	34	35	35	31	25	25	28	35	35
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	32	27	24	29	34	36	36	31	26	26	29	36	36
Central Electric:														
Central Peak	3,592	3,312	3,033	2,171	2,588	2,906	3,032	2,937	2,754	2,372	2,738	3,285	3,592	3,032
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,612	3,334	3,053	2,193	2,611	2,930	3,055	2,962	2,771	2,394	2,756	3,299	3,612	3,055
Santee Cooper Transmission Losses	56	52	47	34	40	45	47	46	43	37	43	51	56	47
Total Central Served Incl. Losses	3,668	3,386	3,101	2,227	2,652	2,976	3,103	3,008	2,814	2,431	2,798	3,351	3,668	3,103
Total System Peak:														
Total Territorial Peak	5,311	4,929	4,553	3,526	4,088	4,602	4,775	4,662	4,318	3,791	4,184	4,821	5,311	4,775
Total Distribution Losses	33	29	25	20	25	31	33	32	27	22	23	27	33	33
Subtotal Territorial	5,344	4,957	4,579	3,546	4,112	4,633	4,808	4,694	4,346	3,813	4,208	4,847	5,344	4,808
Transmission/Transformation Losses	89	83	76	60	69	78	81	79	73	64	70	81	89	81
Total Territorial Incl. Losses	5,433	5,040	4,655	3,606	4,181	4,711	4,889	4,773	4,418	3,877	4,278	4,928	5,433	4,889
Off-System Peak	130	67	55	39	116	199	239	218	183	87	40	87	130	239
Transmission Losses	1	0	0	0	1	11	2	2	1	1	0	1	1	2
Total Requirements	5,564	5,108	4,710	3,645	4,299	4,912	5,129	4,992	4,603	3,965	4,318	5,015	5,564	5,129

PEAR DEMAND FORECAST (MY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	WINTER	SUMMER
Distribution:	-									-	-			
Peak	972	855	756	603	743	935	984	961	816	660	702	796	972	984
Existing DSM/EE Projections	(9)	(9)	(7)	(7)	(7)	(8)	(8)	(8)	(8)	(7)	(7)	(9)	(9)	(8)
Future DSM/EE Projections	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)
Total Distribution Peak	943	826	730	577	717	907	957	933	789	634	676	768	943	957
Distribution Losses	33	29	26	20	25	32	33	33	28	22	24	27	33	33
Subtotal Distribution	976	855	755	597	742	939	990	966	816	656	699	795	976	990
Transmission/Transformation Losses	19	16	14	11	14	18	19	18	16	12	13	15	19	19
Total Distribution Incl. Losses	995	871	770	608	756	957	1,009	984	832	668	713	810	995	1,009
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0_
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal:														
Total Municipal Peak	35	31	26	23	28	34	35	35	31	25	25	28	35	35
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	11_
Total Municipal Incl. Losses	36	32	27	24	29	34	36	36	31	26	26	29	36	36
Central Electric:														
Central Peak	3,625	3,342	3,057	2,194	2,617	2,938	3,065	2,969	2,785	2,399	2,764	3,315	3,625	3,065
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,646	3,365	3,078	2,216	2,640	2,962	3,089	2,994	2,802	2,421	2,781	3,329	3,646	3,089
Santee Cooper Transmission Losses	57	52	48	34	41	46	48	46	43	38	43	52	57	48
Total Central Served Incl. Losses	3,702	3,417	3,126	2,250	2,681	3,008	3,137	3,040	2,846	2,459	2,825	3,381	3,702	3,137
Total System Peak:														
Total Territorial Peak	5,156	4,770	4,389	3,360	3,928	4,446	4,622	4,507	4,161	3,629	4,020	4,661	5,156	4,622
Total Distribution Losses	33	29	26	20	25	32	33	33	28	22	24	27	33	33
Subtotal Territorial	5,189	4,798	4,414	3,380	3,953	4,478	4,655	4,540	4,188	3,651	4,044	4,688	5,189	4,655
Transmission/Transformation Losses	86	79	73	56	66	75	78	76	70	61	67	77	86	78
Total Territorial Incl. Losses	5,275	4,878	4,487	3,436	4,019	4,553	4,733	4,615	4,258	3,712	4,111	4,766	5,275	4,733
Off-System Peak	136	73	60	43	119	203	245	223	186	87	45	93	136	245
Transmission Losses	1	1	0	0	1	1	2	2	1	1	0	1	1	2
Total Requirements	5,411	4,951	4,548	3,479	4,139	4,758	4,979	4,840	4,446	3,800	4,156	4,859	5,411	4,979

PEAR DEMAND FORECAST (MY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	WINTER	SUMMER
Distribution:				7				7.00						
Peak	976	858	761	607	748	941	991	967	821	665	706	800	976	991
Existing DSM/EE Projections	(3)	(3)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(3)	(3)	
Future DSM/EE Projections	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)
Total Distribution Peak	952	835	739	585	726	918	968	944	798	643	684	776	952	968
Distribution Losses	33	29	26	20	25	32	34	33	28	22	24	27	33	34
Subtotal Distribution	986	864	764	606	752	950	1,002	977	826	665	708	803	986	1,002
Transmission/Transformation Losses	19	16	15	12	14	18	19	19	16	13	13	15	19	19
Total Distribution Incl. Losses	1,004	880	779	617	766	968	1,021	996	842	678	721	819	1,004	1,021
Industrial:	,						,-						,	,-
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:	0.2	000	000		000	00.		555	000	000	0.0	0.0	0.2	
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal:	_	•	-	-	•	-	•	_	•	-	_		·	
Total Municipal Peak	35	31	26	23	28	34	35	35	31	25	25	28	35	35
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	31	27	24	29	34	36	35	31	26	26	29	36	36
Central Electric:														
Central Peak	3,652	3,367	3,080	2,211	2,638	2,961	3,089	2,992	2,807	2,418	2,783	3,338	3,652	3,089
Existing DSM/EE Projections	0	0	0	, 0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,673	3,389	3,101	2,232	2,661	2,985	3,113	3,017	2,824	2,441	2,800	3,353	3,673	3,113
Santee Cooper Transmission Losses	57	53	48	35	41	46	48	47	44	38	43	52	57	48
Total Central Served Incl. Losses	3,729	3,442	3,149	2,267	2,702	3,031	3,161	3,064	2,868	2,479	2,843	3,404	3,729	3,161
Total System Peak:														
Total Territorial Peak	5,192	4,802	4,420	3,385	3,958	4,480	4,657	4,541	4,192	3,657	4,047	4,693	5,192	4,657
Total Distribution Losses	33	29	26	20	25	32	34	33	28	22	24	27	33	34
Subtotal Territorial	5,225	4,831	4,446	3,406	3,984	4,512	4,691	4,574	4,220	3,680	4,071	4,720	5,225	4,691
Transmission/Transformation Losses	86	80	74	57	66	75	78	76	70	61	68	78	86	78
Total Territorial Incl. Losses	5,312	4,911	4,519	3,462	4,050	4,587	4,769	4,650	4,291	3,741	4,138	4,798	5,312	4,769
Off-System Peak	141	78	66	46	121	208	251	228	190	87	51	99	141	251
Transmission Losses	1	1	0	0	1	1	2	2	1	1	0	1	1	2
Total Requirements	5,454	4,990	4,585	3,509	4,172	4,796	5,022	4,879	4,482	3,829	4,189	4,898	5,454	5,022
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PEAR DEMIAND FORECAST (MIV	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	WINTER	SUMMER
Distribution:	• • • • • • • • • • • • • • • • • • • •			7										
Peak	984	866	769	616	757	950	1,001	977	830	673	713	807	984	1,001
Existing DSM/EE Projections	(1)	(1)	(0)	(0)	(0)	(1)	(1)	(1)	(1)	(0)	(0)	(1)	(1)	(1)
Future DSM/EE Projections	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)
Total Distribution Peak	963	845	749	596	738	930	981	957	810	653	694	787	963	981
Distribution Losses	34	30	26	21	26	33	34	33	28	23	24	28	34	34
Subtotal Distribution	997	875	776	617	763	963	1,016	990	838	676	718	815	997	1,016
Transmission/Transformation Losses	19	17	15	12	15	18	19	19	16	13	14	15	19	19
Total Distribution Incl. Losses	1,016	891	790	629	778	981	1,035	1,009	854	689	732	830	1,016	1,035
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal:														
Total Municipal Peak	35	31	26	23	28	34	35	35	31	25	25	28	35	35
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	31	27	24	29	34	36	35	31	26	26	29	36	36
Central Electric:														
Central Peak	3,681	3,392	3,103	2,230	2,662	2,987	3,117	3,019	2,832	2,440	2,802	3,363	3,681	3,117
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,701	3,415	3,124	2,251	2,685	3,011	3,140	3,043	2,849	2,462	2,820	3,377	3,701	3,140
Santee Cooper Transmission Losses	57	53	48	35	42	47	49	47	44	38	44	52	57	49
Total Central Served Incl. Losses	3,759	3,467	3,172	2,286	2,727	3,058	3,189	3,090	2,893	2,501	2,863	3,429	3,759	3,189
Total System Peak:														
Total Territorial Peak	5,231	4,838	4,454	3,414	3,993	4,519	4,698	4,580	4,229	3,690	4,076	4,728	5,231	4,698
Total Distribution Losses	34	30	26	21	26	33	34	33	28	23	24	28	34	34
Subtotal Territorial	5,265	4,868	4,480	3,435	4,019	4,551	4,732	4,613	4,257	3,713	4,101	4,756	5,265	4,732
Transmission/Transformation Losses	87	81	74	57	67	76	79	77	71	62	68	79	87	79
Total Territorial Incl. Losses	5,352	4,948	4,554	3,492	4,086	4,627	4,811	4,690	4,328	3,775	4,169	4,834	5,352	4,811
Off-System Peak	146	84	71	50	124	212	257	233	194	87	56	105	146	257
Transmission Losses	1	1	1	0	1	2	2	2	1	1	0	1	1	2
Total Requirements	5,500	5,033	4,626	3,543	4,211	4,840	5,070	4,925	4,523	3,862	4,225	4,940	5,500	5,070

PEAR DEMAND FORECAST (IM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	WINTER	SUMMER
Distribution:	-									-	-			
Peak	992	873	777	624	766	960	1,012	987	839	682	721	815	992	1,012
Existing DSM/EE Projections	(0)	(0)	0	0	0	(0)	(0)	(0)	(0)	0	0	(0)	(0)	(0)
Future DSM/EE Projections	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)
Total Distribution Peak	975	857	761	608	750	944	995	971	822	665	705	799	975	995
Distribution Losses	34	30	27	21	26	33	35	34	29	23	25	28	34	35
Subtotal Distribution	1,010	887	788	629	776	977	1,030	1,005	851	688	730	827	1,010	1,030
Transmission/Transformation Losses	19	17	15	12	15	19	20	19	16	13	14	16	19	20
Total Distribution Incl. Losses	1,029	904	802	641	791	995	1,050	1,024	867	702	744	842	1,029	1,050
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal:														
Total Municipal Peak	35	31	26	23	28	34	35	35	31	25	25	28	35	35
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1_
Total Municipal Incl. Losses	36	31	27	24	29	34	36	35	31	26	26	29	36	36
Central Electric:														
Central Peak	3,715	3,422	3,129	2,248	2,685	3,012	3,143	3,044	2,856	2,462	2,825	3,392	3,715	3,143
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,735	3,445	3,150	2,270	2,708	3,037	3,167	3,068	2,873	2,484	2,843	3,406	3,735	3,167
Santee Cooper Transmission Losses	58	53	49	35	42	47	49	48	45	39	44	53	58	49
Total Central Served Incl. Losses	3,793	3,498	3,199	2,305	2,750	3,084	3,216	3,116	2,918	2,523	2,887	3,459	3,793	3,216
Total System Peak:														
Total Territorial Peak	5,278	4,880	4,492	3,445	4,029	4,557	4,738	4,619	4,266	3,723	4,111	4,769	5,278	4,738
Total Distribution Losses	34	30	27	21	26	33	35	34	29	23	25	28	34	35
Subtotal Territorial	5,312	4,909	4,518	3,466	4,055	4,590	4,773	4,653	4,295	3,746	4,135	4,797	5,312	4,773
Transmission/Transformation Losses	88	81	75	58	68	77	80	78	72	62	69	79	88	80
Total Territorial Incl. Losses	5,399	4,991	4,593	3,524	4,123	4,667	4,852	4,730	4,366	3,809	4,204	4,876	5,399	4,852
Off-System Peak	152	90	76	54	126	216	263	238	197	87	61	111	152	263
Transmission Losses	1	1	1	0	1	2	2	2	1	1	0	1	1	2
Total Requirements	5,552	5,081	4,670	3,578	4,250	4,884	5,118	4,970	4,565	3,897	4,265	4,988	5,552	5,118

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WINTER	SUMMER
Distribution:	• • • • • • • • • • • • • • • • • • • •			7										
Peak	1,001	882	786	633	776	971	1.023	998	849	691	730	824	1,001	1,023
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
Total Distribution Peak	988	868	773	620	763	957	1,010	985	835	677	716	811	988	1,010
Distribution Losses	35	30	27	22	27	33	35	34	29	24	25	28	35	35
Subtotal Distribution	1,022	899	800	641	789	991	1,045	1,019	865	701	742	839	1,022	1,045
Transmission/Transformation Losses	19	17	15	12	15	19	20	19	16	13	14	16	19	20
Total Distribution Incl. Losses	1,042	916	815	653	804	1,009	1,065	1,038	881	714	756	855	1,042	1,065
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal:														
Total Municipal Peak	35	31	26	23	28	34	35	35	31	25	25	28	35	35
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	31	27	24	29	34	36	35	31	26	26	29	36	36
Central Electric:														
Central Peak	3,745	3,450	3,154	2,270	2,713	3,044	3,176	3,076	2,886	2,488	2,848	3,418	3,745	3,176
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,765	3,472	3,175	2,292	2,736	3,068	3,200	3,100	2,903	2,510	2,865	3,433	3,765	3,200
Santee Cooper Transmission Losses	58	54	49	36	42	48	50	48	45	39	44	53	58	50
Total Central Served Incl. Losses	3,824	3,526	3,224	2,327	2,779	3,116	3,249	3,148	2,948	2,549	2,909	3,486	3,824	3,249
Total System Peak:														
Total Territorial Peak	5,320	4,919	4,528	3,479	4,070	4,602	4,785	4,664	4,309	3,761	4,144	4,807	5,320	4,785
Total Distribution Losses	35	30	27	22	27	33	35	34	29	24	25	28	35	35
Subtotal Territorial	5,354	4,949	4,555	3,500	4,096	4,636	4,821	4,699	4,338	3,785	4,170	4,836	5,354	4,821
Transmission/Transformation Losses	89	82	75	58	68	77	80	78	72	63	69	80	89	80
Total Territorial Incl. Losses	5,443	5,031	4,630	3,559	4,165	4,713	4,901	4,777	4,410	3,848	4,239	4,916	5,443	4,901
Off-System Peak	157	95	81	58	128	220	270	243	201	87	66	117	157	270
			1	0	1	2	2	2	1	1	0	1	1	2
Transmission Losses	1	1		0	<u> </u>					ļ.	0			

PEAR DEMAND FORECAST (IM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	WINTER	SUMMER
Distribution:									-	-	-			
Peak	1,010	891	795	642	786	981	1,034	1,009	859	700	738	833	1,010	1,034
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
Total Distribution Peak	997	878	782	629	773	968	1,021	996	846	687	725	820	997	1,021
Distribution Losses	35	31	27	22	27	34	36	35	30	24	25	29	35	36
Subtotal Distribution	1,032	908	810	651	800	1,002	1,057	1,031	875	711	751	849	1,032	1,057
Transmission/Transformation Losses	20	17	15	12	15	19	20	20	17	14	14	16	20	20
Total Distribution Incl. Losses	1,052	926	825	663	815	1,021	1,077	1,050	892	725	765	865	1,052	1,077
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal:														
Total Municipal Peak	35	31	26	23	28	34	35	35	31	25	25	28	35	35
Transmission/Transformation Losses	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	31	27	24	28	34	36	35	31	26	25	29	36	36
Central Electric:														
Central Peak	3,781	3,482	3,181	2,293	2,741	3,074	3,208	3,106	2,915	2,513	2,873	3,450	3,781	3,208
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,801	3,504	3,202	2,314	2,764	3,098	3,231	3,131	2,932	2,536	2,891	3,464	3,801	3,231
Santee Cooper Transmission Losses	59	54	50	36	43	48	50	49	45	39	45	54	59	50
Total Central Served Incl. Losses	3,860	3,558	3,252	2,350	2,807	3,146	3,281	3,179	2,978	2,575	2,935	3,518	3,860	3,281
Total System Peak:														
Total Territorial Peak	5,365	4,960	4,565	3,510	4,107	4,644	4,829	4,706	4,348	3,797	4,179	4,848	5,365	4,829
Total Distribution Losses	35	31	27	22	27	34	36	35	30	24	25	29	35	36
Subtotal Territorial	5,400	4,991	4,592	3,532	4,134	4,677	4,865	4,741	4,378	3,821	4,204	4,877	5,400	4,865
Transmission/Transformation Losses	89	83	76	59	69	78	81	79	73	64	70	81	89	81
Total Territorial Incl. Losses	5,489	5,073	4,668	3,591	4,203	4,755	4,946	4,820	4,451	3,884	4,274	4,957	5,489	4,946
Off-System Peak	162	101	87	62	131	224	276	248	204	87	71	123	162	276
Transmission Losses	1	1	1	0	1	2	2	2	1	1	1	1	1	2
Total Requirements	5,653	5,174	4,755	3,654	4,335	4,981	5,224	5,070	4,657	3,972	4,346	5,082	5,653	5,224

FEAR DEMAND I ORECAST (MI	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	WINTER	SUMMER
Distribution:									-	-	-			
Peak	1,020	899	804	651	795	992	1,046	1,020	869	709	747	842	1,020	1,046
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
Total Distribution Peak	1,007	887	792	639	783	979	1,033	1,007	856	697	735	830	1,007	1,033
Distribution Losses	35	31	28	22	27	34	36	35	30	24	26	29	35	36
Subtotal Distribution	1,042	918	819	661	810	1,014	1,070	1,043	886	721	760	859	1,042	1,070
Transmission/Transformation Losses	20	17	16	13	15	19	20	20	17	14	14	16	20	20
Total Distribution Incl. Losses	1,062	935	835	673	826	1,033	1,090	1,063	903	735	775	875	1,062	1,090
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal:														
Total Municipal Peak	35	31	26	23	28	33	35	35	31	25	25	28	35	35
Transmission/Transformation Losses	1	1	0	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	31	27	24	28	34	36	35	31	26	25	29	36	36
Central Electric:														
Central Peak	3,818	3,515	3,210	2,316	2,770	3,106	3,241	3,138	2,946	2,540	2,900	3,483	3,818	3,241
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,838	3,538	3,230	2,337	2,793	3,130	3,265	3,163	2,963	2,563	2,918	3,497	3,838	3,265
Santee Cooper Transmission Losses	59	55	50	36	43	49	51	49	46	40	45	54	59	51
Total Central Served Incl. Losses	3,898	3,593	3,281	2,373	2,836	3,179	3,315	3,212	3,009	2,602	2,963	3,551	3,898	3,315
Total System Peak:														
Total Territorial Peak	5,412	5,003	4,603	3,543	4,147	4,686	4,874	4,750	4,389	3,833	4,215	4,891	5,412	4,874
Total Distribution Losses	35	31	28	22	27	34	36	35	30	24	26	29	35	36
Subtotal Territorial	5,447	5,034	4,630	3,565	4,174	4,721	4,910	4,785	4,419	3,858	4,241	4,920	5,447	4,910
Transmission/Transformation Losses	90	83	77	60	70	79	82	80	74	64	70	81	90	82
Total Territorial Incl. Losses	5,538	5,117	4,707	3,625	4,243	4,799	4,992	4,865	4,493	3,922	4,311	5,001	5,538	4,992
Off-System Peak	168	106	92	66	133	228	282	253	208	88	76	129	168	282
Transmission Losses	11	1	1	0	1	2	2	2	1	1	1	1	1	2
Total Requirements	5,707	5,224	4,800	3,691	4,377	5,029	5,276	5,120	4,702	4,010	4,388	5,131	5,707	5,276

PEAR DEMAND FORECAST (MV	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	WINTER	SUMMER
Distribution:	•/ •			7				7.00						
Peak	1,029	908	813	660	805	1,003	1,057	1,031	879	718	756	851	1,029	1,057
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)
Total Distribution Peak	1,016	896	801	648	793	990	1,045	1,019	867	706	743	839	1,016	1,045
Distribution Losses	36	31	28	23	28	35	37	36	30	25	26	29	36	37
Subtotal Distribution	1,052	927	829	671	821	1,025	1,082	1,055	897	731	769	869	1,052	1,082
Transmission/Transformation Losses	20	18	16	13	16	19	21	20	17	14	15	17	20	21
Total Distribution Incl. Losses	1,072	945	845	683	836	1,044	1,102	1,075	914	745	784	885	1,072	1,102
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal:														
Total Municipal Peak	35	31	26	23	28	33	35	35	31	25	25	28	35	35
Transmission/Transformation Losses	1	1	0	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	31	27	24	28	34	36	35	31	25	25	29	36	36
Central Electric:														
Central Peak	3,861	3,553	3,241	2,340	2,798	3,137	3,273	3,169	2,975	2,567	2,930	3,520	3,861	3,273
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,881	3,576	3,262	2,361	2,822	3,161	3,297	3,194	2,993	2,590	2,948	3,534	3,881	3,297
Santee Cooper Transmission Losses	60	55	51	37	44	49	51	50	46	40	46	55	60	51
Total Central Served Incl. Losses	3,941	3,631	3,313	2,397	2,865	3,210	3,348	3,243	3,039	2,630	2,993	3,589	3,941	3,348
Total System Peak:														
Total Territorial Peak	5,464	5,050	4,643	3,576	4,185	4,728	4,918	4,792	4,429	3,870	4,254	4,937	5,464	4,918
Total Distribution Losses	36	31	28	23	28	35	37	36	30	25	26	29	36	37
Subtotal Territorial	5,500	5,081	4,671	3,599	4,213	4,763	4,954	4,828	4,460	3,895	4,280	4,967	5,500	4,954
Transmission/Transformation Losses	91	84	77	60	70	79	83	81	74	65	71	82	91	83
Total Territorial Incl. Losses	5,591	5,165	4,749	3,659	4,283	4,843	5,037	4,908	4,534	3,960	4,351	5,049	5,591	5,037
Off-System Peak	173	112	97	70	135	232	288	258	212	88	82	136	173	288
Transmission Losses	1	1	1	11	1	2	2	2	2	1	1	1	1	2
Total Requirements	5,765	5,278	4,847	3,729	4,420	5,076	5,327	5,169	4,747	4,048	4,433	5,185	5,765	5,327

PEAR DEMAND FORECAST (IM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	WINTER	SUMMER
Distribution:														
Peak	1,038	917	822	669	815	1,013	1,069	1.042	889	728	764	860	1,038	1,069
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)
Total Distribution Peak	1,026	905	810	657	803	1,001	1,057	1,030	877	716	752	849	1,026	1,057
Distribution Losses	36	32	28	23	28	35	37	36	31	25	26	30	36	37
Subtotal Distribution	1,062	937	839	680	831	1,036	1,094	1,066	908	741	779	878	1,062	1,094
Transmission/Transformation Losses	20	18	16	13	16	20	21	20	17	14	15	17	20	21
Total Distribution Incl. Losses	1,082	954	854	693	847	1,056	1,115	1,087	925	755	794	895	1,082	1,115
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal:														
Total Municipal Peak	35	31	26	23	28	33	35	35	30	25	25	28	35	35
Transmission/Transformation Losses	1	1	0	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	31	27	24	28	34	36	35	31	25	25	29	36	36
Central Electric:														
Central Peak	3,898	3,587	3,270	2,366	2,832	3,174	3,312	3,207	3,011	2,599	2,959	3,553	3,898	3,312
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,918	3,610	3,291	2,387	2,855	3,199	3,336	3,231	3,029	2,621	2,976	3,567	3,918	3,336
Santee Cooper Transmission Losses	61	56	51	37	44	50	52	50	47	41	46	55	61	52
Total Central Served Incl. Losses	3,979	3,666	3,342	2,424	2,899	3,248	3,387	3,281	3,075	2,662	3,022	3,622	3,979	3,387
Total System Peak:														
Total Territorial Peak	5,511	5,093	4,682	3,612	4,229	4,777	4,969	4,841	4,475	3,911	4,291	4,980	5,511	4,969
Total Distribution Losses	36	32	28	23	28	35	37	36	31	25	26	30	36	37
Subtotal Territorial	5,547	5,124	4,710	3,635	4,257	4,812	5,006	4,877	4,506	3,936	4,318	5,009	5,547	5,006
Transmission/Transformation Losses	92	85	78	61	71	80	83	81	75	66	72	83	92	83
Total Territorial Incl. Losses	5,639	5,209	4,788	3,696	4,328	4,892	5,089	4,958	4,581	4,001	4,389	5,092	5,639	5,089
Off-System Peak	179	117	102	74	138	236	295	264	215	88	87	142	179	295
Transmission Losses	1	1	1	1	1	2	2	2	2	1	1	1	1	2
Total Requirements	5,818	5,327	4,891	3,770	4,467	5,130	5,386	5,224	4,798	4,090	4,477	5,235	5,818	5,386

PEAK DEMAND FORECAST (MV	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	WINTER	SUMMER
Distribution:														
Peak	1,047	926	831	678	825	1,024	1,081	1,054	899	737	773	870	1,047	1,081
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)
Total Distribution Peak	1,036	914	820	667	813	1,013	1,069	1,042	888	725	761	858	1,036	1,069
Distribution Losses	36	32	29	23	28	35	37	36	31	25	27	30	36	37
Subtotal Distribution	1,072	946	848	690	842	1,048	1,106	1,078	919	751	788	888	1,072	1,106
Transmission/Transformation Losses	20	18	16	13	16	20	21	20	17	14	15	17	20	21
Total Distribution Incl. Losses	1,092	964	864	703	858	1,068	1,127	1,099	936	765	803	905	1,092	1,127
Industrial:														
Firm	144	146	146	147	149	149	151	151	145	148	146	144	144	151
Economy Power	311	322	329	317	320	317	315	316	321	318	314	318	311	315
Interruptible	78	80	79	80	74	77	75	78	74	82	78	74	78	75
Total Industrial Peak	532	547	554	544	543	543	541	545	539	549	538	536	532	541
Transmission/Transformation Losses	10	10	11	10	10	10	10	10	10	10	10	10	10	10
Total Industrial Incl. Losses	542	558	565	554	553	554	551	555	550	559	548	546	542	551
Century:														
Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supplemental	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission/Transformation Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Century Incl. Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal:														
Total Municipal Peak	35	31	26	23	28	33	35	35	30	25	25	28	35	35
Transmission/Transformation Losses	1	1	0	0	1	1	1	1	1	0	0	1	1	1
Total Municipal Incl. Losses	36	31	27	24	28	34	36	35	31	25	25	29	36	36
Central Electric:														
Central Peak	3,938	3,624	3,301	2,392	2,864	3,209	3,348	3,241	3,044	2,628	2,988	3,588	3,938	3,348
Existing DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future DSM/EE Projections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L-Rate Firm	16	16	15	16	17	17	18	18	13	17	13	11	16	18
L-Rate Interruptible	5	6	6	6	6	7	6	7	4	6	4	3	5	6
Other Substations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Central Served Peak	3,958	3,646	3,321	2,413	2,887	3,233	3,372	3,266	3,062	2,651	3,006	3,603	3,958	3,372
Santee Cooper Transmission Losses	61	57	51	37	45	50	52	51	47	41	47	56	61	52
Total Central Served Incl. Losses	4,020	3,702	3,373	2,450	2,932	3,283	3,424	3,316	3,109	2,692	3,052	3,658	4,020	3,424
Total System Peak:														
Total Territorial Peak	5,561	5,138	4,721	3,647	4,271	4,822	5,017	4,887	4,519	3,950	4,330	5,025	5,561	5,017
Total Distribution Losses	36	32	29	23	28	35	37	36	31	25	27	30	36	37
Subtotal Territorial	5,597	5,170	4,750	3,670	4,299	4,858	5,054	4,924	4,550	3,975	4,356	5,055	5,597	5,054
Transmission/Transformation Losses	92	85	79	61	72	81	84	82	76	66	72	83	92	84
Total Territorial Incl. Losses	5,689	5,256	4,829	3,731	4,371	4,939	5,138	5,006	4,626	4,042	4,429	5,138	5,689	5,138
Off-System Peak	184	123	108	77	140	240	301	269	219	88	92	148	184	301
Transmission Losses	1	1	1	1	1	2	2	2	2	1	1	1	1	2
Total Requirements	5,875	5,379	4,937	3,809	4,512	5,181	5,441	5,276	4,846	4,130	4,521	5,287	5,875	5,441



### 8.2.8 TEA Letter



November 21, 2019

Charles Duckworth
Deputy CEO and Chief of Planning
South Carolina Public Service Authority
1 Riverwood Drive
Moncks Corner, SC 29461

RE: Natural Gas Hedging on behalf of South Carolina Public Service Authority ("Santee Cooper")

Mr. Duckworth:

The Energy Authority, Inc. ("TEA") is wholly-owned and directed by seven municipal and state-chartered electric utilities and TEA is one of the nation's largest non-profit energy trading and portfolio management organizations. On an annual basis, TEA executes on behalf of its owners and over 50 additional clients, over 175,000 transactions, and purchases and schedules more than 225 billion cubic feet of natural gas.

Additionally, TEA, on behalf of its owners and clients, procures hedges for natural gas by using physical and financial markets to stabilize volatility and mitigate client exposure to natural gas price costs. In connection with Santee Cooper's recently adopted Reform Plan and with the backing and direction of Santee Cooper, TEA can execute ten-year hedges on behalf of Santee Cooper using financial futures and derivatives, from January 2020 through December 2029. At current market prices, such hedges would enable Santee Cooper to lock-in prices which are on par with or lower than the projections contained in the Reform Plan. As of the date of this correspondence, TEA has received executable offers from the marketplace that signify enough liquidity and breadth to purchase a significant portion of Santee Cooper's natural gas needs with prices at the current NYMEX forward curve plus 5 cents on average over the term.

TEA looks forward to executing Santee Cooper's Reform Plan by procuring hedges using financial futures and derivatives at these current historic low prices, as Santee Cooper proceeds with its plan to stabilize its rates for its customers for many years to come.

Warm Regards,

Pocusigned by:

Robert Trinnear

Managing Director, East
The Energy Authority, Inc.

CC: J. Teofilo (TEA)

M. Kinevan (TEA)
M. Anderson (TEA)

V. Budreau (Santee Cooper) E. Wallace (Santee Cooper)



## 8.2.9 V.C. Summer Units 2 and 3 Equipment Valuation Letter



Jimmy I. Gibbs President and CEO

9855 Warren H. Abernathy Highway Spartanburg, South Carolina 29301 P. O. Box 1727 Spartanburg, South Carolina 29304

> Tel: 864.439.8752 Fax: 864.439.7544

September 19, 2019

Mr. J. Michael Baxley Senior VP & General Counsel Santee Cooper One Riverwood Drive Moncks Corner, SC 29461

Dear Mike,

Gibbs International has over 45 years of experience in demolition, salvage, and resale of large-scale sites, and has conducted salvage operations for over 3,000 textile, industrial, and power plants. Our team has visited and conducted high-level inspections of the VC Summer Units 2 and 3 sites post construction cessation. Based upon information known to us at this time, it is our preliminary opinion that the equipment, nuclear components and construction commodities on site that are not affixed to the real estate have a resale value in excess of \$400 million.

To provide specific value on the assets, we will need 90 days to evaluate the equipment and commodities as outlined in our February 28, 2019 proposal. Please let me know how my team can assist you and Santee Cooper going forward.

This information is provided as opinion only and is not binding on either party.

Jimmy I. Gibbs

Best regards,

Gibbs International, Inc.

Copies:

Steve Trakas

Walt Tollison



## 8.3 nFront Resource Planning Study

# SOUTH CAROLINA PUBLIC SERVICE AUTHORITY (SANTEE COOPER)

## **2019 RESOURCE PLANNING STUDY**

OCTOBER 31, 2019

Confidential and Competitive Info for H4287 Proposal (CCIH4287)



This document has been prepared for the use of the client for the specific purposes identified in this document. The conclusions, observations, and recommendations contained in this document attributed to nFront Consulting, LLC, constitute the opinions of nFront Consulting, LLC. To the extent that statements, information, and opinions provided by the client or others have been used in the preparation of this document, nFront Consulting, LLC, has relied upon the same to be accurate and for which no assurances are intended, and no representations or warranties are made. nFront Consulting, LLC, makes no certification and gives no assurances except as explicitly set forth in this report.

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October 31, 2019

Members of the Board of Directors South Carolina Public Service Authority 1 Riverwood Drive Moncks Corner, SC 29461

**Subject: Resource Planning Study** 

Santee Cooper engaged nFront Consulting in March 2019 to work with Santee Cooper's internal resource and transmission planning team in performing analyses to be used by Santee Cooper in identifying opportunities to improve its power supply portfolio. The project's scope expanded to assisting in preparation of Santee Cooper's Business Forecast dated September 9, 2019 and Reform Plan to be submitted yet in 2019 in the H4287 process. This Study is also structured to support Santee Cooper's statutorily-required Integrated Resource Plan.

This Report summarizes the results of analyses performed in collaboration with Santee Cooper's staff. nFront Consulting's roles have included providing: (i) review and input regarding assumptions used for the analyses; (ii) advice as to analytical methods and approaches; and (iii) assistance in verification, interpretation, and presentation of Study results.

The Executive Summary which follows presents an overview of key conclusions and observations from the Study regarding Santee Cooper's new power supply plan. The body of the Report discusses proposed changes in Santee Cooper's resource plan in more depth, highlighting key considerations and impacts of the new resource plan. Appendix A discusses analytical methods and more specific, detailed information pertaining to results under Base Case and Sensitivity Case assumptions. Appendix B includes information concerning key assumptions and analyses prepared to confirm those assumptions. Finally, Appendix C highlights qualifications of nFront Consulting and its project team members.

nFront Consulting is grateful for the exceptional effort of Santee Cooper staff and management as we worked together to evaluate the many concepts and assumptions that have impacted this Study. Santee Cooper's staff and management have been very effective in providing timely guidance, direction, information, encouragement, and feedback as needed to support a fluid, compressed time schedule.

We very much appreciate the opportunity to provide service to Santee Cooper with regard to this very important matter.

Respectfully submitted,

nFroat Consulting LLC

nFront Consulting LLC

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# **EXECUTIVE SUMMARY**

### STUDY PURPOSES AND SCOPE

This Study has been conducted working collaboratively with Santee Cooper's management and staff in preparation of Santee Cooper's Business Forecast dated September 9, 2019 and Reform Plan to be submitted later this year in the H4287 process (the "Study"). This Study also is structured to support Santee Cooper's statutorily required integrated resource plan.

Key management direction regarding essential characteristics of any new plan developed through this Study can be summarized as follows:

- 1. Plan must reflect realistic resource implementation assumptions and schedules;
- 2. Changes proposed must not reduce Santee Cooper's ability to provide reliable, dependable service to customers;
- 3. Plan must be adaptable as future conditions change, not dependent on a single set of assumptions regarding future conditions; and
- 4. Plan must provide more affordable and competitive service to customers and improve environmental performance under a wide range of market conditions.

Numerous resource options and approaches have been considered to effectively, reliably and economically meet Santee Cooper's obligations to supply power for over 2 million customers in South Carolina. Ranges of assumptions concerning future fuel commodity and delivery costs; carbon-limiting regulatory policy or statutes; generation unit costs, performance and efficiency; and other factors over the period from 2020 through 2047 (the "Study Period") have been considered in developing the plan discussed further below and in the Report.

### **NEW POWER SUPPLY ROADMAP FOR SANTEE COOPER**

Santee Cooper's current power supply portfolio is heavily weighted toward coal-fired resources. Unless the portfolio is changed, approximately 44% of Santee Cooper's energy is projected to come from coal resources in 2020 increasing to approximately 52% by 2033. Coal-fired generation is projected to increase over that time span because (a) the amount of energy purchased primarily from natural gas-fueled generation resources connected to adjacent transmission systems is projected to decrease and (b) load is projected to increase.

Through the analyses prepared during the course of this Study, Santee Cooper has identified a series of changes to its generation and transmission systems that, under a wide range of future conditions, can reasonably be expected to result in more affordable and competitive service to the wholesale and retail customers that rely on Santee Cooper for their electricity needs. In addition to making the future cost of electricity more affordable, the proposed plan can reasonably be expected to preserve the reliability of Santee Cooper's power supply and significantly reduce the carbon footprint of its generation fleet. The new direction will enhance the diversity of Santee Cooper's resource portfolio and thereby better position Santee Cooper to provide cost-effective and competitively priced service as conditions change in the future.

### **CONCLUSIONS AND OBSERVATIONS**

Based on the assumptions, analyses, and projections presented in this Report, interim analyses conducted during the course of the Study, and our professional experience and judgement, we have formed the following fundamental conclusions and observations.

# A. New Power Supply Direction

Study results support proceeding in a new direction by restructuring Santee Cooper's power supply portfolio in the following ways.

- 1. **Improve Resource Diversity** Progressively implement a significantly more diverse portfolio of resources in terms of types of energy resources utilized, fuels used for production of electricity, and development of demand-side programs, particularly those targeting peak demand.
- 2. **Reduce Reliance on Coal and Increase Use of Sustainable Resources** Replace certain coal units on the system with renewable resources and clean, high-efficiency natural gas-fueled resources.
- 3. Continue to Maximize Value to Customers of Purchases of Energy from Favorable Regional Energy Markets – Maximize purchases of lower-cost energy from resources connected to surrounding transmission systems. This strategy should complement, not substitute for, implementing changes to lower costs and improve environmental performance of Santee Cooper's generation resources.
- 4. **Right-Size New Generation Resources** Plan future NGCC generation resources in smaller increments with the flexibility to more closely match resource commitments to future loads, but also work to maximize economies of scale by cooperating with other utilities in the planning and development of those future resources.
- 5. Carefully Plan Generation Resources Considering Transmission System Impacts Develop generation plans that are also efficient from the perspective of the need for new transmission lines.

### B. New Power Supply Road Map

Santee Cooper should move toward the future described above in an aggressive, yet responsible, manner consistent with providing affordable and reliable service to customers.

Making the following specific changes to Santee Cooper's portfolio of resources in the 2020s is projected to result in improved portfolio diversity, more affordable and competitively priced electricity for Santee Cooper's customers, and significant reductions in carbon emissions under a wide range of assumptions about future costs and conditions. The specific changes summarized below will provide Santee Cooper flexibility to successfully adapt as the following conditions change:

- Government policy regarding carbon emissions;
- Growth or reduction in customers' demand for electricity and changes in patterns of customers' use of electricity;
- Market conditions impacting availability of attractively priced capacity and energy from power suppliers connected to adjacent transmission systems; and
- Costs of fuel commodities and fuel transportation options.

## 1. Retire the Winyah Generating Station by 2027 using a Phased Retirement Approach

- a. Study results favor retiring the Winyah Generation Station in the 2020s. Retirement of Winyah was shown to be produce more favorable results than retiring Cross 1 and 2, which represent a similar amount of capacity, during that period. Either coal retirement option would remove approximately 1,100 MW of generating capacity from Santee Cooper's system and therefore would necessitate adding approximately 500-600 MW of new resources to Santee Cooper's system before removing the retired coal-fired capacity from service. Under the Base Case assumptions, which reflect no carbon emissions regulation over the Study Period, Study results do not favor retiring all of Santee Cooper's coal-fired resources during the Study Period.<sup>2</sup>
- b. A phased approach to retiring the Winyah Generation Station is projected to produce the greatest benefit for customers.
  - i. Upon commercial operation of two quick-start dual-fueled combustion turbine (CT) generation units totaling approximately 100 MW of capacity, two of the four generation units at Winyah could be retired from service.<sup>3</sup> Santee Cooper's implementation of the CTs followed by retirement of the first two Winyah units would be scheduled to occur in 2023. This schedule assumes the CT implementation process begins late in 2020.
  - ii. In addition to placing the 100 MW of quick-start CTs into service, under the Base Case load forecast, Santee Cooper would need to:
    - 1. Purchase from parties connected to adjacent transmission systems approximately 30 MW of capacity in winter months of 2023 (or such other amounts as may prove necessary in the 2023-2036 period if loads are different than now forecast); and
    - 2. Adjust maintenance outage schedules in the spring and fall seasons to assure adequate reserves during those periods.
  - iii. Upon commercial operation of approximately 500 MW of new NGCC capacity, the remaining two generation units at Winyah could be retired from service. Santee Cooper's implementation of the NGCC capacity followed by retirement of the remaining two Winyah units would be scheduled to occur in 2027. This schedule assumes the NGCC capacity implementation process begins in early 2021.

<sup>&</sup>lt;sup>1</sup> The addition of capacity would be necessary to maintain reliability of supply and meet commitments to regional capacity sufficiency standards. Because Santee Cooper currently has more generation capacity than the minimum required, Santee Cooper would need to replace approximately 50 percent of the capacity retired.

<sup>&</sup>lt;sup>2</sup> Study results indicate that if a substantial tax on carbon emissions or other legislation aimed at limiting carbon emissions from coal-fired or other generation plants were to be implemented, Santee Cooper should revisit costs and benefits of continuing to operate remaining coal-fired facilities relative to other alternatives and potentially accelerate timetables for the introduction of alternative resources.

<sup>&</sup>lt;sup>3</sup> 100 MW of quick start capability near the Santee Cooper load center would be necessary to provide transmission support if two of the existing coal units at Winyah are retired.

# **EXECUTIVE SUMMARY**

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c. As the retirement of Winyah progresses, Santee Cooper can work to minimize expenditures at the plant and productively and appropriately transition the approximately 200 employees at Winyah. Study results indicate avoiding certain costs and expenditures at Winyah during the period 2021 through 2026 would result in significant benefits to Santee Cooper's customers.

# 2. Add approximately 1,000 MW of renewable generation on the Santee Cooper system by 2024

- a. Study results project substantial benefit<sup>4</sup> to Santee Cooper's customers of implementing up to 1,000 MW of new solar<sup>5</sup> capacity on the Santee Cooper system.
- b. Additional studies should be conducted to assess how much additional solar capacity may be beneficial. The additional studies should include more in-depth analyses of potential operational and reliability issues that may result from being contractually required to take or pay for all output available from the solar capacity installed and the cost and effectiveness of solutions to those issues.
- c. Due to current tax laws and other factors, we expect it to be more attractive to obtain this initial 1,000 MW of renewable capacity by entering power purchase agreements ("PPAs") with third parties that specialize in developing solar projects as opposed to Santee Cooper planning, developing and financing the new solar capacity.

# 3. Progressively add 200 MW of energy storage devices to Santee Cooper's system by 2028

Capabilities and costs of energy storage devices are expected to improve significantly over the next several years. By phasing in the addition of storage devices, Santee Cooper can be expected to capture the greatest benefit for its customers at the most reasonable cost available.

# 4. Progressively implement programs that would reduce the loads of customers during peak demand periods, particularly in the winter

Santee Cooper has initially targeted working with Central to implement demand-side programs to meet approximately 150 MW of customer winter peak load by 2027 and growing to 200 MW by 2037.

Study results indicate benefits to Santee Cooper's customers of allowing Santee Cooper to control key loads or incentivize customers to reduce demand for electricity during the winter periods of highest demand, which typically occur in the hour ending 8 am from December through February.

<sup>&</sup>lt;sup>4</sup> Energy from solar resources is not projected to be available during hours in which Santee Cooper customers' highest demands for energy occur. Accordingly, installation of solar capacity by itself is not expected to offset Santee Cooper's need for capacity from other types of resources. Energy produced from solar resources will reduce energy produced from carbon-emitting resources.

<sup>&</sup>lt;sup>5</sup> Throughout this document, the term "solar" is used to refer to photovoltaic or PV solar projects. Unless specifically stated otherwise, all references to the project's capability is in terms of MWac at the project's delivery point on the Santee Cooper transmission system.

# C. Commitments to Specific Resource Plans after 2027

Making further commitments at this time to the specific resource changes to be made beyond 2027 would be premature and would expose Santee Cooper's customers to more risk than is necessary.

- 1. Based on the Base Case set of assumptions used in this Study, implementing approximately 500 MW of additional NGCC capacity in 2031 is projected to be the lowest cost long-term plan for Santee Cooper's customers. However, the Sensitivity Analyses performed in this Study indicate the following decisions regarding Santee Cooper's portfolio after 2027 could be impacted by changes to assumed conditions and the success of efforts to cooperate with other utilities in the development of certain future resources:
  - a. The amount, timing, siting of, and type of natural gas fueled capacity to add;
  - b. Whether to continue to operate all or a portion of the Cross Generating Station or replace those remaining coal-fired resources with other generating resources; and
  - c. The level of solar capacity that would be most attractive to operate on Santee Cooper's system.
- 2. Implementation of potential new resources beyond 2027 typically will require key decisions regarding those resources to be made by Santee Cooper 3 to 10 years in advance, depending on the resource type and other factors. Accordingly, further commitments can be made during the 2020s. In the interim, changes in circumstances and conditions may impact determination of the most favorable resource changes to implement after 2027 and into the 2030s.

# D. Impact of Carbon Limiting Legislation or Policies

Imposition by government of a carbon tax or other carbon-limiting regulation could impose significant costs on Santee Cooper (and other utilities) that would be expected to cause consideration and implementation of higher cost resource plans in an effort to mitigate the impact of the tax. Having proceeded along the path identified in Conclusion B, the impact of the tax on Santee Cooper's costs and the options available to Santee Cooper to mitigate the tax would be much more similar to those of surrounding utilities.

# E. Risk of Higher Natural Gas Prices

By retiring Winyah and replacing that resource with additional natural gas-fueled generation resources, Santee Cooper would increase its exposure to higher natural gas prices as compared to continuing with its coal-dominated existing portfolio. However, based on the natural gas price Sensitivity Analyses performed, costs under the New Resource Plan are projected to remain lower than those under the existing portfolio for natural gas price levels up to approximately twice the levels assumed in the 2030s under the Base Case set of assumptions. Moreover, the impacts on Santee Cooper of higher natural gas prices would be similar to the impacts on surrounding utilities considered. As a result, with the New Resource Plan, Santee Cooper's charges to customers can be expected to remain competitive under a very wide range of natural gas price scenarios.

# F. Retirement of Cross Generating Station

Under the Base Case assumptions, the retirement of Cross 1 & 2 or all four units at Cross Generating Station in the 2030s would increase projected costs to Santee Cooper's customers,

# **2019 Resource Planning Study EXECUTIVE SUMMARY**Page 6

reduce the fuel diversity of Santee Cooper's power supply portfolio, and require greater capital investment to make required additions of replacement capacity resources.

Cross 1 & 2 in particular are projected to be used very infrequently to produce energy but provide needed reliable capacity at relatively low cost to meet load in peak demand and other critical periods. Cross 3 & 4 are projected to supply energy at a considerably higher load factor than Cross 1 & 2 and are the more cost effective and newer of the Cross units.

Should modest to significant levels of carbon taxes or other policies be imposed to limit utilities' emissions of CO<sub>2</sub>, Santee Cooper would be in a position to significantly mitigate the impact of a tax or other policy change on its customers by retiring a portion or all of Cross Generating Station.

Further renewable technological improvements, reductions in capital or operating costs of NGCC units, increases in costs of operating and maintaining the Cross units, or much lower than forecast load levels may also present conditions under which Santee Cooper could reduce costs to customers by retiring a portion or all of Cross and replace that capacity as needed with other resources.

# **G.** Cooperating with Other Utilities

Santee Cooper has advised it intends to work with other utilities to explore the most effective ways to provide additional NGCC capacity in capacity increments that best match Santee Cooper's capacity needs, but also allow customers to benefit from economies of scale from developing larger-sized generation units. Santee Cooper also has advised that it plans to seek opportunities to work with other utilities to explore various alternatives for mutual benefit to customers, ranging from coordination of system dispatch, more favorable natural gas supply, capacity and energy transactions, and other efforts to reduce operational costs.

Study results indicate that achieving economies of scale in the development of new NGCC capacity and benefits of collaborating with other utilities in the other areas identified above would result in significant benefits to Santee Cooper's customers.

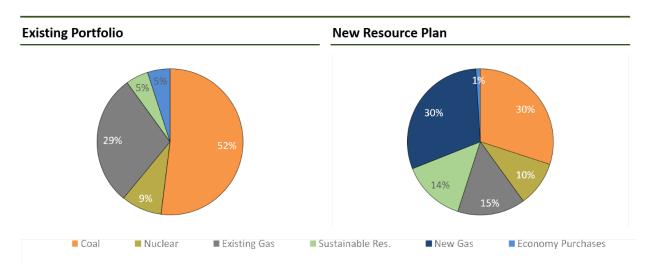
### SANTEE COOPER'S NEW POWER SUPPLY PLAN OUTCOMES

As shown in Figure ES-1 below, by 2033 the New Resource Plan is projected to:

- Reduce Santee Cooper's reliance on coal from 52% to 30% of total energy needed for customers, a reduction of approximately 42%;
- Increase total energy supplied from renewable resources from 5% to 14% of Santee Cooper's total load, almost a three-fold increase<sup>6</sup>; and
- Increase use of natural gas resources (including economy energy purchases) from 33% to 46%, an increase of almost 40%.

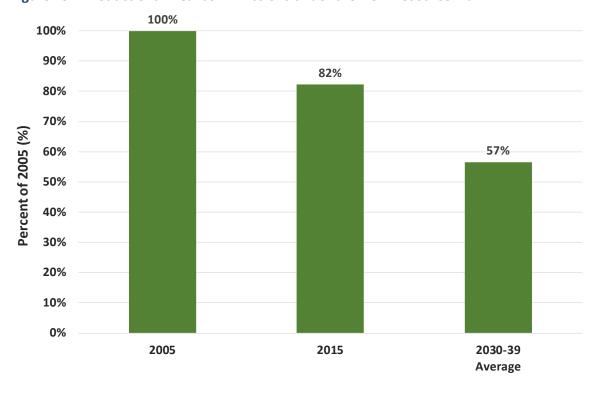
<sup>&</sup>lt;sup>6</sup> Santee Cooper's hydroelectric, solar, and waste-to-energy carbon-free resources. Solar resources would increase by more than 500%.

Figure ES-1: 2033 Energy Mix of Existing Portfolio versus New Resource Plan



Under the New Resource Plan, carbon emissions would be substantially less on average during the 2030s than in 2005 and 2015, the two years most often referenced as base years in discussions concerning carbon-limiting legislation. As shown below in Figure ES-2, in the 2030s, carbon emissions associated with electricity supplied to Santee Cooper's customers are projected to be 43% less than in 2005 and 30% less than in 2015, even though by the 2030s, Santee Cooper's total energy production is projected to be 4% and 10% higher than in 2005 and 2015, respectively.

Figure ES-2: Reductions in Carbon Emissions under the New Resource Plan



# **2019 Resource Planning Study EXECUTIVE SUMMARY**Page 8

## FUTURE POWER SUPPLY FOR SANTEE COOPER'S CUSTOMERS

Santee Cooper's approach to supplying power to its customers will be very different in the future assuming Santee Cooper proceeds in accordance with the above-described new direction and power supply road map. The changes being made today and planned for the coming years can reasonably be expected to result in more affordable and competitive service to Santee Cooper wholesale and retail customers over the long term and under a wide range of future conditions without sacrificing reliability of service.

Santee Cooper's new resource plan was structured specifically to avoid pitfalls that have created concerns in the past. The plan will significantly reduce Santee Cooper's dependence on coal and dramatically increase its use of renewable and clean, environmentally friendly resources, while minimizing capital investment required to make those shifts. These changes are both beneficial for the environment and reduce exposure to potential high costs of carbon tax legislation.

The plan will better align Santee Cooper's portfolio with the portfolios planned by surrounding suppliers, which will allow Santee Cooper to maintain competitive costs under a wide range of future conditions.

All power supply planning necessarily involves projecting costs and other conditions decades into the future. Understanding that those projections and assumptions will change, the new plan was specifically structured to be adaptable to changing conditions.

### REPORT

### STUDY PURPOSES AND SCOPE

This Study has been conducted working collaboratively with Santee Cooper's management and staff in preparation for Santee Cooper's Business Forecast, dated September 9<sup>th</sup>, and Reform Plan to be submitted in the H4287 process and to support development of Santee Cooper's statutorily required Integrated Resource Plan.

Key management direction regarding essential characteristics of any new plan developed through this Study can be summarized as follows:

- 1. Plan must reflect realistic resource implementation assumptions and schedules;
- 2. Changes proposed must not reduce Santee Cooper's ability to provide reliable, dependable service to customers;
- 3. Plan must be adaptable as future conditions change, not dependent on a single set of assumptions regarding future conditions; and
- 4. Plan must provide more affordable and competitive service to customers and improve environmental performance under a wide range of market conditions.

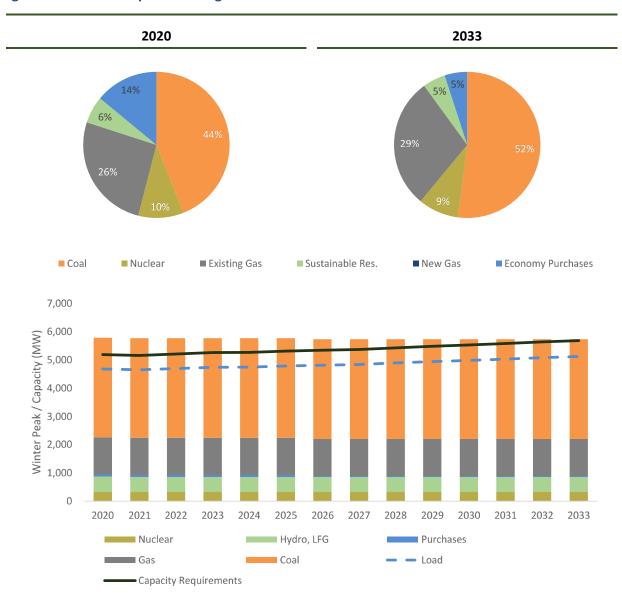
Numerous resource options and approaches have been considered to effectively, reliably and economically meet Santee Cooper's obligations to supply power for over 2 million customers in South Carolina. Modifications to Santee Cooper's current power supply portfolio, which relies heavily on coal as a fuel for generating electricity, have been evaluated that would replace coal-fired assets with a diverse mix of natural gas-fueled combined cycle and renewable generation, energy storage devices, natural gas-fueled combustion turbine generation units suitable for quick start and peak load service, and demand and energy reduction programs.

Ranges of assumptions concerning future fuel commodity and delivery costs; governmental policy; generation unit costs, performance and efficiency; and other factors over the period from 2020 through 2047 have been considered in developing the plan. Under its new power supply plan, Santee Cooper would have the flexibility to effectively adapt under a wide range of future conditions, as illustrated and confirmed by Sensitivity Analyses summarized below and presented in more detail in Appendix A.

# SANTEE COOPER'S EXISTING POWER SUPPLY PORTFOLIO

Santee Cooper's current power supply portfolio is heavily weighted toward coal-fired resources. **Figure 1** below shows the projected mix of energy resources for 2020 and 2033 in the pie charts and the projected peak demand requirements versus capacity resources in Santee Cooper's existing portfolio. As shown, unless the portfolio is changed, approximately 44% of Santee Cooper's energy would be projected to come from coal resources in 2020 increasing to approximately 52% by 2033. This increase results from growth of Santee Cooper customers' energy needs and projections that suggest that Santee Cooper would have fewer opportunities by 2033 to save on fuel costs by purchasing energy from surrounding systems (see the reduction in "Economy Purchases" from other utilities shaded in blue).

Figure 1 – Santee Cooper's Existing Resource Mix



# **IDENTIFYING DESIRED CHANGES**

This Study evaluates impacts on Santee Cooper customers from changes to move its generation resource portfolio toward greater diversity of resources, less reliance on coal, greater use of renewable resources, increased emphasis on energy efficiency and demand response programs, and increased use of other environmentally friendly generation resources, including highly efficient natural gas generation units.

Numerous power supply alternatives were considered including:

1. High efficiency natural gas combined cycle ("NGCC") generation plants ranging in size from 541 MW to 1,081 MW of capacity at multiple locations;

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- 2. Adding a heat recovery steam generator ("HRSG") and steam turbine to two existing combustion turbine units at Santee Cooper's Rainey Generating Station to result in an additional 540 MW NGCC at that location, increasing the capacity of the Rainey Station by 155 MW;<sup>7</sup>
- 3. High efficiency natural gas simple cycle combustion turbines ("NGCT") generation plants ranging in size from 221 MW to 337 MW of capacity at multiple locations;
- 4. Small aeroderivative NGCTs with special quick start capabilities at various sites near Santee Cooper's load center;
- 5. Various demand side programs aimed at reducing customer demand for electricity during the highest load periods, particularly in the winter, and improving efficiency of customers' use of energy;
- 6. Solar resources that would be obtained by contracting to purchase output of plants owned by specialists in the development of solar power;
- 7. Utility-scale battery storage devices;
- 8. Purchases of output from NGCCs connected to adjacent transmission systems under power purchase agreements expected to have terms of 5 years or longer; and
- 9. Purchases of "economy energy" from adjacent market areas, which is typically done for hours or days at a time.<sup>8</sup>

# SITING AND FUEL SUPPLY OPTIONS FOR NEW NATURAL GAS FUELED RESOURCES

The consideration of potential new NGCCs and NGCTs required analysis of potential natural gas supply arrangements with both existing and planned future interstate natural gas pipelines, regional networks, and lateral extensions from various pipeline systems and impacts on the electric transmission system and investment in required upgrades.

**Figure 2**, below, shows options considered for siting new NGCC and NGCT generation units. Among the site options in Santee Cooper's area (shown with red symbols), sites at PeeDee, Winyah, and near Summer were determined to have the most economic potential.

Note that supply of natural gas for the PeeDee site is expected to be via the Atlantic Coast Pipeline ("ACP"), which is under development and scheduled to be completed early in the 2020s. The ACP is

<sup>&</sup>lt;sup>7</sup> The Rainey site currently includes a 540 MW NGCC, two F-Class NGCTs, and three smaller E-Class NGCTs. The change analyzed would not result in more generation capacity at Rainey because of existing constraints on the transmission system in that area that would be extremely costly to resolve. The two existing F-Class NGCTs would be combined with the new HRSG and steam turbine to achieve the new NGCC resource. Operation of other smaller NGCTs at Rainey would be restricted when the two 540 MW NGCCs at the site are in operation.

<sup>&</sup>lt;sup>8</sup> As used herein, "economy energy" refers to the purchase of energy generated on an adjacent system to reduce use of higher cost resources available to Santee Cooper on its system. Santee Cooper currently purchases economy energy under contracts that allow interruption of the transaction by the seller and more firm contracts that Santee Cooper would assume would not be interrupted by the seller. Generally, Santee Cooper carries operating reserves on interruptible contracts and avoids the need to carry operating reserves on the firm contracts. Economy energy purchases do not provide capacity that Santee Cooper can account for as meeting capacity sufficiency standards.

a joint venture of Dominion Energy, Duke Energy, Southern Company Gas, and Piedmont Natural Gas. The pipeline would extend 600 miles, with the capacity to transport 1.5 billion cubic feet of natural gas per day from Appalachian shale gas sources to the mid-Atlantic region, terminating in North Carolina near Lumberton. Natural gas transported from the terminus of the ACP to Santee Cooper sites would be delivered into South Carolina via new natural gas pipeline networks or laterals that could be developed by Dominion or Santee Cooper. Natural gas supply would also be available for sites near or at the Virgil C. Summer Nuclear Generating Station ("Summer") from the existing Transcontinental Gas Pipeline ("Transco"). Transco advises that supplying fuel to potential new Santee Cooper NGCC resources would require upgrades to Transco's system.

Other sites shown on **Figure 2** below with green symbols are existing Dominion Energy South Carolina ("Dominion SC") plant sites. Notice that Dominion SC's system overlaps with Santee Cooper's system. The proximity of the two system areas may offer opportunities to collaborate in the future on generation plans and fuel supply arrangements.

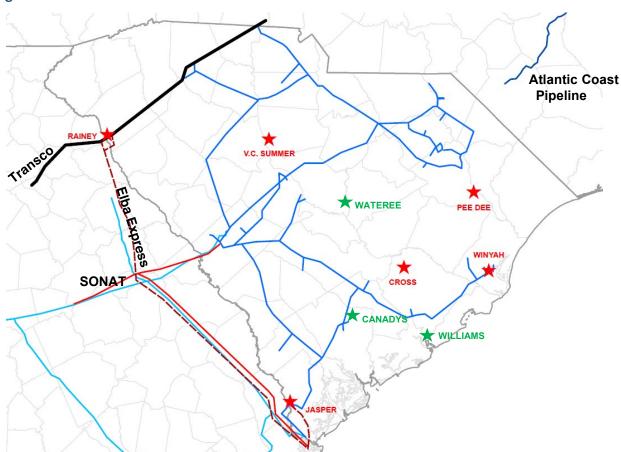


Figure 2 – Potential Sites for New Generation Resources

**Figure 3** below is a map of the area electric transmission system. Santee Cooper's system has been optimized over the years to serve load from generation resources currently in Santee Cooper's portfolio. Retirement of the Winyah Generating Station requires very costly improvements to the system unless replacement generation is installed in specific areas to relieve transmission constraints.

Accordingly, assessments of each option for siting a new power generation facility requires balancing the cost of resolving impacts on the Santee Cooper transmission system against the cost of natural gas pipeline access and fuel delivered via that pipeline path.

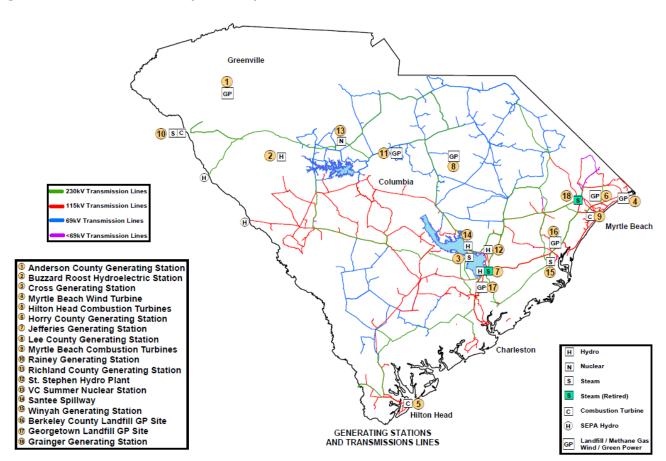


Figure 3 – Area Transmission System Map

Significant transfer limits can exist at various points on the electric transmission system, reducing Santee Cooper's ability to transfer power into its system from adjacent systems. This transfer capability is often used to maximum effect when making near-term economy energy purchases. Significant upgrades to the transmission system intended to increase the transfer capability with adjacent systems are very costly and can require upgrades to adjacent systems to realize the desired capability increase.

### FACTORS DRIVING SANTEE COOPER'S NEW RESOURCE PLAN

The analysis of potential resource plans identified the most economic combinations of Santee Cooper's existing resources and the above types of potential new resources consistent with flexibility to adapt as conditions change and with providing reliable service to customers that depend on Santee Cooper for their electricity needs.

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Key factors that impacted the analyses Santee Cooper performed of potential alternative plans included:

- Sites at which new NGCCs could be developed at the most favorable total costs, including consideration of natural gas pipeline access, delivered natural gas costs, and required upgrades to the electric transmission system;
- 2. Projections of the costs of construction, operation, and maintenance of potential new resources, pipelines, and electric transmission upgrades;
- Time periods required to plan, permit, procure, construct and place into service new generation facilities, electric transmission system improvements, and extensions and upgrades to natural gas delivery systems which range from three to ten years depending on the option being considered;
- 4. Forecasted costs of purchasing energy from solar projects, the profile of energy that would be provided from those projects on a must-take basis, variability of output of solar resources due to weather conditions, and initial analyses as to the amount of solar capacity Santee Cooper should include in the plan pending more detailed operational studies;
- 5. Estimates of costs that would be avoided by retiring existing coal units and time required for appropriate personnel transition processes;
- Expectations and assumptions regarding inflation and escalation of labor and material costs, environmental compliance costs, and delivered costs of coal and natural gas for the necessary long-term planning horizon (through the 2030s and beyond to consider cost implications of decisions to undertake resources that would have useful lives extending into the 2050s);
- 7. Long-term forecasts of customer demand for, and patterns of use of, electricity; and
- 8. Governmental policy regarding taxes or other means to constrain carbon emissions resulting from electricity generation.

nFront Consulting worked with Santee Cooper to review and assemble internally consistent assumptions with respect to the above factors and to perform comparisons of "Evaluated Costs" and other outcomes for numerous alternatives to arrive at the plan discussed below.

To be more specific, the assessment of alternative resource plans focused on balancing, in the most favorable and appropriate manner, the following metrics:

- 1. System operational reliability (a minimum requirement);
- 2. Projected required costs to be recovered from customers over the long-term;
- 3. Capital and debt requirements;
- 4. Competitive considerations—particularly the alignment of Santee Cooper's costs with those of surrounding utilities under various scenarios;
- 5. Potential impact on economy energy purchase opportunities;

- 6. Projected reduction in carbon emissions;
- 7. Impact on Santee Cooper's customers of various sensitivity/risk analyses;
- 8. Qualitative assessments of factors that are best considered by experienced judgment; and
- 9. Other key factors to be addressed as more information becomes available.

#### NEW POWER SUPPLY ROADMAP FOR SANTEE COOPER

Santee Cooper has identified a series of changes to its generation and transmission systems through this Study that are projected to result in more affordable and competitive service to wholesale and retail customers that rely on Santee Cooper for their electricity needs. In addition to making the future cost of electricity more affordable, the proposed plan can reasonably be expected to preserve the reliability of Santee Cooper's power supply and significantly reduce the carbon footprint of its generation fleet. The new direction will enhance the diversity of Santee Cooper's resource portfolio and thereby better position Santee Cooper to adapt and provide cost-effective and competitively priced service as conditions change in the future.

More specifically, Study results support restructuring Santee Cooper's power supply portfolio in the following ways.

- Improve Resource Diversity Progressively work to implement a much more diverse portfolio
  of resources in terms of types of energy sources used, types of fuels used in production of
  electricity, and development of demand-side programs, particularly targeting peak periods.
  Emphasis on resource portfolio diversity will allow Santee Cooper to provide more affordable
  and reliable service to customers under a wider range of future conditions.
- 2. Reduce Reliance on Coal and Increase Use of Sustainable Resources Increasingly incorporate more environmentally friendly resources in a cost-effective manner. This will involve replacing certain coal units on the system with renewable resources and clean, high-efficiency natural gas-fueled resources. Aggressively pursuing environmentally friendly resources will allow Santee Cooper to protect the environment while delivering reliable supply at the most affordable cost available.
- 3. Continue to Maximize Value to Customers of Purchases of Energy from Favorable Regional Energy Markets Maximize purchases of lower-cost energy from resources connected to surrounding transmission systems. Over the past several years, Santee Cooper has taken advantage of favorable market conditions to save customers tens of millions of dollars per year by purchasing energy, on a short-term basis, from natural gas-fueled resources connected to surrounding transmission systems. Maximizing benefits of this strategy will continue to make electric service more affordable for Santee Cooper's customers and minimize carbon produced in the production of electricity—a win for both customers and the environment. This strategy will complement other changes being made to reduce costs and lower carbon emissions. Santee Cooper can also consider locking in a certain level of these benefits into the future through multi-year energy purchases and other approaches. Study results indicate that purchasing energy products from the market is projected to be a more

cost-effective use of limited transmission system capacity to import power from other systems than long-term capacity purchases.

- 4. **Right-Size New Generation Resources -** Plan future generation resources in smaller increments with the flexibility to more closely match resource commitments to future loads. This strategy would assure Santee Cooper will not make greater investments than needed to reliably serve its customers.
- 5. Carefully Plan Generation Resources Considering Transmission System Impacts Develop generation plans that are also efficient from the perspective of the need for new transmission investment. This strategy would minimize costs for Santee Cooper customers and be beneficial from an environmental stewardship point of view. This strategy will also reduce implementation time for planned generation additions because, for certain generation resource alternatives, required upgrades to the transmission system(s) would extend the time to implement the alternative relative to other alternatives that would require more limited transmission system upgrades.

Overall, based on the Study results, proceeding in the directions described above can be expected to result in a portfolio of resources with more innovative technology, significantly greater operating efficiency, more diversity, and enhanced environmental performance with a lower carbon footprint. In implementing the above-described changes to its power supply portfolio, Santee Cooper should continue to balance the costs of new generation, electric transmission additions, fuel supply arrangements, and opportunities to collaborate with other utilities in developing new resources in finalizing resource development plans to achieve the most economic results. By doing so, Santee Cooper can accomplish the transition in a manner that provides more affordable and competitive service over the long term, while maintaining reliable service to customers.

### ROADMAP TO THE FUTURE

Importantly, Santee Cooper has built flexibility into the plan to adapt to dynamic future scenarios in order to provide affordable and competitively priced service to customers over the long term. Accordingly, the following roadmap can and would be modified as more information becomes available, additional studies are completed, discussions with potential partners progress, and needs of customers change.

Santee Cooper should move toward the future described above in an aggressive, yet responsible, manner consistent with providing affordable and reliable service to customers.

Accordingly, Santee Cooper's current road map to its power supply future includes the following changes to its generation portfolio.

# 1. Retire the Winyah Generating Station by 2027 using a Phased Retirement Approach

Study results favor retiring the Winyah Generation Station in the 2020s, rather than retiring Cross 1 and 2 in that period. Either coal retirement option would remove approximately 1,100 MW of generating capacity from Santee Cooper's system and therefore would necessitate adding approximately 500 MW of new resources to Santee Cooper's system before removing

that amount of coal-fired capacity from service. 9 Under the Base Case assumptions, Study results do not favor retiring all of Santee Cooper's coal-fired resources during the Study Period. 10

Implementing the required additional capacity by adding new natural gas combined cycle ("NGCC") generation capacity was determined to be the most attractive alternative. Assuming a decision to proceed with a new NGCC resource is made by early 2021, implementation of that resource can be expected to occur in 2027 considering time required for design, permitting, procurement and construction of the resource and related electric transmission system upgrades and natural gas system modifications. Accordingly, Study results favor retirement of Winyah in 2027. However, because Santee Cooper currently has more than the minimum capacity needed to serve customers load reliably, Study results indicate a portion of the coal capacity could be retired earlier so long as certain limited capacity additions are implemented.

Accordingly, a phased approach to retiring the Winyah Generation Station would produce the greatest benefit for customers. More specifically, two of the four generation units at the station would be retired from service in 2023, which will reduce the capacity available to serve load by approximately 580 MW.

To ensure reliable supply to customers without the two retired Winyah units, Santee Cooper is projected to need to:

- Install two quick-start dual-fueled combustion turbine generation units totaling approximately 100 MW of capacity to be used during peak load periods and to manage contingencies on the transmission system near Santee Cooper's load center;
- Purchase from parties connected to adjacent transmission systems approximately 30 MW of capacity during winter 2022/2023 or such other amounts as may prove cost-effective in the 2023-2036 period if loads are different than now forecast; and
- Adjust maintenance outage schedules or procure short-term market capacity in the spring and fall seasons to assure adequate reserves during those periods.

Retirement of the remaining two generation units at Winyah would then occur in 2027, which would reduce generation capacity available to serve load by approximately an additional 570 MW. Santee Cooper would coordinate the final timing of the retirement with development of approximately 500 MW of capacity from a high-efficiency NGCC generation unit. Santee Cooper has advised it intends to work with other utilities to explore the most effective ways to provide this additional NGCC capacity that best matches Santee Cooper's

<sup>&</sup>lt;sup>9</sup> The addition of capacity would be necessary to maintain reliability of supply and meet commitments to regional capacity sufficiency standards.

<sup>&</sup>lt;sup>10</sup> Study results indicate that if a substantial tax on carbon emissions or other legislation aimed at limiting carbon emissions from coal-fired or other generation plants were to be implemented, Santee Cooper should revisit costs and benefits of continuing to operate any remaining coal-fired facilities relative to other alternatives.

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capacity needs and allows customers to benefit from greater economies of scale that can be achieved by developing larger-sized generation units.

As the retirement of Winyah progresses, Santee Cooper should work to minimize expenditures at the plant and to productively and appropriately transition the approximately 200 employees at Winyah.

# 2. Add approximately 1,000 MW of renewable generation to the Santee Cooper system by 2024

Study results project substantial benefits to Santee Cooper's customers of implementing up to 1,000 MW of new photovoltaic solar capacity <sup>11</sup> on the Santee Cooper system. The projected benefits include both lower energy costs and carbon emissions. Moreover, additional studies should be conducted to assess whether additional solar capacity would be beneficial. The additional studies should include more in-depth analyses of potential operational and reliability issues (explained in more detail below) that may result from being contractually required to take or pay for all output available from more than 1,000 MW of solar capacity and the cost and effectiveness of solutions to those issues. Renewable generation technologies currently anticipated to have substantially higher costs than solar projects can be further investigated by Santee Cooper if conditions warrant in the future but were not specifically addressed in this Study.

Due to current tax laws and other factors, analyses indicate taxable entities that specialize in solar projects are projected to deliver output from solar projects at a lower cost than if Santee Cooper undertook the project itself. Accordingly, Santee Cooper anticipates that the preponderance of this 1,000 MW of renewable capacity would be obtained by entering power purchase agreements ("PPAs") with third parties. Under the subject PPAs, Santee Cooper can be expected to be obligated to pay for output available to be produced by the project, whether or not Santee Cooper chooses to take the output (often referred to as a "must-take obligation") and would be entitled to specified capacity, energy and other attributes of the project. The seller would be required to take all steps necessary to plan, finance and construct the solar project. Seller also would be responsible over the life of the project to accomplish and pay costs of owning, operating, maintaining, and decommissioning its project. To acquire up-to-date market intelligence on costs and timelines for solar projects, Santee Cooper has determined it would be prudent to issue a Request for Information and Indicative Pricing as a precursor to procurement processes to be conducted in 2020 and 2021.

As weather conditions can interrupt supply of energy from solar resources, Santee Cooper's New Resource Plan anticipates installation of the new solar resources at diverse locations relatively near its load center. Specifically, Santee Cooper is targeting multiple sites each with a relatively small proportion of the total capacity (25 MW to 150 MW) in the eastern third of the State to achieve geographic diversity of solar resources. As a rule of thumb, 7 to 10 acres of land are typically required per MW of solar generation capacity. Therefore, installing 1,000

<sup>&</sup>lt;sup>11</sup> Throughout this document, the term "solar" is used to refer to photovoltaic or PV solar projects. Unless specifically stated otherwise, all references to the project's capability is in terms of MWac at the project's delivery point on the Santee Cooper transmission system.

MW of solar capacity can be expected to require approximately 7,000 to 10,000 acres of property.

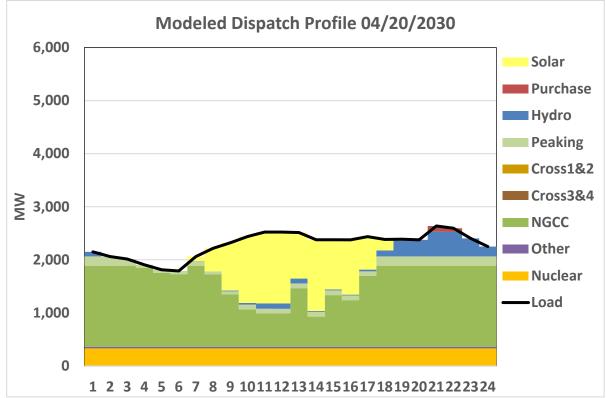
Solar capacity produces energy only as solar conditions allow. Santee Cooper anticipates that, unless energy storage devices are also added, very little energy would be produced by the solar resources during times of day in the winter in which customers' demand for electricity from the Santee Cooper system is highest. Accordingly, adding solar resources is not expected to reduce the amount of generation capacity Santee Cooper will need to reliably serve its customers' loads during the highest customer demand periods. Instead, the addition of solar resources is expected to mainly offset the amount of energy that would otherwise be produced from carbon-emitting generation resources.

Regarding operational and reliability issues mentioned briefly in the first paragraph of this section above, during hours of the day when output of solar resources normally would be highest, energy from 1,000 MW of solar capacity would represent approximately 20% to 30% of the total demand for energy of Santee Cooper's customers in peak summer and winter months. However, in minimum load months such as March, April, October and November, Santee Cooper's loads during hours of solar energy production are much lower, such that the amount of solar energy provided to the system would represent a much higher proportion of Santee Cooper's total load.

**Figure 4** below illustrates projected use of 1,400 MW of solar capacity on a peak load day in April 2030.<sup>12</sup> Note that the amount of solar energy (yellow shaded area) available represents a larger portion (approximately 50% or more) of Santee Cooper's peak demand of approximately 2,500 MW during the applicable hours. The green shaded area represents energy provided from NGCC resources needed to serve load in the hours before, during and after the hours in which solar energy is being provided to the system.

<sup>&</sup>lt;sup>12</sup> For this purpose, an NGCC resource of 1,081 MW and 1,400 MW of solar were assumed added to the system, with Winyah having been retired. Both of these values are larger than the optimal plan arrived at herein for Santee Cooper's system.





The issue illustrated by Figure 4 is that the NGCC resources represented by the green area are shown to operate very near their minimum output levels in the hours when solar output is highest. Dispatchable generation plants can be throttled back from full output, but only to specified minimum limits and at significantly reduced efficiency. If load were to be insufficient for those plants to operate at least at minimum output levels, Santee Cooper would either need to use less cost-effective resources during the day to serve its load or sell or dump excess energy into adjacent markets (even if the price is well below cost of the energy to Santee Cooper). Considering this analysis is based on projected 2030 load levels, the potential for Santee Cooper's loads to be lower than projected also has to be considered.

In the analysis underlying Figure 4, Santee Cooper modeled various amounts of solar capacity from 500 MWs up to 1,400 MWs. Based in part on that analysis, Santee Cooper has concluded that it could fully use the energy from up to 1,000 MW of solar capacity under a wide range of future load forecasts and manage with minimal additional costs various operational issues related to that use. However, before planning solar capacity amounts above 1,000 MW, Santee Cooper needs to conduct further analyses because those larger amounts of solar capacity could create greater operational issues that would need to be addressed.

Accordingly, at this time, based on this Study, Santee Cooper has targeted adding 1,000 MW of solar capacity by 2024. <sup>13</sup> As Santee Cooper performs additional simulations, considers advanced storage devices as technology in that area improves, and learns more about future load levels, installing additional solar resources may well prove advantageous for its customers after taking into account the costs of addressing all issues that could adversely impact system reliability, quality of power delivered, or economical use of other resources.

# 3. Progressively add 200 MW of energy storage devices to Santee Cooper's system

Santee Cooper has initially targeted the installation of energy storage devices that would by 2028 provide approximately 200 MW of capacity during periods of peak customer demand.

Capabilities and costs of energy storage devices are expected to improve significantly over the next several years. By phasing in the addition of storage devices, Santee Cooper intends to capture the greatest benefit for its customers at the most reasonable cost available.

Storage devices can be helpful in managing:

- Abrupt early morning changes in demand of Santee Cooper's customers during the winter season;
- Early evening peak customer demands during summer months;
- Abrupt change in the output of solar facilities as weather conditions change;
- Use of energy produced by solar resources in minimum load periods; and
- In certain cases, abrupt changes in demand of certain large customers

Colocation of battery and solar capacity makes sense for many reasons including economy of project development and operational considerations. Battery resources are often used to store energy produced by solar resources before the energy is delivered by the project to the electric system. On an integrated electric system like Santee Cooper's, storage resources can also be implemented in a manner in which conventional resources are utilized to produce additional energy for the battery to store and discharge later. Either way, energy can be released from storage resources later to manage fluctuations in solar plant output, regulate balance of energy demand and supply, offset high variable cost generation with cheaper stored energy, and meet loads during highest load periods.

Consideration must also be given to how the deployment of emerging technologies, such as battery storage, into the power system may introduce additional safety concerns for employees, emergency responders, and the general public. Santee Cooper intends to deploy utility scale battery storage systems in a way that protects the safety of employees, emergency responders, and the general public. While lithium-ion batteries are currently the leading technology for utility scale battery storage applications (the same technology used in laptop computers, tablets, and cellular phones), the specific technology selected for

<sup>&</sup>lt;sup>13</sup> Utility scale solar capacity resources typically can be added within a two- to three-year period. Obtaining more information reduces risks of over committing to solar resources while allowing Santee Cooper to gain further information from planning, procuring, installation and operation of the planned 1,000 MW.

deployment will be assessed for its safety risk and will include safeguards such as active cooling and thermal management, active fire suppression, and remote monitoring.

# 4. Progressively implement programs that would reduce the loads of customers during peak demand periods, particularly in the winter

Santee Cooper has initially targeted demand-side programs to meet approximately 150 MW of customer winter peak load by 2027 and growing to 200 MW by 2037.

The planned programs would allow Santee Cooper to control key loads or incentivize customers to reduce demand for electricity during the winter periods of highest demand, which typically occur in the hour ending 8 am from December through February.

Examples of these programs are demand reduction through conservation, conservation voltage reduction, direct load control of residential and commercial equipment, and critical period pricing.

Central Electric Power Cooperative comprises a very large proportion of Santee Cooper's load. Therefore, coordination of these efforts with Central, particularly targeting the winter peak demand periods, will be very important.

# 5. Further Evaluate Retiring the Cross Units

Should the Federal government impose a modest to significant tax on utilities' emissions of CO<sub>2</sub>, Santee Cooper would be able to significantly mitigate the impact of that tax on its customers by retiring Cross Generating Station.

Under the Base Case set of assumptions used in this Study, assuming retirement of either just Cross 1 & 2 or all four units at Cross Generating Station would increase projected costs to Santee Cooper's customers and reduce the fuel diversity of Santee Cooper's power supply portfolio.

Cross 1 & 2 are projected to be used very infrequently to produce energy and therefore produce very low amounts of carbon each year. Essentially, Cross 1 & 2 provide low cost capacity necessary to meet load during the highest demand periods of the year as well as when other generation units are out of service for maintenance, which allows Santee Cooper to defer investment in generation capacity that would be needed without Cross 1 & 2. For these reasons, planning to retire Cross 1 & 2 is not currently projected under the Base Case assumptions to result in lower costs to Santee Cooper's customers.

# 6. Add High Efficiency NGCC Capacity in Increments Closely Matched to Peak Load Requirements

Due to the retirement of the Winyah Generating Station coupled with future growth in customer peak demand for electricity, Santee Cooper is projected to need additional generation capacity<sup>14</sup>. Study results indicate it would be most attractive if this projected need for capacity is met by adding capacity increments of approximately 500 MW from high-efficiency NGCCs and 350 MW from high-efficiency NGCTs.

<sup>&</sup>lt;sup>14</sup> As noted above, the 1,000 MW of planned solar capacity is not expected to provided energy to serve Santee Cooper's customers during the hours when peak demand occurs.

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Santee Cooper has advised it believes it will be successful in working with other utilities to achieve the economies of scale associated with larger-size generation units in the 1,000 MW size range. Participating with others in the development of future NGCC resources should allow Santee Cooper to better match the total capacity of its power supply portfolio with the capacity required to reliably meet winter and summer peak demands of its wholesale and retail customers. Santee Cooper also expects to identify more favorable fuel supply arrangements by working with other utilities in the area.

Decisions regarding additions of natural gas capacity other than the initial increment planned for 2027 can be made several years from now. Accordingly, Santee Cooper's future planning efforts should continue to weigh options for capacity assumed to be added in the 2030s for purposes of this Study.

# 7. Continue Maximizing Benefits of Energy Purchases from Surrounding Markets

Favorable market conditions currently present Santee Cooper with opportunities to purchase energy from natural gas-fueled resources connected to surrounding transmission systems. Those opportunities can be expected and are projected to be reduced as markets change in future years. Maximizing benefits of this strategy in the interim will continue to make electric service more affordable for customers and minimize carbon produced in production of electricity—a win for the Santee Cooper customers and the environment.

# 8. Work together with Surrounding Utilities to Find Mutual Benefits for Customers

Santee Cooper has advised it plans to seek opportunities to work with other utilities to explore various alternatives for mutual benefit to its customers, ranging from coordination of system dispatch, developing new generation at more favorable economies of scale, more favorable natural gas supply, capacity and energy transactions, and other efforts to reduce operational costs.

# PROJECTED KEY OUTCOMES, KEY ASSUMPTIONS AND SENSITIVITY ANALYSES

The changes to Santee Cooper's resource plan described above have been structured to result in improved portfolio diversity, more affordable electricity for Santee Cooper's customers, and significant reductions in carbon emissions under a wide range of assumptions about future costs and conditions.

The resource plan changes will increase flexibility to successfully adapt as the following conditions change:

- Government policy regarding carbon emissions;
- Growth or reduction in customers' demand for electricity and changes in patterns of customers' use of electricity;
- Market conditions impacting availability of attractively priced capacity and energy from power suppliers connected to adjacent transmission systems; and
- Costs of fuel commodities and fuel transportation options.

The Base Case and Sensitivity Analyses assumptions used represent reasonable, internally-consistent projections of future conditions under various future scenarios. Assumptions used in the Base Case represent current or planned conditions. The assumptions used for Sensitivity Cases are also potential

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scenarios that could occur. Sensitivity Analyses assumptions were developed in key areas to test the extent to which a significantly different assumption would impact Santee Cooper's key near term resource decisions.

For instance, the current futures market reflects the view that natural gas prices will remain very attractive until at least the late 2020s. Accordingly, the Base Case assumption regarding prices for the natural gas commodity was based on the futures market price levels through the late 2020s as of April 2019. Moreover, the Base Case assumption assumes attractive natural gas price levels will continue through at least the end of the Study Period, 2047. A very long-term period of attractive natural gas prices is consistent with the latest "High Technology" fundamental forecast published by the Energy Information Agency ("EIA") in is 2019 Annual Energy Outlook ("AEO"). However, because the natural gas price levels assumed could impact resource decisions, two other higher price scenarios were used to test the impact of those scenarios on the near-term decisions reflected in Santee Cooper's plan.

The ranges of assumptions considered in four key areas were as shown in **Figure 5** below. Overall, none of the Sensitivity Cases analyzed would alter decisions to be made by Santee Cooper over the next few years. However, if future conditions align with certain Sensitivity Analyses assumptions, Santee Cooper's New Resource Plan can and should be adapted. For instance, imposition of a carbon tax would cause Santee Cooper to re-evaluate retirement of the Cross Generating Station, or portions thereof, in favor of additional natural gas-fueled and/or renewable resources.

Figure 5 – Overview of Certain Key Assumptions					
Assumption	Base Case Assumptions	Sensitivity Case Assumptions			
Natural Gas Commodity Price Levels	Study Period prices average just under \$3/MMBtu in 2018\$, starting lower in the 2020s in line with current futures market prices and increasing slightly in real terms thereafter	From 2026 through 2030, prices would increase from the Base Case levels up to either (i) levels projected based on the AEO Reference Case forecast or (ii) levels 2 times the Base Case price forecast			
Available Interstate Pipeline Options for Natural Gas Supply	Supply available via Transco <sup>15</sup> or the proposed Atlantic Coast Pipeline ("ACP")	Supply only available from Transco			

<sup>&</sup>lt;sup>15</sup> "Transco" refers to the Transcontinental Gas Pipe Line. Deliveries from Transco to other pipelines, regional pipeline networks, or laterals undertaken by Santee Cooper would occur either in Transco Zone 4 or 5.

Figure 5 – Overview of Certain Key Assumptions					
Assumption	Base Case Assumptions	Sensitivity Case Assumptions			
Carbon Tax Imposed?	Current status of no carbon tax continues throughout the Study Period	Carbon tax of \$15/ton effective in 2027 increasing each year by \$5/ton, capped at \$80 per ton of carbon emissions by 2040			
Cost of Solar Energy Delivered	\$25/MWh	\$35/MWh			

Costs that could be avoided by retiring the Winyah Generating Station ("Winyah") and Cross Generating Stations ("Cross"), or portions thereof, and cost and performance of those generation facilities if operations continue were provided by Santee Cooper from budgets and plans prepared by Santee Cooper. As explained above, Study results favor retirement of two Winyah units in 2023 and the remaining two units in 2027. If regulatory changes, maintenance requirements for the units, or other factors place upward pressure on long-term costs of continuing to operate the Cross units than now assumed, or changes in technology or other factors lower projected costs of alternative resources, future planning efforts may identify benefits to retiring Cross 1 and 2 or even the entire Cross Generating Station.

Uncertainties as to the costs of constructing new natural gas generation units and non-fuel operating costs of those units were not deemed significant enough to impact Santee Cooper's near-term decisions. Further consideration of site-specific electric transmission upgrades, natural gas supply arrangement costs and input from potential generation development partners may impact site selection and exact timing of resource additions.

### **ADAPTABILITY OF THE PLAN**

Key management direction regarding essential characteristics of any new plan developed through this Study emphasized that any plan developed must be adaptable as future conditions change from current conditions and from any single set of conditions that may be assumed. That is, the success of the plan, from Santee Cooper customers' view, should not depend on a single set of conditions occurring in the future. In other words, the plan should be tested to ensure the impact of different future conditions on Santee Cooper's costs would be within a competitive range taking into account the flexibility Santee Cooper would have to modify the plan in light of conditions being different than assumed at the time the plan was developed.

The Santee Cooper New Resource Plan described above meets that very important objective. As explained in more detail in Appendix A, the proposed plan would have the flexibility to be adapted in the ways described in **Figure 6** in response to conditions being different than assumed under the Base Case assumptions. By so adapting the plan, Santee Cooper could mitigate the impact of the change in circumstances to maintain competitive prices to customers.

Figure 6 – Potential Changes to the Plan to Adapt to Different Circumstances

# **Flexibility to Changing Conditions**

Potential Changes in Conditions	Retire Cross 1 & 2	Retire Cross 3 & 4	Source of Natural Gas for New NGCCs	Change Mix or Use of Resources	Change Schedule of Resource Additions	Capacity Purchases from Others
Carbon Tax Imposed	✓	✓		More solar / storage		
Higher Customer Demand					Advance / increase resources and DSM	Solicit capacity purchases
Lower Customer Demand	✓				Delay new resources	
ACP Cancelled or Indefinitely Delayed			Supply from Transco			
Lower Prices for Economy Energy from Adjacent Systems				Reduce use of coal units		Increase energy purchases
Very High natural gas ("NG") Prices				Reduce NG use by adding solar & storage and increasing coal unit production		

As shown in **Figure 7** below, the New Resource Plan, relative to Santee Cooper's existing portfolio, is projected by 2033 to:

• Reduce Santee Cooper's reliance on coal from 52% to 30% of total energy needed for customers, a reduction of approximately 42%;

- Increase total energy supplied from renewable resources from 5% to 14% of Santee Cooper's total load, almost a three-fold increase<sup>16</sup>; and
- Increase use of natural gas resources (including economy energy purchases) from 33% to 46%, an increase of almost 40%.

Figure 7 - Santee Cooper's New Resource Plan - 2033 Energy Mix

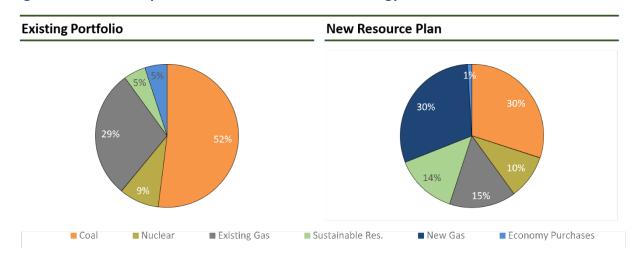
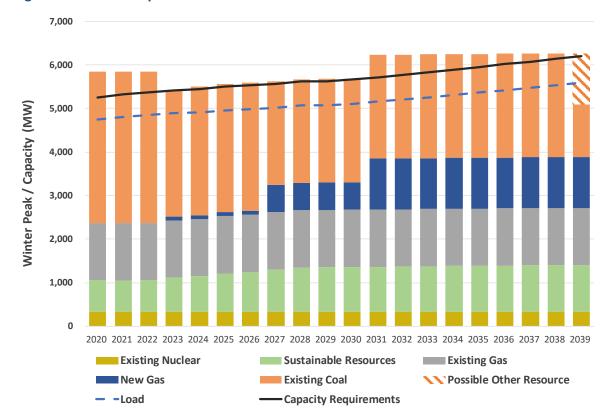


Figure 8 below depicts the projected load versus resource capacity reflected in the New Resource Plan. As shown in the chart, the retirement of a portion of Winyah by 2023 nearly brings the Santee Cooper system into balance, though doing so requires a small amount of additional capacity over 2023-2026. Beginning 2027, the retirement of the remainder of Winyah is replaced with significant new NGCC capacity. These capacity changes are supplemented with demand-side resources and storage implemented primarily over 2020-2030 and a further potential NGCC unit in approximately 2031. In the out years of the horizon shown in Figure 8, a portion of the Cross plant is shown as potentially replaced by some other resource, conveying that Santee Cooper intends to continue evaluating the potential retirement of additional coal units in favor of lower cost and more sustainable resources.

<sup>&</sup>lt;sup>16</sup> Santee Cooper's hydroelectric, solar, and waste-to-energy carbon-free resources. Solar resources would increase by more than 500%.

Figure 8 – Santee Cooper's New Resource Plan – Load v Resources



**Figure 9** below depicts Santee Cooper's projected load versus capacity resources under the New Resource Plan but with adjustments to capacity amounts to perfectly match resource capacity to load requirements in all years. This view is intended to convey Santee Cooper's intent to work toward more closely aligning resources and load in the future, particularly by focusing on smaller resource increments, including storage and demand-side resources, and entering into strategic partnerships with surrounding utilities to jointly develop resources.

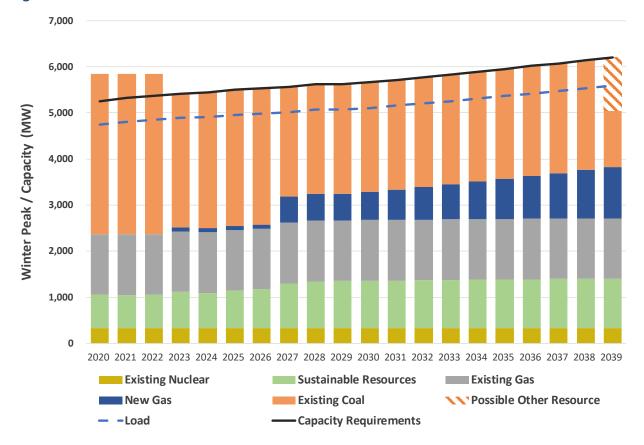


Figure 9 – New Resource Plan – Exact Load v. Resource Balance

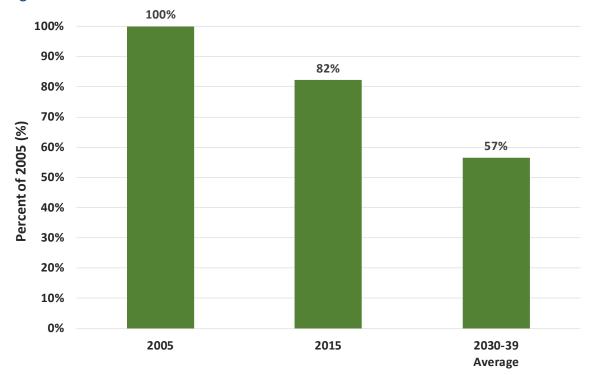
Under the New Resource Plan, carbon emissions would be substantially less on average during the 2030s than in 2005 and 2015, which are the two years most often referenced as comparative base years in discussions concerning carbon-limiting legislation. As shown below in **Figure 10**, carbon emissions associated with electricity supplied to Santee Cooper's customers are projected to be 43% less than in 2005 and 30% less than in 2015, even though by the 2030s, Santee Cooper's total energy production is projected to be 4% and 10% higher than in 2005 and 2015, respectively.

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Figure 10 – Reductions in Carbon Emissions under the New Resource Plan



#### **C**ONCLUSIONS

Please see the section titled **Conclusions and Observations** on Page 2 of the Executive Summary for a discussion of the conclusions reached through this Study as to Santee Cooper's new power supply direction, resource roadmap and specific changes that should be made to Santee Cooper's power supply portfolio in the 2020s.

#### **APPENDICES**

**2019 RESOURCE PLANNING STUDY** 

## APPENDIX A **2019** Resource Planning Study

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#### APPENDIX A - ANALYTICAL PROCESS AND RESULTS

#### INTEGRATED ANALYTICAL APPROACH

This resource planning study has included the following multiple analyses of a variety of topics critical to Santee Cooper's decisions regarding future resource plans.

- 1. Operational and reliability issues that may result from installing large (1,081 MW) NGCC generation units and sizable levels of solar capacity;
- 2. Sites that would be the most cost-effective for development of new NGCC generation plants;
- Transmission issues that would arise from retiring the Winyah or Cross Generating Stations and solutions to those issues in terms of location and characteristics of new generation and transmission system upgrades; and
- 4. Resource expansion optimization analyses for multiple coal resource retirement scenarios

These four analyses have been performed in an integrated and coordinated, and somewhat iterative, manner. For instance, initial results of resource expansion options were used to formulate the analysis of operation and reliability issues and of siting options. Then, results of the operational analysis and investigation of siting options impacted the amount of assumed solar capacity and sites assumed available for NGCC and NGCT generation units in subsequent resource expansion analyses. Throughout the process, analytical results were reviewed by the planning team and with management, and qualitative considerations based on experience, judgement, and management direction and input were incorporated into further analytical efforts.

Overall, the final resource expansion analysis integrated all of the information obtained through the other analytical processes into an analysis of power supply portfolio alternatives to determine least-cost resource plans for multiple options for retirement of existing Santee Cooper coal-fired resources. The term integrated is used to convey that the analyses were performed in a manner that interim results and conclusions from one analysis were used in other analyses. In some cases, conclusions were derived from an analysis prepared based on assumptions that were then updated as the planning effort proceeded.

More specifically, the following coordinated and integrated analyses underlie the determination of Santee Cooper's new power supply direction.

#### Operating Considerations Analysis

Simulation of the Santee Cooper generating fleet was performed to assess impacts of retirement and replacement of Winyah with a large natural gas-fired combined cycle resource and significant installation of solar resources on system operations and reliability.

#### NGCC Site Analysis

Multiple sites within the Santee Cooper territory identified for potential development of generation plants were evaluated. The NGCC Siting analysis considered and balanced the

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incremental costs associated with developing a large NGCC unit (1,081 MW) at several sites.<sup>17</sup> The analysis was used to identify the most favorable sites for development of resources. This analysis compared total costs for the candidate sites for the cost items that vary among the sites, including:

- Electric transmission system upgrades and generating plant interconnection;
- Firm natural gas transportation costs, including costs to purchase firm transportation service from pipelines and costs to extend pipeline laterals to the site; and
- Basis price difference for natural gas delivered to the sites, including variable natural gas transportation charges.

#### Transmission System Analysis

Santee Cooper's transmission planning team prepared analyses to identify reasonable allowances for transmission system upgrades associated with various sites and to determine solutions to system issues that would be created by retiring a portion of the Winyah Station. nFront Consulting independently reviewed key transmission planning processes and results. Based on that review, nFront concluded estimates of required transmission upgrades for various alternatives were reasonable for purposes of this Study.

#### Resource Expansion Analysis

Resource expansion analyses were performed utilizing an industry-standard approach to evaluate and identify least-cost generation expansion plans under a Base Case set of assumptions for multiple coal resource retirement options. The lowest cost plans for the coal retirement options were compared to determine the most favorable retirement option and the least-cost expansion plan for the specific retirement option.

Projected power supply costs for each plan were compared to projected power supply costs for Santee Cooper's existing portfolio to identify projected effects of the alternative resource plans on the costs to be recovered from Santee Cooper's customers.

As is typical with resource planning studies, the power supply costs considered in this analysis focused on annual and cumulative changes in certain categories of Santee Cooper costs impacted by the alternative plans being evaluated. More specifically, changes in the following categories of power supply costs were considered for the changes in production, transmission, and natural gas plant associated with each alternative:

- 1. Investment, including interest during construction, and related debt service;
- 2. Use of the Capital Improvement Fund for capital costs or debt service/retirement;
- 3. Costs of capital additions and environmental additions for existing resources;
- 4. Decommissioning costs for modeled coal resource retirements;

<sup>&</sup>lt;sup>17</sup> The siting analysis was prepared to gain an understanding of the economics of various sites, irrespective of the capital costs of the NGCC equipment. Subsequently analyses focused on smaller NGCC resources in order to better balance supply and demand and achieve greater flexibility.

- 5. Natural gas transportation costs;
- 6. Fixed and variable O&M costs;
- 7. Costs related to Santee Cooper's contract to provide gypsum to a third party;
- 8. Emissions related costs; and
- 9. Fuel and purchased energy costs.

Santee Cooper's portfolio was structured to serve Santee Cooper retail load, retail loads of wholesale customers, and wholesale sales under existing contracts. Consistent with Santee Cooper's role as a load-serving entity, not a power marketer, the portfolio was developed without considering sales of energy into markets or under bi-lateral contracts with prospective parties. Therefore, the plan developed based on this Study is not dependent on receipt of revenues from market sales (revenues from market sales would improve the economic results).

Purchases of energy from third parties interconnected with adjacent transmission systems were considered. Sensitivity Analyses confirm conclusions reached through this Study would not be different if market changes were assumed to reduce price or availability of economy energy assumed purchased from third parties.

#### Sensitivity Analyses

Least-cost resource plans identified through the Resource Expansion Analysis were evaluated under a range of assumptions for natural gas prices, power prices, availability of market purchases, access to natural gas pipelines, CO2 regulation, and levels of Santee Cooper load to assess the robustness of the identified plans to changing market conditions and to consider flexibility of the plans to be adapted to changing circumstances. Sensitivity Analyses were prepared for multiple coal retirement options to assure the changes in assumption assumed in the Sensitivity Analyses did not change conclusions concerning the most favorable coal retirement option.

Each of these analyses and the results are described in more detail in the following sections of this Appendix A.

#### **OPERATING CONSIDERATIONS ANALYSIS**

Early in the process to evaluate resource plans for Santee Cooper, opportunities to retire existing coal-fired resources and install new natural gas-fired combined cycle resource and solar resources were identified as likely components of resource plans that could lower costs and reduce emissions for Santee Cooper. While opportunities were identified, questions were also raised as to how such resource decisions may affect the reliable and economic dispatch of the Santee Cooper generating fleet. To help answer these questions, nFront Consulting assisted Santee Cooper's staff in conducting a dispatch simulation of the Santee Cooper generating system to assess how the addition of new resources and retirement of existing resources might affect Santee Cooper's ability to reliably and most economically serve customer load with its generation fleet.

#### Approach for the Operating Considerations Analysis

A dispatch simulation was prepared using Santee Cooper's existing generation dispatch and commitment simulation model, GenTrader, which is used by Santee Cooper to prepare its long-term budgets for fuel and power cost. The GenTrader model is an hourly chronological dispatch simulation model licensed by Power Costs, Inc. (PCI) that is widely used by electric utilities throughout the U.S. for planning and operating studies. To conduct the Operating Considerations Analysis, multiple example resource portfolios reflecting significant changes to the Santee Cooper supply configuration were evaluated using GenTrader to simulate the impact that each portfolio could have on several measures of Santee Cooper operations.

For the GenTrader simulation, the Santee Cooper system was modeled as a stand-alone system, with Santee Cooper resources dispatched to meet the Santee Cooper load plus wholesale sales obligations, and with limited access to hourly economy transactions with neighboring electric systems. Quantities of economy energy purchases and sales were limited to hourly maximum import and export quantities based on the estimated available transfer capability of the electric transmission system provided by Santee Cooper.

Example resource portfolios were developed for the Operating Considerations Analysis based on natural gas combined cycle (NGCC) options previously identified by Santee Cooper and assuming a range of utility-scale solar implementation ranging in size from 500 to 1500 megawatts. The example resource portfolios were not developed to depict optimum resource plans but were instead designed to evaluate the impact that large resource additions may have on reliable and economic Santee Cooper operations. The following resource portfolios were evaluated for the Operating Considerations Analysis.

- As-Is Existing Santee Cooper resource portfolio
- Portfolio 2 Rainey 2x1 NGCC repower (no changes to other existing Santee Cooper resources)
- Portfolio 3 Rainey 2x1 NGCC repower, new 2x1 H-class NGCC, retire Winyah coal resources
- Portfolio 4 New 2x1 H-class NGCC, retire Winyah coal resources
- Portfolio 5 500 megawatts of solar, Rainey 2x1 NGCC repower, new 2x1 H-class NGCC, retire
   Winyah coal resources
- Portfolio 6 1000 megawatts of solar, Rainey 2x1 NGCC repower, new 2x1 H-class NGCC, retire Winyah coal resources
- Portfolio 7 1500 megawatts of solar, Rainey 2x1 NGCC repower, new 2x1 H-class NGCC, retire Winyah coal resources

Tabulated system-level operating results for the simulated dispatch included the following metrics.

- Unserved energy Quantity of load that cannot be served under a given simulation; high levels are potentially indicative of generating resources being unavailable to serve load or being restricted due to operating limitations.
- Dump energy Quantity of generated energy that is surplus to load and sales; high levels are
  potentially indicative of limited flexibility of generating unit cycling or limited turn-down.

- Market purchases Simulated quantity of economy energy purchased from the market;
   differences between cases could be indicative of resources not being available to serve load.
- Market sales Simulated quantity of economy energy sold to the market; differences between cases could be indicative of limited flexibility of generating unit cycling or turndown.
- Operating reserve deficiency Measure of the quantity of required operating reserves that are not available from simulated committed generating resources and quick-start resources; potentially indicative of limited generating resource operating flexibility or simulated restrictions on resource commitment.<sup>18</sup>

In addition to the tabulated system-level operating results, performance metrics for individual major generating units were compiled and reported, including output factors, hours utilized, and average run time.

#### Results of the Operating Considerations Analysis

In general, the Operating Considerations Analysis did not identify any significant issues with respect to system or resource reliability for the portfolios evaluated, with the exception that large quantities of solar installations merit further consideration and evaluation. More specifically, as depicted in **Figures A-1 and A-2**, below, the following observation can be made for the Operating Considerations Analysis.

- Market purchases and sales appear to follow trends that would be expected given improvements to the Santee Cooper generating portfolio (e.g., market purchases decline as lower cost NGCC resources are added to the portfolio, and market sales increase as NGCC and solar resources are added).
- Dump energy is zero for Portfolios 1 through 5, is very small for Portfolio 6 (0.01%), but is more significant (0.4%) for Portfolio 7 (when solar resources are increased to 1500 megawatts). This result indicates that at higher level of solar implementation, the GenTrader simulation encounters difficulties meeting load plus operating reserves within the operating limits of the available generating resources (even given opportunities to sell surplus generation). This result indicates that further, more detailed evaluations may be required to identify operating issues that may result from large amounts of solar capacity and to identify costs associated with potential solutions to those issues.
- The quantity of unserved energy is relatively small and is generally consistent across the portfolios that include NGCC resources and appears unaffected by the quantity of solar installed.<sup>19</sup> The relatively higher levels of unserved energy when NGCC resources are installed is likely indicative of the modeled large size for these resources (1081 megawatt NGCC), and

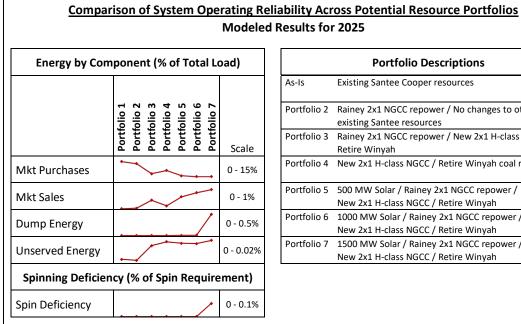
<sup>&</sup>lt;sup>18</sup> The GenTrader model was configured to model levels of operating reserves (spinning and quick start reserves) sufficient to meet the requirements of the VACAR reliability area, plus operating reserves required to back-up non-firm economy purchases and solar generation.

<sup>&</sup>lt;sup>19</sup> In actual practice, Santee Cooper is not likely to experience *unserved energy* conditions except during the most extreme system emergency conditions since Santee Cooper would likely be able to purchase power from neighboring electric systems to manage most generating resource contingencies.

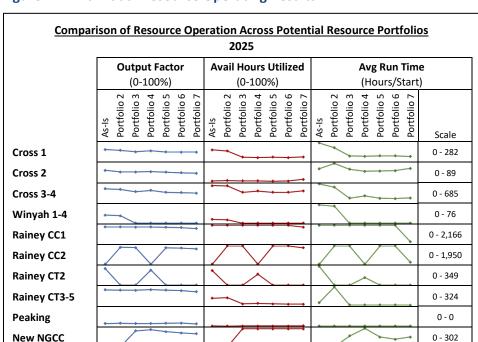
simulated results for unserved energy would likely be lower if the GenTrader model were to be configured to simulate a realistic operation and switching between 1x1 and 2x1 NGCC operation for these resources.

- Operating reserve deficiencies are zero for all portfolios except for Portfolio 7. Under Portfolio 7, with 1500 megawatts of solar being added, the GenTrader simulation encountered difficulty meeting the total operating reserve obligations, which includes operating reserves to provide back-up for intermittent solar generation. While the operating reserves deficiency is small and could possibly be addressed in actual practice through system operating schemes or purchases of operating reserves, the results nonetheless indicate that further, more detailed evaluations may be required to identify operating issues that may result from large amounts of solar capacity and to identify costs associated with potential solutions to those issues.
- The operating results for individual generating units did not indicate unexpected or unusual operation across the modeled resource portfolios. As might be expected, coal resource operation declines with the addition of new NGCC resources, and further declines with solar resource additions. Additionally, NGCC resource operation declines with the addition of solar resources. However, no single resource was projected to have operation that would adversely affect system reliability.
- As the amount of solar capacity was assumed to increase above 1,000 MW of solar capacity, the operational analysis indicated potential economic impacts on dispatch and commitment decisions that may not be adequately addressed in the resource expansion analysis. Based on that result, experience and judgement, installations of solar capacity were limited to 1,000 MW in subsequent analyses of specific resource expansion alternatives.

Figure A-1: System Level Operating Results



As-Is	Existing Santee Cooper resources
Portfolio 2	Rainey 2x1 NGCC repower / No changes to other
	existing Santee resources
Portfolio 3	Rainey 2x1 NGCC repower / New 2x1 H-class NGCC /
	Retire Winyah
Portfolio 4	New 2x1 H-class NGCC / Retire Winyah coal resources
Portfolio 5	500 MW Solar / Rainey 2x1 NGCC repower /
	New 2x1 H-class NGCC / Retire Winyah
Portfolio 6	1000 MW Solar / Rainey 2x1 NGCC repower /
	New 2x1 H-class NGCC / Retire Winyah
Portfolio 7	1500 MW Solar / Rainey 2x1 NGCC repower /
	New 2x1 H-class NGCC / Retire Winyah



**Figure A-2: Individual Resource Operating Results** 

#### **NGCC SITING ANALYSIS**

**New Solar** 

An initial phase of modeling potential new resource portfolios for Santee Cooper involved the identification and assessment of potential power plant sites. As previously discussed, Santee Cooper has identified the potential need to retire portions of its coal-fired generating fleet and install new NGCC resources to replace the retired resources. Installation of new NGCC resources will require that Santee Cooper add electric transmission facilities and secure firm fuel supply to assure these resources can meet the firm capacity needs of Santee Cooper. Additionally, optimum siting of new NGCC resources can alleviate the need for electric transmission system upgrades that may otherwise be required following the retirement of the existing Santee Cooper coal-fired resources.

N/A

The following describes an analysis of potential generating resource sites to identify the more attractive sites for continued evaluation as part of the Santee Cooper resource planning efforts. The analysis evaluated and compared the incremental costs for each site to provide firm electric service and secure firm fuel supply sufficient to develop a new 2x1 H-class NGCC at each site. Costs evaluated include incremental costs for Santee Cooper electric transmission system upgrades, electric transmission system interconnection, purchase of firm point-to-point electric transmission service from others (if needed), construction of a natural gas pipeline lateral (where appropriate), projected costs for firm natural gas transportation service, and projected differences in natural gas commodity prices. Incremental site costs were projected for a twenty-five-year Study Period beginning 2027.

#### **Potential Sites**

Through its resource planning efforts, Santee Cooper has identified several potential sites for future generating resource development. These sites could include expansion of existing Santee Cooper

# APPENDIX A 2019 Resource Planning Study ANALYTICAL PROCESS AND RESULTS Page 40

sites, redevelopment of existing Santee Cooper sites, and development of new sites. The NGCC Siting Analysis was conducted to economically screen the potential sites and identify those sites that present the most likely alternatives for future development for additional evaluation in the Resource Expansion Analysis.

The following sites have been identified by Santee Cooper as potential sites for development of new NGCC resources.

#### Existing Rainey Power Plant

The existing Rainey Generating Station has sufficient room to accommodate a new 2x1 H-class NGCC. Natural gas supply could potentially be provided through a new pipeline lateral connected to Transco Zone 4. Electric transmission at the Rainey site is limited. Resolving these limitations may involve significant cost.

#### Existing Winyah Power Plant

The existing Winyah Generating Station site could accommodate a new 2x1 H-class NGCC within the existing footprint for the plant. The new unit could be interconnected with only minor reconfiguration of the existing transmission facilities once the existing coal facilities are retired and disconnected from the Santee Cooper electric system. Siting a new NGCC unit at Winyah could eliminate the need for any new electric transmission system upgrades, but building a new natural gas pipeline lateral to the Winyah site and/or purchasing new firm natural gas service through Dominion Energy Carolina Gas Transportation (Dominion Carolina Gas) could be expensive.

#### Existing Cross Power Plant

The existing Cross Generating Station site could accommodate a new 2x1 H-class NGCC within the existing footprint for the plant. However, this prospective new unit would require an upgrade of existing transmission facilities, costs to build a new natural gas pipeline lateral to the Transco pipeline or to the ACP, and the cost of firm gas transportation service over the major pipeline in question. The relative costs of these issues combined to make this site obviously less attractive than other potential sites. In addition, given the existing Cross plant, the resulting concentration of generation at this site was viewed as an undue risk. Hence, this site was not analyzed as part of the Siting Analysis.

#### Pee Dee Site

The Pee Dee site is an undeveloped site owned by Santee Cooper. The site is in close proximity to the Santee Cooper load, which would alleviate the need for certain transmission system upgrades. The Pee Dee site is also in close proximity to the termination of the Atlantic Cost Pipeline (ACP) that is currently under development. Santee Cooper is projected to secure natural gas commodity prices through the ACP that are lower than some other options; however, firm reservation fees on the ACP are projected to be higher than other options available to Santee Cooper. Natural gas supply from ACP may be through a new lateral pipeline interconnection or through Dominion Carolina Gas.

#### Near Summer Site

The Near Summer site depicts an opportunity to develop a new NGCC site near the existing Summer Power Plant. While not fully eliminating costs for transmission upgrades, siting near Summer would take advantage of Santee Cooper transmission system upgrades that were developed as part of the cancelled Summer 2 and 3 nuclear units. Natural gas could be supplied through a new lateral pipeline interconnection with Transco Zone 5 or through Dominion Carolina Gas. A high-level review of the area by Santee Cooper has identified more than one potential NGCC site that could be developed in the area.

#### Jasper Site

Santee Cooper's Jasper site is a potential site for development of a new NGCC. The Jasper site would have access to relatively low-cost firm natural gas service through Dominion Carolina Gas. However, siting a new NGCC at Jasper is expected to result in very high costs for upgrading the Santee Cooper electric transmission system.

#### **Incremental Site Cost Assumptions**

The NGCC Siting Analysis was prepared by estimating incremental costs for developing a new NGCC for each of the sites identified above. Evaluated costs include incremental costs for electric transmission system upgrades and interconnection, firm point-to-point electric transmission service, construction of natural gas pipeline laterals, natural gas firm transportation service, and differences in natural gas commodity prices. Assumptions utilized to develop these costs for the NGCC Siting Analysis are described below.

#### **Electric Transmission Costs**

Costs for Santee Cooper electric transmission system upgrades are expected to be significant with the retirement of any of the existing Santee Cooper coal resources. The NGCC Siting Analysis assumed that the existing Winyah coal-fired resource will be retired, which will trigger the need for significant Santee Cooper transmission system upgrades if no new resources are added near the load center served by the Santee Cooper system. Based on load-flow and facility costs analyses prepared by Santee Cooper, as described in more detail in the following discussion of the Transmission System Analysis, costs for transmission system upgrades would total approximately \$400 million (in 2019 dollars). However, if Santee Cooper decides to build a new NGCC resource at the Winyah or Pee Dee sites to replace the retired Winyah resources, the \$400 million of upgrade costs could be largely avoided. If Santee Cooper were to instead build a replacement NGCC resource at another site, less of these upgrade costs could be avoided, and in some cases, an even greater level of additional costs would be incurred. **Table A-1**, below provides a summary of the transmission costs assumed for the NGCC Siting Analysis. In addition, a 5 percent annual O&M cost as a percent of incurred capital costs was modeled for each site. Transmission wheeling charges in Table A-1 depict incremental point-to-point wheeling charges if a new NGCC were to be installed at the Rainey site.

Table A-1
ESTIMATED ELECTRIC TRANSMISSION SYSTEM COSTS

Incremental Cost for Adding New NGCC 2x1 H-class 2019 \$

	Electri	Transmissio	n Wheeling				
		System Avoided			Off-Sys		
		Site Electric	Site Electric Upgrades System Upgrades			Firm PTP	Firm PTP
	Total	Intercon-	Winyah	Upgrade for	for Winyah	Rate	Charges
Name	\$Millions	nection	Retired	Site	Retire	\$/MW-yr	\$M/yr
Jasper Site	\$722.0	\$22.0	\$400.0	\$300.0	\$0.0	\$0.00	\$0.0
Rainey Expansion	\$437.0	\$22.0	\$400.0	\$15.0	\$0.0	\$16,333	\$17.7
Pee Dee Site	\$58.0	\$22.0	\$400.0	\$36.0	-\$400.0	\$0.00	\$0.0
Summer Site	\$282.0	\$22.0	\$400.0	\$0.0	-\$140.0	\$0.00	\$0.0
Winyah Site	\$10.0	\$10.0	\$400.0	\$0.0	-\$400.0	\$0.00	\$0.0

#### **Natural Gas Costs**

Site-specific costs for incremental natural gas service result from several components, including cost to secure new firm natural gas transportation service, variable costs for natural gas transportation service, cost of constructing a new pipeline lateral (to avoid some firm reservation fees), and site-related differences in costs for natural gas commodity when purchased from different natural gas hubs or pipeline zones. Assumptions were developed from multiple sources, including the following.

- Rates for natural gas transportation service (reservation fees and variable transportation fees) were based on a review of existing tariffs and communications between Santee Cooper and potential natural gas pipelines companies.
- Construction costs for natural gas pipeline laterals were developed by a natural gas expert
  retained by nFront Consulting and represent planning level estimates for the cost to design,
  permit and construct a new natural gas pipeline lateral between a major pipeline and specific
  generating sites under consideration by Santee Cooper.
- Annual average commodity price basis between the various natural gas hubs and zones were developed from OTC Global Holdings forward prices published April 2019 by S&P Global Market Intelligence.

The following **Tables A-2** and **A-3** summarize the natural gas transportation rates and pipeline lateral cost assumptions used for the NGCC Siting Analysis.

Table A-2
Natural Gas Transportation Rates

2019\$

·				
	Upstream	FT Rsrv	Fuel Use	Variable
Pipeline / Site	Pipeline	\$/MMBtu	%	\$/MMBtu
Transco Zone 4		0.7800	1.500%	0.0303
Transco Zone 5		0.7800	1.500%	0.0303
SONAT Aiken		0.6900	4.310%	0.0600
SONAT Elba Express		0.3200	0.980%	0.0013
Atlantic Coast Pipeline		2.1600	1.000%	0.0041
Dominion Jasper	Elba	0.1300	0.399%	0.0202
Dominion Pee Dee	Transco	1.8700	1.233%	0.0258
Dominion Pee Dee	ACP	0.7100	1.233%	0.0258
Dominion Winyah	Elba	1.1600	1.233%	0.0258
Dominion Winyah	ACP	1.4600	1.233%	0.0258
<b>Dominion Summer</b>	Transco	0.8400	1.233%	0.0258
Dominion Summer	ACP	1.3000	1.233%	0.0258

Note: All FT reservation rates in \$/MMBtu/hr at max use.

TABLE A-3
NATURAL GAS PIPELINE LATERAL COSTS

2019\$

	Total	Cost of	Compr.
Name	\$Millions	Lateral	Station
ACP to Pee Dee	\$200.0	\$170.0	\$30.0
ACP to Winyah	\$355.0	\$325.0	\$30.0
Transco Z5 to Summer	\$210.0	\$180.0	\$30.0
Transco Z4 to Rainey	\$25.0	\$25.0	\$0.0
NG Lateral Annual O&M (%	Capital)	0.50%	

#### **NGCC Siting Analysis Results**

Projected incremental site-specific costs for the period 2027-2051, in 2019 dollars, are summarized below in **Table A-4**. Projected costs include costs for Santee Cooper electric transmission system upgrades and generation interconnection and associated operating and maintenance costs, purchase of firm point-to-point electric transmission service specific to the Rainey site, natural gas firm transportations service, natural gas variable transportation service, projected basis differences in natural gas commodity prices, construction of a natural gas pipeline lateral and associated operating and maintenance costs, and totals across all cost components. Evaluated sites are listed in Table A-4 by generating site name, with natural gas source and transportation path in parenthesis.

TABLE A-4
ESTIMATED INCREMENTAL SITE COSTS FOR NEW NGCC

Electric Transmission plus NG Transportation Costs for NGCC 2x1 H-Class NPV 2027-2051 Millions Dollars (2019\$)

				NG	NG		
		Elec. Trans.	NG FT	Variable	Commod.	Cost of	
		Upgrades	Reserv.	Transport	Basis to	Self-build	
Site (NG Trans. Path)	Units	and O&M	Charges	Charges	HHub	NG Lateral	Total
Pee Dee (Transco Z5, DOM)	\$M	102.4	1,986.4	138.4	223.4	0.0	2,450.6
Pee Dee (ACP, DOM)	\$M	102.4	2,151.3	86.6	-412.2	0.0	1,928.1
Winyah (Transco Z4, Elba, DOM)	\$M	17.7	1,694.1	165.2	-30.7	0.0	1,846.2
Winyah (ACP, DOM)	\$M	17.7	2,713.5	86.6	-412.2	0.0	2,405.5
Summer (Transco Z5, DOM)	\$M	497.9	1,214.3	138.4	223.4	0.0	2,074.0
Summer (ACP, DOM)	\$M	497.9	2,593.6	86.6	-412.2	0.0	2,765.9
Jasper (Transco Z4, Elba, DOM)	\$M	1,274.9	922.0	133.1	-30.7	0.0	2,299.2
Pee Dee (ACP, Lateral)	\$M	102.4	1,619.1	31.6	-412.2	192.2	1,533.2
Winyah (ACP, Lateral)	\$M	17.7	1,619.1	31.6	-412.2	341.2	1,597.4
Summer (Transco Z5, Lateral)	\$M	497.9	584.7	75.1	223.4	201.9	1,582.9
Rainey (Transco Z4, Lateral)	\$M	1,101.1	584.7	75.1	223.4	24.0	2,008.3

The following observations can be made based on a review of the results of the NGCC Siting Analysis presented in Table A-4.

- The lowest cost site configuration assumes that Santee Cooper constructs a natural gas
  pipeline lateral from the ACP to the Pee Dee site (or contracts to have a pipeline lateral
  constructed by others for use by Santee Cooper).
- Other low-cost site configurations include the Near Summer and Winyah sites, again with Santee Cooper constructing a natural gas pipeline lateral. Incremental costs to develop these sites are projected to be only marginally higher than the Pee Dee site, indicating Santee Cooper has multiple comparable sites worthy of consideration. The differences are of a magnitude that more detailed dispatch and other analysis and updated information concerning firm natural gas reservation charges could alter the ranking.
- If Santee Cooper were to forego the construction of a pipeline lateral and instead secure natural gas transportation through Dominion Carolina Gas (labeled as DOM for the site names in Table A-4, the lowest-cost sites are again projected to be Pee Dee, Near Summer and Winyah. Other sites are generally projected to have much higher costs than these three sites.
- Incremental costs for the Pee Dee, Near Summer and Winyah sites that assume the construction of a natural gas pipeline lateral are approximately \$378 million lower, on average (or nineteen percent lower), than the same sites assuming natural gas transportation service from Dominion Carolina Gas. Santee Cooper should continue to investigate and analyze the cost of building a natural gas pipeline lateral as compared to the cost of securing

firm service from Dominion Carolina Gas to confirm the magnitude of these projected benefits.

The least-cost Pee Dee site configurations assumes the purchase of natural gas delivered through the ACP, while the least-cost Near Summer site configuration assumes the purchase of natural gas delivered through Transco. Differences in incremental costs for these sites are heavily dependent on assumptions made for natural gas firm transportation rates and commodity price basis. Santee Cooper should continue to investigate and analyze the cost assumptions for natural gas firm transportation rates and commodity price basis to confirm the projected differences in site costs.

As Santee Cooper continues its evaluation of costs for natural gas supply and electric transmission infrastructure, it will be important to recognize that Santee Cooper has several options for site development and natural gas supply, several of which may be capable of achieving Santee Cooper's objectives for power supply portfolio development.

#### TRANSMISSION SYSTEM ANALYSIS

As is historically typical for all utilities, Santee Cooper planned its power system based on the location of its customer demand and the location of its generation resources. For fossil-fueled resources, transportation of fuel is typically more efficient than transportation of electricity; that is, it is less expensive to transport fuel per unit of energy than electricity per unit of energy. As a result of this relationship, utilities have often located their resources relatively close to their customer demand. For instance, Santee Cooper did the same when it located Winyah near the Myrtle Beach area (the "load pocket"). The transmission system was not designed to transport all of the power needed to serve the load pocket because the local sited resources are able to provide power within the load pocket.

As to be expected, retiring generation within the load pocket and replacing those retired resources with purchases from resources outside the load pocket results in the transmission system exceeding its limits of operation ("overloading"). Santee Cooper staff performed analyses of various scenarios involving retirement of Winyah and Cross and locating potential new resources within the load pocket.

- Retiring Winyah and replacing the power with resources located outside of the load pocket results in the transmission system serving the Myrtle Beach area being loaded beyond its limits. nFront Consulting reviewed the results of the transmission analysis prepared by Santee Cooper and agrees that action to either strengthen the transmission system and/or to replace Winyah with local resources would be required to maintain the reliability of service to the Myrtle Beach area customers and to maintain compliance with NERC reliability regulations. Santee Cooper identified a suite of transmission improvement solutions to address the issues found and to maintain a reliable system compliant with regulations.
- Retiring Cross in addition to Winyah exacerbates the issues and increased the costs of potential transmission improvements.
- Santee Cooper also studied cases where Winyah and Cross were replaced with new resources sited at various locations identified as potential development sites (see previous section

entitled NGCC Siting Analysis) to evaluate the reduction (or increase) in costs for transmission improvements that result from the new resources.

Santee Cooper's studies and cost estimates were based on both past studies and new studies. nFront Consulting reviewed the analyses and found them to be reasonable. Using these analyses, Santee Cooper and nFront Consulting developed planning level estimates related to costs for transmission system improvements that would be required for the installation of new Santee Cooper generating resources to replace potentially retired Santee Cooper coal resources. The cost estimates related to each resource option are a combination of (i) costs to interconnect the new resource to the power system, (ii) costs for facility upgrades near the new resource to be able to integrate the resource into that area of the power system, and (iii) costs to increase transfer capability into the load pocket depending on resource location.

It is important to note that while various solutions to the identified transmission issues/overloads were evaluated, there was insufficient time to investigate all possible solutions. Additionally, it must also be recognized that time restrictions allowed for the study of only thermal limits through power flow analyses. While thermal limits are usually the most limiting, other analyses will need to be performed, including evaluation of voltage stability limitations, transient dynamic stability limits, and fault current limitations. That is to say, that while the solutions and cost estimates developed are reasonable as planning level estimates for generating portfolio studies, Santee Cooper will need to perform additional studies and refine cost estimates based on those studies to support the development of future resource plans.

#### **RESOURCE EXPANSION ANALYSIS**

nFront Consulting and Santee Cooper staff and management collaboratively performed an evaluation of resource expansion alternatives to develop a resource plan satisfying the stated objectives of reducing dependency on coal-fired resources. Fundamentally, Santee Cooper's planning effort has been focused on assessing potential coal-fired retirement options, which are discussed in more detail below under **Coal Retirement Options**.

The resource expansion analysis was prepared using industry-standard approaches and software models to evaluate total power supply costs of resource portfolios and to identify an optimized mix of resource alternatives capable of providing Santee Cooper with a robust, least-cost resource expansion plan over the Study Period.

In conducting the Resource Expansion Analysis, Santee Cooper and nFront Consulting:

- Used an industry standard software model capable of simulating generating resource dispatch and generation expansion optimization;
- (ii) Developed internally consistent sets of key assumptions needed to conduct the Resource Expansion Analysis;
- (iii) Reviewed accuracy of simulation model inputs and reasonableness of simulation results;
- (iv) Evaluated resource expansion plans under a variety of assumptions regarding coal resource retirements; and
- (v) Developed standardized reports for presentation of analysis results and conclusions.

In addition to the evaluation and identification of a least-cost plan under the Base Case set of assumptions, nFront Consulting and Santee Cooper analyzed the plan under a wide range of sensitivity assumptions for natural gas prices and pipeline access, power prices and market availability, CO2 regulation, and varying levels of Santee Cooper load to assess the robustness of the identified least-cost plan to changing market conditions. The Sensitivity Analyses are described later in this Appendix A.

#### **Coal Retirement Options**

**Table A-5** below provides the in-service year and current age of Santee Cooper's coal units.

TABLE A-5
SANTEE COOPER COAL UNIT IN-SERVICE YEARS AND CURRENT AGES

Coal Unit	In-service Year	Current Age (Years)
Cross Unit 1	1995	24
Cross Unit 2	1983	36
Cross Unit 3	2007	12
Cross Unit 4	2008	11
Winyah Unit 1	1975	44
Winyah Unit 2	1977	42
Winyah Unit 3	1980	39
Winyah Unit 4	1981	38

Santee Cooper and nFront Consulting believe it is appropriate to include in this study an assessment of the economics of potential retirement of some portion of Santee Cooper's coal fleet. Coal-fired generation, nation-wide, is under increasing economic pressure as a result of the extended period of low natural gas prices that has prevailed in the energy market and increasing environmental regulations. Hence, many utilities across the country are studying the potential economic benefits of retiring aging coal units and replacing this capacity with high efficiency natural gas and renewable generation, and many retirements of such coal units have taken place or are planned over the next couple of decades, including those of Santee Cooper's neighboring utilities.

The Study was structured to compare Santee Cooper's costs of portfolios that alternatively assumed retirement of:

- Winyah Generating Station, consisting of four similarly sized generating units totaling 1,150
   MW in capacity (winter rating);
- Cross Generating Station Units 1 &2, consisting of two similarly sized generating units totaling 1,155 MW in capacity (winter rating); and
- Winyah and Cross totaling 3,530 MW of capacity (winter rating).

Under the Base Case assumption and most Sensitivity Case assumptions, continuing to operate the Cross units results in lower projected costs than cases in which Cross Units 1 and 2 or the entire Cross

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Generating Station were also assumed retired. Fundamentally, these results are driven by the following considerations:

- 1. Retiring the entire Winyah Station provides greater opportunity to avoid O&M, capital improvement, and environmental compliance costs than retiring Cross Units 1 & 2 but achieves very close to the same reduction in coal-fired capacity;
- 2. Phasing the retirement of Winyah allows Santee Cooper to avoid certain transmission system upgrades that would be necessary should Cross 1 & 2 be retired;
- 3. Cross Units 1 and 2 are projected to be used very infrequently to produce energy but provide low cost capacity necessary to meet load during the highest demand periods of the year as well as when other generation units are out of service for maintenance;
- 4. Continuing to operate Cross Units 1 and 2 allows Santee Cooper to defer investment in generation capacity that would be needed if Cross Units 1 and 2 are retired;
- 5. For cases where a portion or all of the Cross Generation Station is assumed retired, projected utilization of replacement resources depict progressively less energy per megawatt of installed capacity such that the energy cost savings are not projected to outweigh the capital and fixed costs of new resources that would be incurred to replace those units; and
- 6. Options were identified to minimize impact of retiring Winyah on necessary transmission system upgrades, including the modeled installation of two quick-start dual-fueled combustion turbine generation units at the Winyah site by 2023, as discussed below in the section entitled Santee Cooper Power Supply Roadmap.

If a carbon tax or other carbon-limiting policy is imposed, or Cross resource operating costs are projected to be higher than now assumed, or changes in technology or other factors result in lower projected costs of alternative resources, future planning efforts may identify that it would be attractive for Santee Cooper to proceed with retirement of a portion or all of the Cross Generating Station.

#### **Resource Expansion Modeling**

The Resource Expansion Analysis was performed using the Capacity Expansion (CapEx) resource expansion optimization software model licensed by ABB, a leading software vendor for several software applications that are widely used across the electric utility industry. CapEx is a PC-based software model capable of simulating simplified hourly generating resource dispatch and evaluating future resource expansion plans using a mixed integer linear programing technique to identify a least-cost portfolio of generating resource additions derived from resource options input by the user. Santee Cooper is the licensee for the CapEx model used for the Resource Expansion Analysis.

For the Resource Expansion Analysis, the Santee Cooper system was modeled as a stand-alone system, with Santee Cooper resources dispatched to meet the Santee Cooper load plus wholesale sales obligations, and with limited access to hourly economy purchases from wholesale markets. Modeled Santee Cooper projected loads and sales obligations include Santee Cooper retail load; sales to Central Electric Power Cooperative; partial requirements sales to the municipalities of Seneca, South Carolina and Waynesville, North Carolina, and PMPA; sales to Century Aluminum through 2028;

and other firm wholesales sales contracts, each with specific terms. Additional information on retail load and wholesale sales obligations are provided in Appendix B.

Santee Cooper's existing resources include nuclear and coal-fired steam generating resources, natural gas-fired NGCC and NGCT resources, diesel-fueled combustion turbines peaking resources, hydro power resources, owned and purchased solar power resources, and purchases from qualifying facility contracts. **Table A-6** provides a summary of existing and near-term committed Santee Cooper resource capacity by type.

Table A-6
Santee Cooper Resource Capacity (Winter Ratings)

RESOURCE TYPE	CAPACITY (MW)
NUCLEAR STEAM	322
COAL STEAM	3,530
NGCC	520
NGCT	630
OIL CT	165
HYDRO	142
LANDFILL GAS	29
Total	5,338
Additional Resources	
SS HYDRO	84
<b>BUZZARDS ROOST</b>	15
SC SEPA	305
RENEWABLES	74
SOLAR <sup>20</sup>	7
Total	485
Total Resources	5,823

Modeled economy purchases were limited to maximum import quantities based on known and modeled transfer capability of the electric transmission system and based on recent Santee Cooper market experience. Import limits modeled for the Resource Expansion Analysis are depicted in **Table A-7**.

<sup>&</sup>lt;sup>20</sup> Additional solar resources of 75 MW each are expected to be online by June 2020 and January 2021, totaling 150 MW.

### TABLE A-7 MODELED IMPORT LIMITS FOR MARKET PURCHASES

	On-Peak	Off-Peak
	Hours	Hours
Winter (Dec-Feb)	800 MW	800 MW
Summer (May-Sep)	1200 MW	700 MW
Shoulder Months	1000 MW	1000 MW

#### **Key Assumptions**

nFront Consulting and Santee Cooper developed a Base Case set of assumptions for use in the Resource Expansion Analysis. In the development of these assumptions, nFront Consulting and Santee Cooper relied on the results of the prior analyses described in this Appendix A to inform its development of assumptions regarding potential coal unit retirements, potential resource impacts on system reliability, and preferred sites for new generating resource development. Assumptions, described in detail in Appendix B to this report, address the following topic areas.

- Santee Cooper load forecast of retail and wholesale sales
- General inflation and cost escalation assumptions
- Santee Cooper financial assumptions
- Projections of operating and maintenance (O&M) costs, capital and general improvements, and capital additions for Santee Cooper coal units
- Gypsum production and contract requirements
- Coal unit decommissioning costs
- O&M costs for Rainey NGCC and NGCT units
- Operating characteristics, O&M costs, and capital costs for generating resource alternatives
- Solar resource pricing
- Cost of battery storage resources
- Cost of Santee Cooper demand-side resources
- Coal price forecasts for existing Santee Cooper resources
- Delivered natural gas prices by generation plant/site and by type of natural gas transportation service (firm and interruptible service)
- Power market price forecast
- Natural gas firm transportation costs
- Natural gas pipeline lateral costs
- Electric transmission upgrade and interconnection costs
- Benefits of strategic partnerships with neighboring utilities

In addition to the above, the CapEx model was populated with operating characteristics for all of the existing Santee Cooper resources (e.g., seasonal capacity ratings, heat rate curves, variable O&M costs, emission rates, maintenance patterns and rates, forced outage rates). These operating characteristics are based on historical performance, planned improvements, and projected maintenance costs for each of the Santee Cooper generating units.

Throughout the development of the assumptions used for the CapEx model, as described in more detail in Appendix B, Santee Cooper developed the specific assumptions to be used with input and

review from nFront Consulting. nFront Consulting's review focused both on inputs used within the CapEx model as well as projected operating results produced by the dispatch and capacity expansion simulations performed with CapEx. nFront Consulting has found the assumptions to be reasonable for use in the Resource Expansion Analysis described herein.

#### Resource Portfolio Analysis

nFront Consulting and Santee Cooper performed resource portfolio simulations in CapEx under multiple assumptions for coal resource retirements and generation expansion options (as described in more detail below). Common to each of the expansion plans evaluated is the adoption of near-term resource retirements and resource additions targeted to achieve several objectives of the Santee Cooper Power Supply Roadmap.

#### Santee Cooper Power Supply Roadmap

For each of the expansion plans evaluated in CapEx, Santee Cooper has assumed the following near-term resource retirement and expansion activities to address several objectives of the Santee Cooper Power Supply Roadmap.

- Retire the Winyah coal plant through a phased approach, removing two of the four generation units from service in 2023 and the following two units in 2027.<sup>21</sup>
- Add flexible capacity, as required, to meet capacity needs during the phased retirement of Winyah, including installation of two quick-start dual-fueled combustion turbine generation units near or at the Winyah site by 2023, totaling approximately 100 megawatts of capacity, and purchase approximately 30 megawatts of capacity for the winter months of 2023.
- Add approximately 1,000 megawatts of renewable generation by 2024 through contracts with developers. Santee Cooper anticipates that the majority the renewable resources would be photovoltaic solar projects, which would be distributed throughout the Santee Cooper system to improve diversity of production from intermittent solar resources.
- Add 200 MW of utility-scale battery storage to the Santee Cooper system over 2024 through 2028 (40 megawatts each year). Besides meeting capacity needs, battery storage can be used on the Santee Cooper system to help improve system reliability, quality of power, and economical use of resources.
- Implement programs that would reduce the loads of customers during peak demand periods, particularly in the winter. Santee Cooper has initially targeted the implementation of voltage control, direct load control, and demand response programs to avoid approximately 150 megawatts of winter peak load by 2027, increasing to 200 megawatts by 2037.

#### Alternative Power Supply Plans Analyzed

As described above, the Resource Expansion Analysis was performed in a manner that provided for the identification of potential least-cost resource portfolios under representative scenarios for coal resource retirements. Furthermore, a portfolio representing the existing Santee Cooper resources

<sup>&</sup>lt;sup>21</sup> The Study reflects the retirement of Winyah Units 3 and 4 in 2023 and the remainder of the plant in 2027. This sequencing is due to differing efficiencies and other operating considerations among the units.

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with future resource needs assume met by NGCT capacity was also evaluated as a Reference Case for computation of changes in power supply costs projected for each evaluated resource expansion portfolio. As previously described, the near-term activities of the Power Supply Roadmap were assumed to be implemented under all of the retirement scenarios evaluated.

#### Reference and coal retirement scenarios:

#### Reference Case

The reference case depicts the existing Santee Cooper resources, with no resource retirements over the 2020-2039 planning period. Under the Base Case load growth projections, Santee Cooper will need to add resources beginning in 2033 to meet capacity reserve requirements, reaching a total capacity need of approximately 390 megawatts by 2039. Near-term resources and programs added as part of the Power Supply Roadmap were not modeled for the Reference Case.

#### Retire Winyah Case

As discussed previously, Winyah is modeled to be retired in phases, with two of the four generation units retiring in 2023 and the following two units in 2027. Under this retirement scenario, Santee Cooper will need to add at least 490 megawatts by 2027, increasing to approximately 1040 megawatts by 2039 to meet capacity reserve requirements.

#### Retire Winyah and Cross 1&2 Case

Under this retirement scenario, the Winyah Plant is retired as described above, and Cross Units 1 and 2 are retired in 2039. Under this scenario, Santee Cooper will need to add approximately 2200 megawatts by 2039 to meet capacity reserve requirements. As discussed above, retiring Cross Units 1 and 2 was not found to provide a lower cost portfolio alternative under the Base Case assumptions. Results for this scenario are included to provide results depicting a more aggressive coal retirement scenario.

#### Retire All Coal Case

Under this retirement scenario, the Winyah Plant is retired as described above. However, for this scenario, the entire Cross Plant is also retired, with Units 1 and 2 retired in 2030 and Units 3 and 4 retired in 2032. Under this scenario, Santee Cooper will need to add approximately 1700 megawatts by 2030 and 3420 megawatts by 2039 to meet capacity reserve requirements. As discussed above, portfolios incorporating the retirement of all or portions of the Cross Plant were not found to be lower cost than portfolios incorporating the retirement of Winyah only under the Base Case assumptions. Results for this scenario are included to provide results depicting an accelerated coal retirement scenario, and to evaluate potential benefits under a scenario with CO2 regulations.

The following **Figure A-3** depicts future Santee Cooper capacity needs under the scenario with Winyah retired by 2027 and excluding plans for near-term resource and program additions consistent with the Power Supply Roadmap.



Figure A-3: Capacity and Demand Balance

#### **Resource Expansion Options**

Under the coal unit retirement scenarios, Santee Cooper is projected to need additional generation capacity beginning in 2027 and increasing thereafter with load growth and changes to wholesale sales quantities. The Resource Expansion Analysis assumes that future capacity need will be met with new, high-efficiency NGCC and NGCT resources, assumptions for which are depicted in Table B-8 in Appendix B. Additionally, capital and fixed O&M costs for electric transmission interconnection, electric transmission system upgrades, firm natural gas reservation, and natural gas pipeline laterals, as depicted in Tables A-1 through A-3, were modeled for new NGCC resource options on a dollar per kilowatt basis. NGCT resource options were modeled with costs for electric transmission interconnection and system upgrades that are identical to the NGCC on a dollar per kilowatt basis. NGCT resource options did not incur costs for natural gas pipeline laterals or firm transportation but were instead modeled with delivered natural gas prices that include cost for interruptible transportation service (at a rate equivalent to firm natural gas reservation fees, but on a dollar per MMBtu basis).

As stated in its Power Supply Roadmap, Santee Cooper intends to work with other utilities to explore joint development opportunities to provide additional NGCC capacity that best matches Santee Cooper's capacity needs while providing benefits of economies of scale from developing larger-sized generation units. As such, NGCC resources depicting joint ownership of a 2x1 H-class NGCC, with Santee Cooper taking entitlement to half of the resource, have been simulated for inclusion in portfolios evaluated in CapEx. Additionally, based on the results of the NGCC Siting Analysis,

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described above, resource expansion plans developed under the Base Case assumptions were evaluated assuming preferred NGCC development at the Pee Dee site.

#### **Resource Expansion Analysis Results**

The Reference Case and each of the coal retirement scenarios, as described above, were evaluated in CapEx to identify a least-cost generation expansion plan for each retirement scenario. Dispatch of Santee Cooper resources were simulated in CapEx over the Study Period to meet the total load obligations of Santee Cooper. New NGCC and NGCT resources options were added as needed to meet, at a minimum, Santee Cooper planning reserve margins of 12% for the winter peak and 15% for the summer peak. Costs for new NGCC and NGCT resources, including generating unit capital and operating cost and site-specific costs, were evaluated in CapEx to identify the least-cost resource plan under each retirement scenario.

Least-cost resource plans identified through the CapEx simulations under the Base Case assumptions are depicted for each retirement scenario in the following **Table A-8**. These plans depict a mix of NGCC and NGCT resources installed at the Pee Dee site and NGCT resources installed at Winyah. Demand-side resources modeled for the Power Supply Roadmap are not included in Table A-8.

TABLE A-8
BASE CASE RESOURCE EXPANSION PLANS

			Retire Winyah	
	Reference Case	Retire Winyah	and Cross 1&2	Retire All Coal
2020				
2021				
2022				
2023		Retire Winyah 3&4 -580MW	Retire Winyah 3&4 -580MW	Retire Winyah 3&4 -580MW
		LM6000 50MW	LM6000 50MW	LM6000 50MW
		LM6000 50MW	LM6000 50MW	LM6000 50MW
		30MW Purchase	30MW Purchase	30MW Purchase
		Battery Storage 40MW	Battery Storage 40MW	Battery Storage 40MW
2024		Solar PV 1000MW	Solar PV 1000MW	Solar PV 1000MW
		Battery Storage 40MW	Battery Storage 40MW	Battery Storage 40MW
2025		Battery Storage 40MW	Battery Storage 40MW	Battery Storage 40MW
2026		Battery Storage 40MW	Battery Storage 40MW	Battery Storage 40MW
2027		Retire Winyah 1&2 -570MW	Retire Winyah 1&2 -570MW	Retire Winyah 1&2 -570MW
		PeeDee NGCC 541MW	PeeDee NGCC 541MW	PeeDee NGCC 541MW
		Battery Storage 40MW	Battery Storage 40MW	Battery Storage 40MW
2028				
2029				
2030				Retire Cross 1&2 -1155MW
				PeeDee NGCC 541MW
				PeeDee NGCC 1081MW
2031		PeeDee NGCC 541MW	PeeDee NGCC 541MW	
2032				Retire Cross 3&4 -1225MW
				Winyah NGCT 337MW
				Winyah NGCT 337MW
				Winyah NGCT 337MW
2033	Winyah NGCT 337MW			
2034				
2035				Winyah NGCT 337MW
2036				
2037				
2038				
2039	Winyah NGCT 337MW		Retire Cross 1&2 -1155MW	
			PeeDee NGCC 541MW	
			PeeDee NGCT 337MW	
			PeeDee NGCT 337MW	

Projected NPV power supply costs over the Study Period, in 2019 dollars, are provided in **Table A-9**. As depicted in the table, projected costs of resource dispatch and fixed capital and operating costs for new resources produced through the CapEx simulations have been adjusted ex post to reflect costs that cannot be readily simulated for the individual retirement scenarios, including Santee Cooper costs or changes in costs for existing debt service, the Capital Improvement Fund, planned coal resource capital additions, coal resource decommissioning, coal unit fixed O&M, and incremental costs to fulfill a gypsum supply contract.

TABLE A-9
PROJECTED TOTAL POWER SUPPLY COSTS, BASE CASE

NPV 2019 Millions \$ (2020-2047)

			Retire	
	Reference	Retire	Winyah	Retire All
Cost Component	(Existing)	Winyah	Cross 1&2	Coal
Existing Debt Service	5,925	5,925	5,925	5,925
CIF Available for Debt Service	0	(203)	(240)	(413)
Capital Adds Debt Service	167	98	98	91
New Resource Debt Service	147	848	1,133	1,855
Decommissioning Costs	0	29	55	88
Fixed O&M	4,104	3,596	3,550	3,121
NG Transportation	0	1,164	1,389	2,267
Fuel Costs	11,255	9,487	9,155	7,697
VOM/Market Energy	5,292	4,465	4,497	5,037
Emission Cost	0	0	0	0
Incremental Gypsum Cost	76	243	267	394
Total Cost	26,967	25,652	25,830	26,063
Higher/(Lower) than Reference		(1,315)	(1,137)	(904)

The following observation can be made based on a review of the projected power supply cost presented in **Table A-9**.

- The Retire Winyah expansion plan is projected to result in significant reductions in total power supply costs relative to the Reference Case (NPV \$1.3 billion through 2047).
- The Retire Winyah expansion plan is projected to result in lower power supply costs relative the Reference Case than either of the other two evaluated coal retirement scenarios.
- Under each coal retirement scenario, cost increases due to new resource debt service, natural
  gas firm transportation, lower gypsum production, and coal resource decommissioning are
  more than offset by projected reductions in costs of fuel, market purchases, coal resource
  fixed O&M, and coal unit capital costs.<sup>22</sup>
- Should Santee Cooper decide to retire some or all of Cross, significant reductions in power supply costs are projected to be available relative to the Reference Case. However, the incremental cost reductions for the Cross retirement option relative to the Winyah only retirement are not sufficient to offset the increase in capital and fixed costs for new resources needed to replace the retired Cross resources under the Base Case set of assumptions used in this Study.

<sup>&</sup>lt;sup>22</sup> In Santee Cooper's budgets, coal resource related capital costs are either assumed funded from debt, and related debt service then is a revenue requirement, or the Capital Improvement Fund provided for by the Bond Resolution. In the coal retirement cases, changes in coal unit capital costs are included either on the line titled "CIF Available for Debt Service" or the line titled "Coal Unit Capital Adds".

#### **SENSITIVITY ANALYSIS**

In addition to the analyses described above under a Base Case set of assumptions, nFront Consulting evaluated potential resource portfolios under a variety of differing assumptions about the future, including the following:

- Higher natural gas prices
- Carbon regulation
- Cancellation of the Atlantic Coast Pipeline
- Smaller basis difference between ACP and Transco natural gas
- Lower economy energy prices
- No access to economy energy
- Lower and higher load growth

Each of these scenarios are discussed below. In each scenario, the assumptions underpinning the scenario are summarized, and the resulting projected power costs relative to the Reference Case are compared. In addition, where relevant, potential adaptations to the scenario in question and the resulting change in projected power costs are outlined.

#### **Higher Natural Gas Prices**

In order to test the sensitivity and adaptability of potential power supply portfolio changes to a range of future prices for natural gas, in addition to the Base Case forecast of natural gas prices, based generally on recent forward prices, a Mid-High Case and High NG Case were developed reflecting gas prices that increase over 2027-2030 to levels that are equivalent to the AEO Reference Case and double the level of the Base Case, respectively. **Figure A-4** depicts the Mid-High and High NG price scenarios as compared to the Base Case and various scenarios presented in the EIA's 2019 Annual Energy Outlook in terms of the Henry Hub price that underpins the delivered cost of natural gas assumed for Santee Cooper's resources and the assumed cost of economy energy.



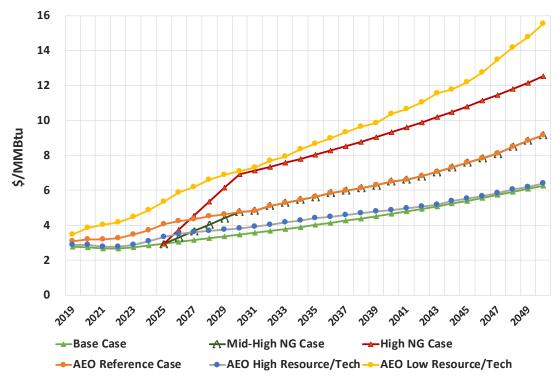


Figure A-4: Sensitivity Analysis Assumptions – Higher Natural Gas Prices

**Table A-10** provides the resulting impact on projected costs of the High NG Price Scenario as compared to the Base Case assumptions. Results under the High NG Price scenario are provided for the Retire Winyah case, assuming the same build as reflected in the Base Case, as well as a reoptimized build, which reflects only a single 1x1 NGCC build in 2027, followed by two NGCT units in 2031 and 2037. Results are also shown for the Retire All Coal case under the High NG price assumption, reflecting the build arrived at under the Base Case.

The result indicate, as might be expected, that Santee Cooper power supply costs are projected to increase as natural gas prices increase. However, consistent with the results under the Base Case analysis, retiring Winyah and replacing with NGCC resources in 2027 and 2031 provides for lower cost than the existing Santee Cooper portfolio. Additionally, if Santee Cooper has the ability to adjust its power supply decisions beyond the NGCC planned for 2027 in response to higher natural gas prices, Santee Cooper can further lower its power supply costs by installing NGCT resources instead of a second NGCC (labeled "Re-optimized Build" in Table A-10). These results also reflect that the retirement of the Cross units is not projected to be cost-effective under the higher natural gas price assumptions, demonstrating that the Cross units can effectively provide a hedge against natural gas prices.

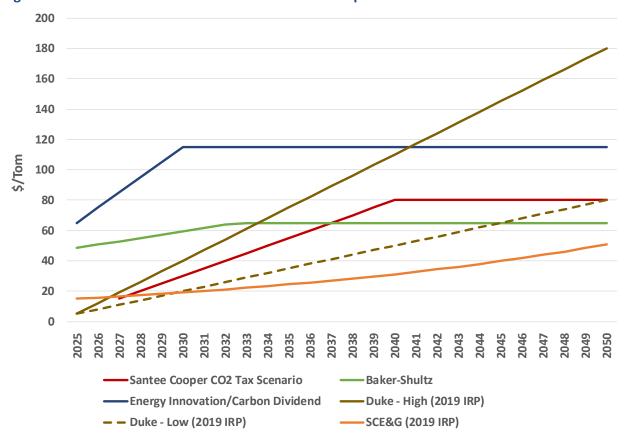
TABLE A-10
SENSITIVITY ANALYSIS RESULTS — HIGH NATURAL GAS PRICE SCENARIO

Projected Cost Impact of Resource Plans	Base Case	Mid-High NG	High NG
(Millions \$, 2020-2047, NPV 2019 \$)	Assumptions	Price	Price
Projected Reference Case Cost	26,967	27,682	28,214
Higher/(Lower) Cost than Reference Case			
Retire Winyah by 2027	(1,315)	(749)	(154)
Retire Winyah by 2027 (Re-optimize Build)		(1,036)	(591)
Retire All Coal (Winyah 2027, C1&2 2030, C3&4 2032)	(904)		3,661

#### CO2 Tax Scenario

In order to test the sensitivity and adaptability of potential resource portfolios to future carbon regulation, a CO2 Tax scenario was developed reflecting a tax rate of \$15/ton beginning 2027, escalating at \$5/ton annually until a cap of \$80/ton is reached in 2040, and being level in nominal terms thereafter. Projected economy energy prices were adjusted to reflect a pass-through of CO2 emissions costs based on the implied heat rate of the Base Case power prices and an emissions rate of natural gas-fired resources. **Figure A-5** below depicts the CO2 Tax level assumed for this scenario versus those reflected in recent legislative proposals and those assumed in the recent Integrated Resource Plans of Duke Energy and Dominion Energy South Carolina.

Figure A-5: Assumed CO2 Tax Scenario Versus Other Representative Tax Rates



The level of CO2 tax assumed for this Sensitivity Case rises to a very significant level that would significantly alter power supply choices for essentially all utilities. The use of these CO2 tax assumptions should not be interpreted as any form of endorsement or projection of tax levels that may or should be imposed. Rather, the assumption is made to test Santee Cooper's New Resource Plan under a *significant* CO2 tax scenario. The result of the tax would be a significant shift toward more carbon-friendly, higher cost resource plans for Santee Cooper and most utilities in the nation that would result in significantly higher costs to electric utility customers. Several tax proposals being discussed by legislators include provisions to flow CO2 tax revenue back toward taxpayers through various tax credits and other mechanisms. Nonetheless, total costs to customers would increase as utilities implement higher cost resource plans to avoid paying taxes imposed by carbon legislation.

**Table A-11** provides the resulting impact on projected costs of the CO2 Tax Scenario as compared to the Base Case assumptions. Resulting savings under this scenario for the New Resource Plan build are much greater than under the Base Case assumptions. The Plan portfolio reflecting a Winyah only retirement is shown to considerably reduce Santee Cooper's exposure to higher costs due to a CO2 tax relative to the existing portfolio, reducing costs by approximately 13 percent versus the existing portfolio. A minor additional reduction in projected costs is shown under this case with a re-optimized build, which reflects a slight acceleration in the NGCC builds versus the New Resource Plan portfolio. For this purpose, the level of renewables implemented in the Base Case is assumed to be unchanged but would represent an option to further reduce the impact of CO2 regulation. Savings versus the existing portfolio (i.e., Reference Case) are even greater assuming retirement of the entire coal fleet.

TABLE A-11
SENSITIVITY ANALYSIS RESULTS — CO2 TAX SCENARIO

Projected Cost Impact of Resource Plans	Base Case	
(Millions \$, 2020-2047, NPV 2019 \$)	Assumptions	CO2 Tax
Projected Reference Case Cost	26,967	37,796
Higher/(Lower) Cost than Reference Case		
Retire Winyah by 2027	(1,315)	(4,969)
Retire Winyah by 2027 (Re-optimize Build)		(5,009)
Retire All Coal (Winyah 2027, C1&2 2030, C3&4 2032)	(904)	(6,537)
Retire All Coal (Re-optimize Build)		(6,760)

The CO2 Tax Scenario would entail considerable increases in the cost of electricity for nearly all utilities across the country. The projected impact to Santee Cooper's power supply costs under the existing portfolio (i.e., Reference Case) is approximately 40 percent. Under the coal retirement scenarios, the projected cost increase (versus the Base Case assumptions) is limited to approximately 19 to 28 percent. Importantly, the level of cost increase under the coal retirement scenarios would be similar to the level experienced by Santee Cooper's nearby competitors that have been studies herein, based on their recently published plans.

Retiring coal resources results in significant reductions in CO2 emissions as a result of having the unit(s) in question no longer available to dispatch but also when replacement capacity is more economical to dispatch than the remaining coal fleet, as when new NGCC resources are brought online in the New Resource Plan. **Figure A-6** depicts the projected CO2 emissions for the New

Resource Plan under the Base Case and the CO2 Tax Scenario and for the Retire All Coal case. Carbon emissions in each case and for 2015 are shown as a percent of 2005 emissions.

100% 100% 90% Under the resource plan, 82% average carbon emissions during 80% the 2030s are projected to be 43% to 67% lower than in 2005 70% 57% 60% 50% 43% 42% 40% 34% 33% 30% 20% 10% 0% 2005 2015 Avg 2030-39 Avg 2030-39 Avg 2030-39 Avg 2030-39 Avg 2030-39 Winyah Ret Winyah Ret Winyah Ret All Coal Ret All Coal Ret Case Case Case (CO2) (CO2; Re-Opt) (Base) (CO2) (CO2; Re-Opt)

Figure A-6: Projected Impact on Carbon Emissions of New Resource Plan

**Emissions as a Percentage of 2005 Emissions** 

#### No Atlantic Coast Pipeline Scenario

The NGCC resource siting study discussed above demonstrated that the Pee Dee site, sourcing natural gas from the Atlantic Coast Pipeline (ACP), was the most cost-effective site, though only by a relatively small margin. Sourcing natural gas from the ACP is expected to provide access to natural gas from lower cost major shale gas production regions but at a considerably higher firm reservation cost. Importantly, sourcing natural gas from the ACP provides for significant fuel diversity given the existing Rainey plant is fueled by natural gas sourced from Transco. Subsequent analyses considering a similar NGCC build-out at the Near Summer site, sourced by natural gas from Transco delivered through a similar lateral to that Near Summer site, project power supply costs very similar to results for the Pee Dee site with natural gas sourced from the ACP. Resulting NPV savings relative to the existing portfolio differ from the New Resource Plan by approximately plus or minus \$50M, depending on assumptions regarding transmission cost impacts and natural gas delivery costs, including both pipeline lateral and firm gas transportation costs.

#### Reduced ACP Basis Difference Scenario

**Figure A-7** depicts the projected cost of natural gas delivered over Transco versus from the ACP, which would be sourced from the region near the Dominion South natural gas hub, under the Base Case. Projected natural gas prices at Dominion South are projected to be approximately 19 percent lower than Transco Zone 5 over 2027-2047. However, should this basis difference advantage from the ACP narrow in the future, Santee Cooper's cost of natural gas and power supply costs could be

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negatively impacted. In the New Resource Plan, 63 percent of Santee Cooper's natural gas use is projected to be delivered over ACP and sourced from Dominion South. To test the sensitivity and adaptability of the New Resource Plan to this exposure, a scenario was analyzed reflecting a collapse in this difference of 50 percent beginning 2031.

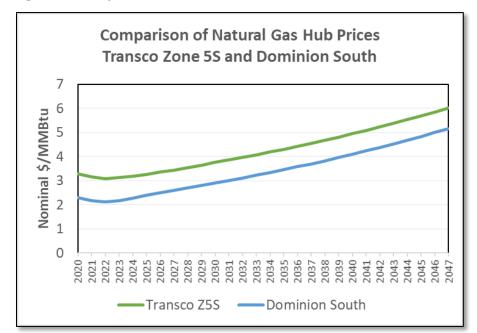


Figure A-7: Projected Cost of Natural Gas Delivered over ACP versus Transco

Under this scenario, NPV power costs for the Retire Winyah least-cost resource portfolio are projected to increase by approximately \$190M versus the Base Case. Santee Cooper could potentially mitigate this cost exposure, or risk, by building new resources at the Near Summer site, which as discussed above is very similar in cost to Pee Dee-sited resources served by the ACP. Further analysis of this issue coupled with updated proposals regarding firm transportation reservation charges by the ACP will need to be considered as Santee Cooper finalizes site selection for its 2027 NGCC resource.

#### Low Economy Pricing Scenario

The Base Case results reflect Santee Cooper purchasing a significant amount of economy energy from third parties on adjacent transmission system, particularly over the first several years of the study horizon. Based on the projected market prices, the implied heat rate of available economy energy increases considerably over approximately 2026-2030, which results in this economy energy being generally uneconomic under most scenarios, all else equal. To the extent, market prices exhibit more stable implied heat rates after 2025, Santee Cooper would be able to "lean" on the market more and achieve much of the same benefits of natural gas-fired generation without building certain of the NGCC resources assumed added in the 2030s under the Base Case assumptions.

In order to understand the impact of this assumption on the resulting cost differences across portfolios, a Low Economy Pricing Scenario was analyzed under economy prices reflecting a constant

implied market heat rate. **Figure A-8** compares projected economy prices, consistent with Tier 1 pricing, for the Base Case versus the Low Economy Pricing scenario.

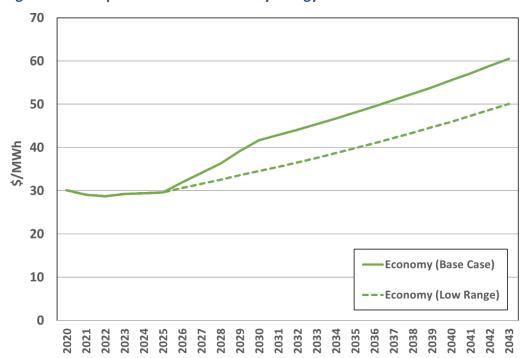


Figure A-8: Comparison of Tier 1 Economy Energy Price Forecasts

**Table A-12** provides the resulting impact on the cost savings for the Retire Winyah and Retire All Coal cases under the Low Economy Pricing scenario. Projected benefits of the portfolio changes are reduced considerably to the extent economy pricing is more favorable, but projected costs remain far lower than the existing portfolio.

TABLE A-12
SENSITIVITY ANALYSIS RESULTS — LOW ECONOMY PRICING SCENARIO

Projected Cost Impact of Resource Plans	Base Case	Low Econ Price	
(Millions \$, 2020-2047, NPV 2019 \$)	Assumptions		
Projected Reference Case Cost	26,967	26,521	
Higher/(Lower) Cost than Reference Case			
Retire Winyah by 2027	(1,315)	(1,058)	
Retire All Coal (Winyah 2027, C1&2 2030, C3&4 2032)	(904)	(665)	

#### No Economy Energy Purchases Scenario

**Table A-13** provides the resulting impact on the cost savings for the Retire Winyah, Retire Winyah with Cross 1 & 2, and Retire All Coal cases of the No Economy Energy Purchases scenario. The first two of these cases are shown to provide much higher savings under the No Economy scenario, as the economy market provides some access to cheaper off-system natural-gas generation than the existing portfolio under the Base Case.

TABLE A-13
SENSITIVITY ANALYSIS RESULTS — NO ECONOMY SCENARIO

Projected Cost Impact of Resource Plans	Base Case	No Econ
(Millions \$, 2020-2047, NPV 2019 \$)	Assumptions	Purchases
Projected Reference Case Cost	26,967	27,563
Higher/(Lower) Cost than Reference Case		
Retire Winyah by 2027	(1,315)	(1,586)
Retire Winyah by 2027, Retire Cross 1&2 in 2039	(1,137)	(1,372)
Retire All Coal (Winyah 2027, C1&2 2030, C3&4 2032)	(904)	(787)

#### Load Growth Scenarios

The robustness of Santee Cooper's resource plans to variations in future load growth was also analyzed. Low and High Load scenarios were developed reflecting variations in load growth of Santee Cooper's retail segment and Central, the load of large industrial customers, and the continuation of off-system sales contracts as further discussed in Appendix B, resulting in loads that were 14 percent lower in the Low Load scenario beginning approximately 2025 and 5% higher in the High Load scenario beginning approximately 2029.

**Table A-14** provides the resulting change in the projected cost impacts of the Retire Winyah portfolio versus the existing portfolio. Study Period benefits are projected to be lower under the Low Load scenario and lower still under the High Load scenario. For the former, to the extent Santee Cooper can adjust the portfolio decisions and eliminate the NGCC builds in 2027 and 2031, instead building NGCTs in 2029 and 2035, cost savings would be approximately the same as the Base Case.

Table A-14
Sensitivity Analysis results — Load Growth Scenarios

Projected Cost Impact of Resource Plans	Base Case		
(Percent Change in Avg Levelized \$/MWh, 2020-2047)	Assumptions	Low Load	High Load
Projected Reference Case Cost	26,967	24,988	28,233
Higher/(Lower) Cost than Reference Case			
Retire Winyah by 2027	(1,315)	(819)	(800)
Retire Winyah by 2027 (Re-optimize Build)		(1,216)	

#### Higher Cost of Solar Energy Scenario

The Base Case set of assumptions reflect that solar resources can be added to the system by third-party developers under a purchase power agreement (PPA) at a rate of \$25/MWh nominally over the long term (i.e., beyond the 20-25 years that constitute typical terms of such PPAs). This assumed energy rate was jointly determined by Santee Cooper and nFront Consulting based on recent market information and trends in the same. The assumption that PPAs could be extended or new PPAs arranged with the same pricing reflects that the recent downward trend in the cost of solar facilities will continue sufficiently to offset the impact of the expected reduction in the investment tax credit, which is scheduled to be reduced from the current 30 percent to 10 percent beginning 2022 for commercial entities. nFront Consulting views these assumptions as reasonable for purposes of this study.

To understand the sensitivity of the results presented herein to significantly higher costs of solar energy, based on the energy production assumed from the 1,000 MW of solar capacity in the New Resource Plan, each dollar per MWh of increase in the delivered cost to Santee Cooper of solar energy would be projected to increase Santee Cooper's cost of energy by approximately \$18 million on an NPV basis over the initial 10-year period the 1,000 MW of solar capacity is assumed to provide energy to the system (i.e., 2024 through 2033) and by approximately \$34 million over the Study Period through 2047. Moreover, using solar energy is projected to result in lower system energy costs to the extent delivered cost of the solar energy is less than approximately \$37/MWh over that initial 10-year period through 2033 and less than approximately \$42/MWh over the Study Period through 2047.

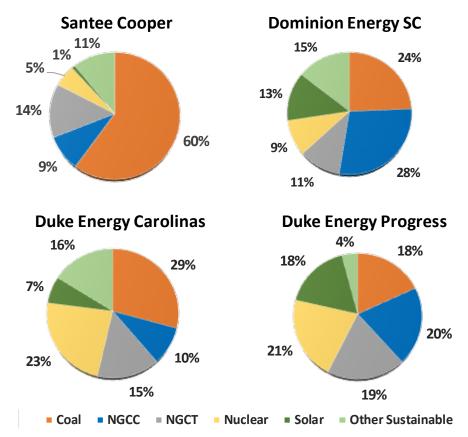
#### **COMPETITIVE ANALYSIS**

In addition to the economic analysis of potential changes to Santee Cooper's portfolio, nFront Consulting developed comparisons of Santee Cooper's current and planned future portfolio versus those of its nearby competitors, drawing on the scenarios developed for the Sensitivity Analysis discussed above. In order to develop information regarding Santee Cooper's competitors current and planned future resources, nFront Consulting compiled data from publicly available resources, including the most recent IRPs and FERC Form I data, supplemented with data published by S&P Global regarding current resources and projected operations and operating cost by resource or resource type.

**Figure A-9** depicts the estimated capacity mix by major resource category for 2020 of Santee Cooper versus that of three of its primary competitors—Dominion Energy South Carolina (Dominion Energy SC or DESC, formerly South Carolina Electric and Gas)<sup>23</sup>, Duke Energy Carolinas (DEC), and Duke Energy Progress (DEP). In these charts, the NGCT category includes other peaking facilities that may be dual-fueled or simply diesel-fired. Other sustainable resources include hydro, storage, and demand-side measures (in this case, almost exclusively direct load control or demand response). The charts show that Santee Cooper currently has a far larger proportion of coal capacity in its generation fleet than these utilities.

<sup>&</sup>lt;sup>23</sup> For Dominion Energy South Carolina, the resource plan shown above includes two 1x1 NGCC resources and solar being added to its portfolio over the study horizon. An additional resource plan presented in the document reflects NGCT rather than NGCC resource additions and somewhat greater solar capacity additions than the plan presented above.

Figure A-9: Santee Cooper Resource Capacity Mix Versus Competitors in 2020

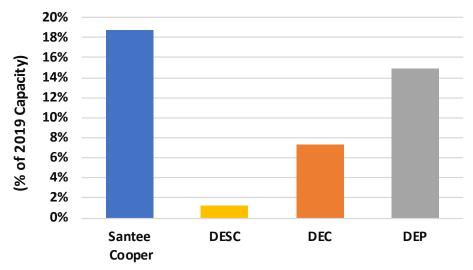


Importantly, most if not all of Santee Cooper's competitors reviewed in this analysis intend to (i) further reduce their reliance on coal, (ii) significantly increase their reliance on NGCC resources, and (iii) significantly increase their reliance on renewable resources, particularly solar. As discussed above, Santee Cooper's New Resource Plan similarly contemplates significant modifications to its power supply portfolio in each of these areas.

**Figure A-10** depicts the extent of coal capacity retired in Santee Cooper's L&R Plan versus the amount reflected in the IRPs of Santee Cooper's competitors discussed above as a percentage of their 2019 installed capacity. This comparison shows that Santee Cooper's New Resource Plan reflects the most significant amount of coal retirement as measured against system capacity. Importantly, however, both Duke Energy Carolinas and Progress reflect additional coal retirements out beyond 2033, in both cases a greater amount in these out years than prior to 2034. <sup>24</sup> Both of these recent IRPs reflect a "Carbon Constrained" scenario, which assumes a carbon tax is imposed beginning 2025, as a base case. The carbon tax assumed is set at \$5/ton beginning 2025 and escalates at \$3/ton per year thereafter.

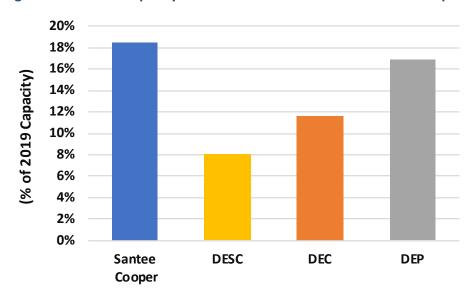
<sup>&</sup>lt;sup>24</sup> For this purpose, the year 2033 (i.e., 15 years into the forecast horizon) was chosen as it was viewed to reflect a sufficient time period beyond the key resource changes identified under the Base Case.





**Figure A-11** similarly compares NGCC additions in Santee Cooper's New Resource Plan versus its competitors. This comparison shows that Santee Cooper's plan reflects the most significant amount of NGCC additions. Importantly, however, both DESC and Duke Energy Carolinas reflect additional NGCC additions out beyond 2033.

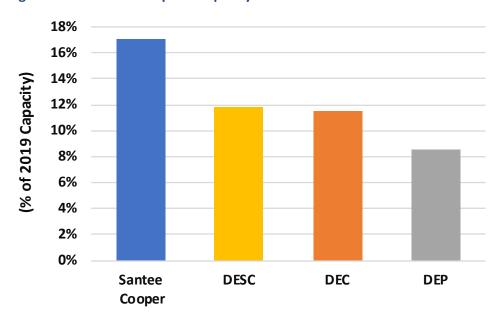
Figure A-11: NGCC Capacity Added Thru 2033 as a Percent of 2019 Capacity



**Figure A-12** compares the amount of solar capacity additions in Santee Cooper's New Resource Plan versus its competitors. This comparison shows that Santee Cooper's plan reflects the most significant amount of solar capacity additions in proportion to 2019 total portfolio capacity. While DEP exhibits the lowest extent of solar capacity additions across the four utilities, as shown in , DEP also currently has the highest extent of installed capacity, mostly as a result of favorable regulatory treatment of solar in North Carolina, which dominates DEP's service area.

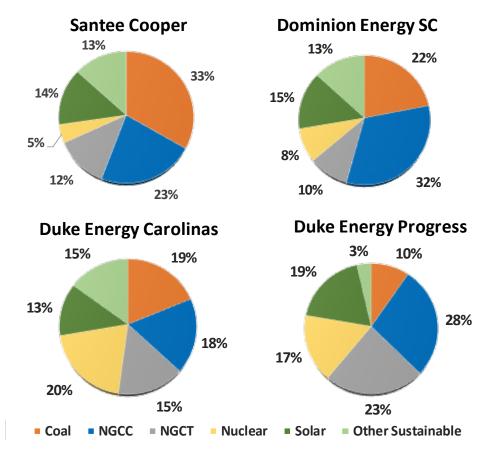
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Figure A-12: Solar Nameplate Capacity Added Thru 2033 as a Percent of 2019 Capacity



**Figure A-13** depicts the resulting capacity mix by major resource type for 2033 for Santee Cooper versus the same three competing utilities. The chart for Santee Cooper shows a much more balanced portfolio relative to the current capacity mix and much better alignment between Santee Cooper's capacity mix and those competitors. This should allow Santee Cooper to remain more competitive relative to these utilities than if no changes were made to its current portfolio across a wider range of potential scenarios regarding natural gas prices and carbon emissions regulation, among other scenarios.

Figure A-13: Santee Cooper New Resource Plan Capacity Mix Versus Competitors in 2033

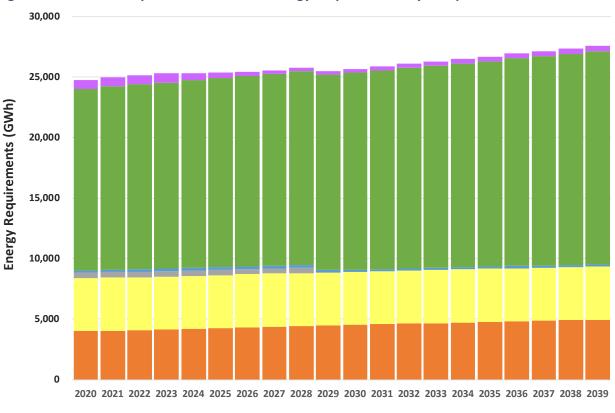


#### APPENDIX B - STUDY ASSUMPTIONS

#### **LOAD FORECAST**

Forecasts of the peak demand and energy requirements to be served from Santee Cooper's resources were provided by Santee Cooper. Santee Cooper prepares a load forecast approximately annually, combining an econometric forecast of its retail load with a forecast of Central's power requirements provided by Central, along with projections and assumptions regarding the requirements of Century Aluminum, two wholesale municipal customers, and off-system sales also prepared by Santee Cooper. Off-system sales customers include the Navy Yard, Alabama Municipal Electric Authority (AMEA), Piedmont Municipal Power Agency (PMPA), and the municipal utilities that serve Seneca, South Carolina and Waynesville, North Carolina. The forecast reflects the economic outlook for the region obtained from a reputable third party, projected retail prices for electricity and competing fuels, and normal weather conditions for the Santee Cooper service area. The forecast reflects estimated demand and energy savings from energy efficiency programs by Santee Cooper and Central.

**Figure B-1** below depicts the projected components of the energy requirements under the Base Case forecast.



■ Distribution ■ Industrial ■ Century ■ Municipal ■ Central ■ Off-System Sales

Figure B-1: Santee Cooper Load Forecast – Energy Requirements by Component

The Base Case forecast utilized for this Study reflects the following energy requirements and winter peak demand growth rates over 2020-2039 for components of Santee Cooper's territorial load. The Base Case forecast also reflects that Century Aluminum will no longer be taking service from Santee Cooper beginning 2029. The projection of off-system sales reflects that certain contracts will not be renewed over 2023-2026.

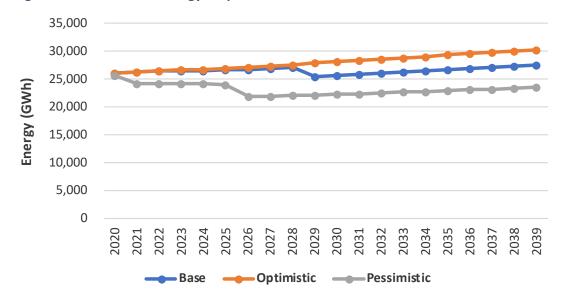
Table B-1
PROJECTED GROWTH RATES FOR SANTEE COOPER TERRITORIAL LOAD

	Energy Req'ts	Winter Peak Demand
Distribution System	1.1%	1.0%
Industrial	0.0%	0.1%
Central	0.9%	0.9%
Municipal	-0.1%	-0.1%
Off-system Sales	-2.5%	-0.3%
Total	0.3%	0.6%

In addition to the Base Case, High and Low Load Cases were prepared to assess the robustness and flexibility of the resource plan to changes in future load levels. These cases reflected variations in the growth rate of Santee Cooper's retail load and sales to Central, as well as varying assumptions regarding the continuation of service to certain wholesale customers by Santee Cooper over the Study Period.

**Figure B-2** and **Figure B-3** below depict the projected energy requirements and winter peak demand served by Santee Cooper in each of the load forecast scenarios.

Figure B-2: Forecasted Energy Requirements

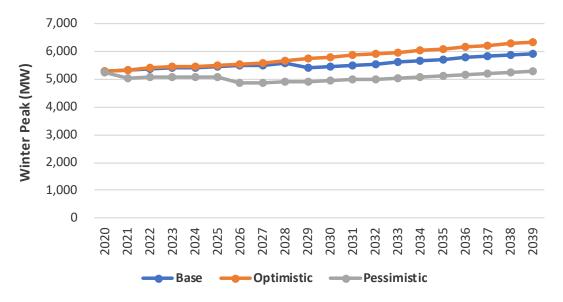


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**STUDY ASSUMPTIONS** 

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Figure B-3: Forecasted Winter Peak Demand



#### **COST ESCALATION**

The Load and Resources Plan Study utilizes the following assumptions for future annual cost escalation:

- Fixed and variable operating cost escalation: 2.0%
- Capital costs for new generation resources: 2.5%
- Capital costs for new electric transmission facilities: 2.0%
- Capital costs for natural gas pipeline facilities: 2.0%

These cost escalation assumptions were provided by Santee Cooper and reviewed for reasonableness by nFront Consulting, as discussed in the following subsections.

# **Operating Cost Escalation**

Santee Cooper developed a general inflation assumption to be utilized in projecting a broad range of operating costs, such as operation and maintenance and administrative costs, based on recent inflation expectations provided by a variety of sources reviewed by Santee Cooper. nFront Consulting reviewed the most recent data regarding historical and projected inflation and determined that the 2.0% general inflation/escalation assumption is within a reasonable range of assumptions of this nature that are utilized in the industry and was reasonable for purposes of this study. The conclusions of this study are not highly sensitive to this assumption within a reasonable range. Importantly, inflation expectations have dropped considerably over the last year, which impacts the review of market and forecasted cost data of a nominal nature that are more than approximately six months old.

#### **Capital Cost Escalation**

Santee Cooper developed its assumed cost escalation for generation equipment based on historical escalation data published in the Handy-Whitman Index of Public Utility Construction Costs (HWI). For

transmission equipment and natural gas pipeline equipment, Santee Cooper instead relied on the general inflation assumption discussed above. nFront Consulting reviewed the most recently published HWI for historical cost escalation for generating plant, electric transmission plant, and gas transmission plant equipment, which provides the following resulting cost escalation averages over the last ten years (ranges depending on the reliance on January or mid-year indices).

• All Steam Generating Plant: 2.4-2.5%

• Electric Transmission Plant: 1.6-1.9%

• Gas Transmission Plant: 1.9-2.3%

While longer-term averages were generally somewhat higher, nFront Consulting views the more recent averages as being more consistent with the relevant trends in inflation expectations, reduced electricity demand forecasts across the U.S., and reduced demand and recently declining costs for certain fossil-fueled generation equipment. Based on this research, the capital cost escalation values provided by Santee Cooper for use in this study appear reasonable.

#### **FINANCIAL ASSUMPTIONS**

Santee Cooper provided information shown in **Table B-2** regarding debt interest rate and discount rate assumptions used in the Study. These assumptions are based on information received by Santee Cooper from its financial advisers, reflecting today's market environment of generally low expected inflation and interest rates.

TABLE B-2
STUDY FINANCIAL ASSUMPTIONS

Financial Concept	Interest Rate
Long-term Debt Interest Rate	3.8%
Interest During Construction	2.6%
Discount Rate for Present Value Calculations	3.8%

#### **EXISTING RESOURCES -- COAL PLANTS**

#### **Fixed Costs**

Projections of fixed operation and maintenance (O&M) costs, capital and general improvements, and environmental-related capital additions associated with Santee Cooper's existing coal plants were provided by Santee Cooper, based generally upon Santee Cooper's most recent budget, escalated based on the Study's general inflation assumption. Projections included both (i) total costs, which reflect costs that are required to support the long-term operation of the units, and (ii) avoidable costs, which reflect various assumptions regarding costs that could be avoided versus those that would remain under certain retirement scenarios as discussed below for each major cost category:

• **Fixed O&M**. Assumptions were provided for costs that could be avoided under certain retirement scenarios versus those that would remain. This was based on a detailed review of

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O&M budget line items and staff positions to determine those that would not be required in a retirement scenario for the plant, or portion thereof, in question versus those that would continue to be required due to site maintenance issues or given the broader needs of the remaining coal fleet.

- Capital and General Improvements (CGI). Projections were based generally upon a combination of recent historical expenditures and an assessment of requirements over the first several years of the planning horizon, escalated thereafter based on general inflation. For retirement scenarios, the relevant CGI expenditures were assumed completely avoided beginning the year of retirement for the retiring plant or unit(s) in question; however, in addition, it was assumed that CGI expenditures would be reduced somewhat beginning three years prior to retirement.
- Environmental Capital Adds (Enviro Cap Adds). Projections of capital additions associated with environmental compliance included required periodic renewals and replacements on environmental control-related equipment and equipment and work required to comply with regulations associated with coal combustion residuals (CCR) and effluent limit guidelines (ELG). As a definite timeframe for compliance with ELG had not yet been set at the time of Santee Cooper's 2019 Budget, costs associated with ELG compliance were not included in that budget but are included in this Study as required over the next several years. This Study assumes that costs for ELG compliance could be avoided in the event the assumed retirement was within a three- to five-year timeframe of mandated compliance through negotiation with the relevant regulatory authorities.

**Table B-3** below provides projected fixed costs associated with Santee Cooper's coal units over the first several years of the study horizon, after which point costs were generally escalated based on the general inflation assumption. However, O&M costs below include an allowance for maintenance expenses during outage events, resulting in some annual variation in this category.

TABLE B-3
PROJECTED FIXED COSTS ASSOCIATED WITH SANTEE COOPER'S COAL UNITS (\$MILLIONS)

		Winyah		c	ross 1 &	2	С	ross 3 &	4
			Enviro			Enviro			Enviro
	Fixed		Cap	Fixed		Cap	Fixed		Cap
	O&M	CGI	Adds	0&M	CGI	Adds	O&M	CGI	Adds
Total									
2020	47.3	15.0	20.5	15.1	2.7	6.9	53.5	7.9	13.4
2021	42.9	20.0	23.8	26.7	14.2	15.2	55.0	5.9	8.5
2022	47.9	25.1	24.2	16.4	3.6	10.1	51.3	17.3	18.5
2023	45.2	18.7	20.9	16.8	6.9	5.8	52.5	13.0	12.0
2024	46.1	17.3	0.0	24.9	10.2	0.0	53.6	19.1	1.5
2025	50.4	28.5	0.0	17.5	5.8	13.8	54.8	10.9	1.6
2026	46.0	8.0	0.0	17.8	7.4	17.9	56.0	14.0	1.6
2027	54.2	22.2	0.0	26.3	6.9	3.7	57.2	12.9	1.7
Avoidable									
2020	40.3	15.0	10.5	15.1	2.7	1.2	53.5	7.9	4.1
2021	36.0	20.0	17.4	26.6	14.2	12.1	54.9	5.9	5.9
2022	40.8	25.1	24.2	16.3	3.6	6.3	51.2	17.3	14.7
2023	37.9	18.7	20.9	16.6	6.9	3.9	52.3	13.0	10.6
2024	38.7	17.3	0.0	24.7	10.2	0.0	53.5	19.1	1.5
2025	42.9	28.5	0.0	17.3	5.8	13.8	54.6	10.9	1.6
2026	38.4	8.0	0.0	17.7	7.4	17.9	55.8	14.0	1.6
2027	46.4	22.2	0.0	26.2	6.9	3.7	57.1	12.9	1.7

nFront Consulting reviewed the approach used to develop these projections and worked with Santee Cooper to refine them, mostly for consistency with the study's general escalation assumptions. These estimates could change in the future as Santee Cooper continues to evaluate costs required to continue operation of its coal plants over the long term.

# Non-fuel Variable O&M Costs

Estimates of non-fuel variable O&M, or costs for consumables and other O&M costs that vary as a function of unit generation, were provided by Santee Cooper, again based on Santee Cooper's 2019 Budget. **Table B-4** provides the base year variable O&M rates assumed for the coal plants, which were escalated after 2020 based on the general inflation assumption.

Table B-4
Variable O&M Cost Rates Assumed for Coal Plants

Coal Plant	\$/MWh (2020\$)
Cross Plant	2.28
Winyah Plant	3.60

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As discussed further below, these rates were reduced for purposes of making dispatch decisions by the value of gypsum produced as part of the emissions control process, based on historical gypsum production rates and the estimated cost of replacement gypsum that would otherwise have to be purchased from the market and shipped to the plant site.

#### **Gypsum Production and Contract Requirements**

Santee Cooper has contracted with American Gypsum (AG) to deliver significant quantities of gypsum, intended to be produced as a byproduct of emissions control processes at the coal plants, to AG's facility, which is located adjacent to the Winyah plant site. Gypsum is a byproduct of the flue gas desulfurization (FGD) process utilized at Santee Cooper's coal plants to reduce sulfur content in emissions from these plants. To the extent the coal plants do not produce enough wallboard quality gypsum to meet minimum required deliveries under the AG contract, Santee Cooper fulfills any shortfalls by purchasing gypsum in the open market for delivery to the AG site. In order to produce wallboard quality gypsum, the coal units must operate continuously for two to three days. In addition, gypsum produced at the Cross plant must be shipped to the AG site.

For purposes of this Study, the coal units are assumed to produce gypsum, based on historical production rates, that offset requirements under the AG contract. Remaining gypsum requirements to fulfill the AG contract are assumed fulfilled via market purchases, at an assumed cost rate of \$39/ton, escalated at the general inflation rate.<sup>25</sup>

# **Decommissioning Costs**

For purposes of potential coal retirement scenarios, cost estimates to decommission Santee Cooper's existing coal plants or portions thereof and return the site to a brownfield site were developed by Santee Cooper drawing from historical data regarding similar costs at Grainger and Jefferies, two coal plants that were decommissioned by Santee Cooper in approximately 2012. These historical costs were adjusted for plant size and escalated based on the general inflation assumption. **Table B-5** provide the assumed decommissioning costs in 2019 dollars.

TABLE B-5
ASSUMED COAL PLANT DECOMMISSIONING COSTS

Coal Plant	\$Million (2019 \$)
Winyah Plant	33.8
Cross Unit 1 & 2	37.3
Cross Plant	74.6

Decommissioning costs were assumed incurred over a three-year period, beginning the year of decommissioning, based on 25 percent of costs being incurred in the first year, 50 percent in the

<sup>&</sup>lt;sup>25</sup> This Study assumed that additional production from the FGD slurry pond at Winyah would be utilized to produce additional gypsum through a contract with a third party, which is uncertain at this time.

second, and the remainder in the third year. However, for scenarios in which Winyah is retired in stages, decommissioning expense is assumed to be delayed until the entire plant is decommissioned.

#### **EXISTING RESOURCES - RAINEY PLANT**

The Rainey plant consists of a 2x1 natural gas combined cycle (NGCC), two 180 MW F-class natural gas combustion turbine simple cycle (NGCT) units and three 90 MW E-class NGCT units. Fixed and non-fuel variable O&M assumed for these units, based on estimates developed by nFront Consulting, are provided in the table below. For the Rainey NGCTs, no fixed O&M cost were included in the cost projections as these costs would be incurred across any of the scenarios modeled (i.e., the Rainey units are assumed to continue to operate throughout the Study Period for all scenarios evaluated in the Study). While the Rainey NGCC unit is similarly in operation across all scenarios evaluated, for various reasons, a fixed O&M cost rate similar to the value assumed for new NGCC units was retained in the Study but has no impact on comparisons of options or scenarios. These O&M cost estimates generally reflect expected plant staff costs within the fixed component and non-fuel consumables and long-term service agreement costs within the variable component, as the latter are generally related to starts and/or operating hours. For purposes of options reflecting a conversion of the two larger NGCTs into a 2x1 NGCC unit, the fixed O&M assumed for the converted unit was adjusted downward for an allowance for existing fixed O&M at the Rainey plant associated with the original units.

Table B-6

Fixed and Non-Fuel Variable O&M Cost Rates Assumed for Rainey Plant (2020\$)

Unit Type	Fixed (\$/kW-yr.)	Variable (\$/MWh)
Rainey NGCC	7.00	2.50
Rainey NGCTs	_	15.00

#### POTENTIAL RESOURCE OPTIONS

# Conventional, Fully Dispatchable Options

Cost and operating characteristics of potential NGCC, NGCT, and aero-derivative gas turbine resource options, including the conversion of the two larger Rainey NGCTs to combined cycle, were initially provided by Santee Cooper. nFront Consulting reviewed the sources and methodology behind the assumptions and recommended several adjustments, which were adopted for this study. **Table B-7** below provides the operating costs and characteristics that were assumed for fossil-fueled resource options considered to be added to Santee Cooper's system.

TABLE B-7
OPERATING COSTS AND CHARACTERISTICS OF FOSSIL-FUELED RESOURCE OPTIONS

	1 x 1 H-class NGCC	2 x 1 H-class NGCC	Rainey HRSG Conv. <sup>[1]</sup>	Dual-fuel H-class NGCT	Dual-fuel F-class NGCT	Dual-fuel LM6000
Capacity (MW):						
Average Ambient	541	1,081	520	337	231	45
Summer Max	511	1,025	423	317	221	38
Winter Max	549	1,092	520	357	237	50
Capital Costs (\$/kW, 2020\$):						
Generating Unit	616	516	1,630	375	408	1,076
Site Cost <sup>[2]</sup>	23	12	0	15	21	55
Owner's Cost	78	39	195	56	81	71
Total Capital Cost [3]	717	567	1,825	445	510	1,202
Operating Cost (2020\$):						
FOM (\$/kW-yr)	7.50	5.00	7.00	6.00	8.00	10.00
VOM (\$/MWh; incl'd starts)	2.50	2.40	2.50	17.00	15.00	7.00
Full Load Heat Rate (Btu/kWh)	6,400	6,400	7,038	9,200	9,900	9,500

<sup>[1]</sup> Capital costs reflect the addition of 155 MW of capacity (not the resulting NGCC capacity of 520 MW).

nFront Consulting reviewed the capital cost estimates provided by Santee Cooper for a 1x1 H-class NGCC, which reflected General Electric (GE) 7HA.02 equipment. For the Generating Unit cost, nFront Consulting compared the cost per kW provided by Santee Cooper (i.e., \$616/kW in 2020 \$) to the estimated capital costs (including the power island and engineering, procurement, and construction costs) for a similar 1x1 GE 7HA.02 combined cycle, with both estimates being exclusive of owner's costs, site costs, and switchyard and transmission costs, that were provided by GE to nFront in 2017 for a separate study. The estimated capital cost provided by GE at that time for that study was approximately \$594/kW (in 2019 \$) and reflected the same 541 MW net output as assumed for Santee Cooper. Given that this value was less than two percent different than the Generating Unit cost provided by Santee Cooper (after adjusting for inflation), nFront Consulting viewed the original value as a reasonable estimate. Accordingly, the generating unit capital costs for the 1x1 NGCC provided by Santee Cooper were used for the Study. Site and owner's cost estimates were not specifically reviewed by nFront Consulting.

In order to review the capital cost estimates for the 2x1 H-class NGCC, nFront determined the ratio of the cost per kW for the power island and engineering, procurement, and construction costs provided by Mitsubishi for a 2x1 501J NGCC (including two combustion turbines, two heat recovery steam generators, and one steam turbine) to that of a 1x1 501J unit that were provided by Mitsubishi to nFront Consulting in 2017 for a separate study. The ratio of costs indicated that the cost per kW for the 2x1 501J NGCC was approximately 78 percent of the cost for the 1x1 unit. The ratio of the unit capital costs provided by Santee Cooper for a 2x1 GE 7HA.02 and a 1x1 GE 7HA.02 (as shown in the table above) was approximately 84 percent. As this ratio is fairly consistent with the ratio indicated by the Mitsubishi data from the separate nFront study, nFront Consulting viewed the estimated 2x1

<sup>[2]</sup> Includes an allowance for natural gas pipeline interconnection costs

<sup>[3]</sup> Excludes electric interconnection costs

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NGCC capital costs provided by Santee Cooper as reasonable and perhaps conservatively high. Accordingly, the generating unit capital costs for the 2x1 NGCC provided by Santee Cooper were also used for the Study.

It was assumed in analyzing the new resource plan that Santee Cooper would jointly develop and build one or more 2x1 NGCC units with other parties, with Santee Cooper retaining an entitlement to one-half of the unit, thereby taking advantage of the improved economies of scale of the larger NGCC while attaining a resource that fits into Santee Cooper's resource portfolio and resource planning more effectively. For these jointly developed units, it was assumed that Santee Cooper would be entitled to one-half of the unit's capacity and energy output and be responsible for half of the development, construction, and operating cost of the unit, including any natural gas pipeline lateral construction and operating cost.

Capital cost estimates for the Rainey NGCC conversion, the NGCT, and LM6000 options provided by Santee Cooper were also reviewed based on industry experience by nFront Consulting and determined to be reasonable for purposes of the Study.

Fixed and non-fuel variable O&M assumptions for the above described conventional resource options were provided by nFront Consulting and generally reflect expected plant staff costs within the fixed component and non-fuel consumables and long-term service agreement costs within the variable component, as the latter are generally related to starts and/or operating hours.

Full-load heat rates and heat rate curves were initially provided by Santee Cooper based on estimates provided by GE and adjusted upward somewhat by nFront Consulting to be consistent with performance estimates for similar technologies that nFront Consulting has reviewed for other independent studies.

#### Solar

Due to current tax laws and other factors, taxable entities that specialize in solar projects are able to provide solar power at a lower cost than if Santee Cooper undertook such solar projects itself. This Study assumes that Santee Cooper would instead contract for solar power from utility-scale solar facilities developed, owned, and operated by taxable entities through purchase power agreements (PPA). Under such PPAs, the Seller would be responsible over the life of the project for operating, maintaining, and decommissioning its project.

Under the Base Case, energy delivered under such solar PPAs are assumed at a long-term, fixed rate of \$25/MWh, inclusive of transmission interconnection costs. This assumption is based on nFront Consulting and Santee Cooper experience and market knowledge regarding recent offers being made through competitive procurement processes, including some which nFront Consulting has managed, and recent trends in the same. However, for purposes of a sensitivity case, this rate was increased to \$35/MWh.

Solar facilities would be located near Santee Cooper's primary load centers near the coast but would be geographically dispersed to achieve some diversity while maintaining significant economies of scale. As Santee Cooper is winter peaking, with the peak typically occurring during the hour ending 8 AM, solar capacity would not be counted toward peak demand requirements. However, some small capacity value would be achieved toward Santee Cooper's summer peak, which typically occurs in the late afternoon.

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While typical contract terms for PPAs of this nature are 15-25 years, this Study assumes that, based on continued downward cost pressure for PV modules and balance of plant equipment, such contracts could be renewed at the end of their terms and facility refurbishments made to extend the lives of the solar facilities for approximately the same pricing in nominal terms.

Santee Cooper expects to initiate a request for information process within the next few months to obtain prospective pricing and contract terms for solar PPAs from potential counterparties in order to develop a short list of entities to participate in a request for proposal process to be initiated in 2020 and 2021. Santee Cooper expects to execute multiple PPAs for solar resources of 25 MW to 125 MW to provide for an initial tranche of no more than 500 MW of PPA solar.

# Storage

The Study assumes the addition of battery energy storage systems (BESS) with a capacity of 200 MW and 400 MWh (i.e., 2-hour duration) over the 2024-2028 timeframe across Santee Cooper's system, primarily to serve peak requirements during brief winter peak periods when other resources and market power is not available or not available at reasonable cost. As winter peak periods exhibit needle peaks typical of regions with relatively high electric heat penetration, it was determined that BESS facilities of limited duration capability were most appropriate. For this Study, these storage devices were assumed to be utilized in limited circumstances as reserve capacity. Accordingly, this Study assumes low frequency of charge/discharge cycles, which would allow for the useful life of the units to extend through the Study Period. A shorter useful life assumption may be appropriate for other storage devices assumed used for other service duty.

Initial year capital and operating and maintenance costs were provided by Santee Cooper based on information obtained from battery system vendors. nFront Consulting reviewed this information relative to its experience and industry publications and determined that these values were reasonable. nFront Consulting then developed a projection of the future trend of capital cost per kWh of storage capacity based on such projections from similar sources, arriving at the projected installed unit cost data depicted in **Figure B-4** below.

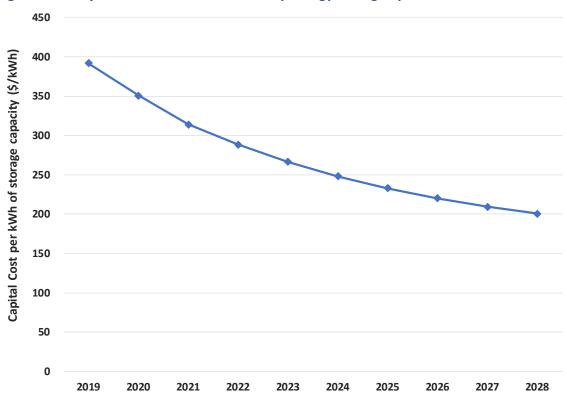


Figure B-4: Projected Installed Cost of Battery Energy Storage Systems

For simplicity and ease of modeling, capital costs for all storage capacity assumed a mid-point over the 2024-2028 period of \$220/kWh (2026 \$) of storage capacity, with installed costs in other years varying from this value based on the general capital cost escalation assumption of 2.5 percent.

# **Demand-side Resources**

Santee Cooper has conducted demand-side management programs aimed at improving the efficiency of residential and commercial end uses for many years. Santee Cooper's load forecast utilized for this Study reflects the latest projections of the level of activity and impacts of these programs through reductions in future peak demand and energy requirements. In addition, however, the Study assumes the implementation of a direct load control program targeting Santee Cooper's winter peak demand and offsetting demand requirements that must otherwise be met by supply-side resources. Finally, Santee Cooper has recently implemented a voltage optimization program intended to reduce system losses and peak demand through improving voltage stability across the system and reducing voltage slightly during peak periods. The implementation of this program was very recent, and no explicit adjustment was made to the load forecast. Hence, any impact from this program is not believed to be reflected in the load forecast.

nFront Consulting reviewed Santee Cooper's projections regarding the capital and operating costs and impacts of its prospective direct load control program. Other than several adjustments, mostly associated with cost escalation, nFront Consulting viewed the cost and impact assumptions as reasonable and representative of a variety of demand-side measures that might be implemented by Santee Cooper over the Study Period. Capital costs of the program, including upfront incentive payments and equipment costs, were estimated at \$145/kW in 2020 dollars. Ongoing program costs,

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including continuing incentives, marketing, call center operations, system licensing, communication fees, and administrative costs varied during the program and tended to be front-loaded. **Figure B-5** depicts the assumed demand-side management program operating cost.

100

90

80

70

40

30

20

10

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039

**Figure B-5: Projected Direct Load Control Program Operating Costs** 

#### **FUEL PRICE FORECASTS**

#### Coal Price

Forecasts for the delivered cost of coal to the Cross and Winyah units were developed by Santee Cooper based on basin forecasts obtained from Energy Ventures Analysis (EVA) and S&P Global (S&P) and rail transportation costs developed by Santee Cooper. Rail transport costs are based on recent experience of Santee Cooper, and generally reflect five-year contracts with cost escalation of 2.5 percent per year during each five-year term. Sources of supply to Santee Cooper's coal units were assumed to include the central Appalachian, north Appalachian, and Illinois basins, with coal burn at each of the Santee Cooper coal-fired generating units reflecting a blend of the basin fuels specific to the need of each resource. The final projected delivered cost reflects discounts of 5 to 10 percent on coal supplies obtained under long-term contracts, versus spot prices, based on Santee Cooper's recent experience negotiating such contracts, and with long-term contract supplying 90 percent of the total fuel burned.

**Figure B-6** depicts the resulting projections of the cost of coal burned at each of the coal units, which reflect nominal cost escalation similar to the general inflation assumptions used in this Study, as

compared to the 2019 Annual Energy Outlook (AEO) Reference Case for the Southeast-VACAR region, adjusted from real dollars reported in the AEO to be consistent with the general inflation assumption utilized in this Study.

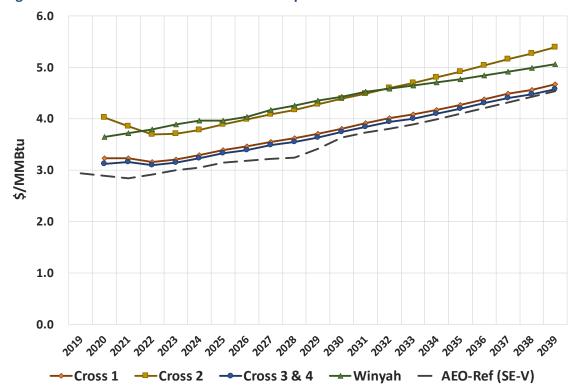


Figure B-6: Cost of Coal Burned at Santee Cooper Coal Plants

nFront Consulting reviewed Santee Cooper's forecast methodology, recommending modifications associated primarily with (i) how the forecasts from EVA and S&P were combined to prepare the base case forecast, and (ii) the source used to compute the discount for long-term contracts. nFront Consulting views the Santee Cooper projections to be reasonable for this Study, particularly as the resulting nominal escalation rates are similar to those reported in the latest AEO Reference Case.

# Natural Gas Commodity Price

Natural gas prices were developed for this Study based on a review of forecasts of Henry Hub prices published in the EIA's AEO and forward price curves developed by OTC Global Holdings. Based on this review and in consultation with Santee Cooper and its advisers, multiple scenarios were developed capturing a broad range of potential market conditions in order to test the sensitivity of power supply portfolio options to varying natural gas prices and the adaptability of resource plans to unfolding scenarios. Basis differentials, commodity adders, and the cost of firm and interruptible gas transmission service for a variety of potential resource sites and delivery configurations were developed based on recent forward differentials, interstate pipeline tariffs, and indicative pricing data provided by pipeline companies

**Figure B-7** depicts forecasts of natural gas prices at Henry Hub in 2018 dollars over the last several iterations of the AEO for the Reference Case (labeled as AEO year-Ref) and for the High Resource and

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Technology Case for the most recent AEO (labeled 2019-High Res/Tech). The data reflect that the successive forecasts of Henry Hub prices published in the AEO have been progressively lowered over the last few iterations of the AEO. This is consistent with the market transformation that has taken place over the last several years with the development of shale gas resources through directional drilling and fracking technology.

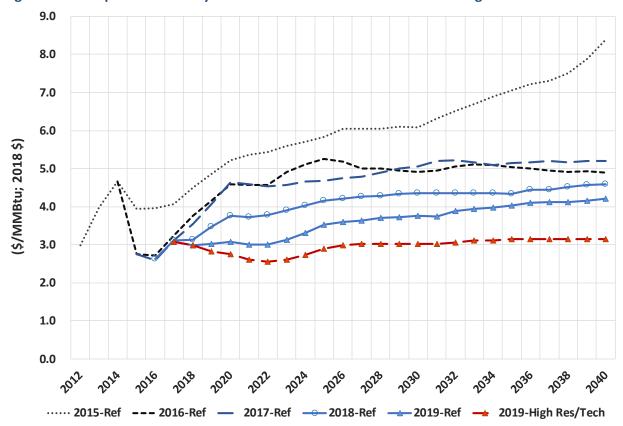


Figure B-7: Comparison of Henry Hub NG Price Forecasts Across AEO Vintages

Forward prices for Henry Hub natural gas developed by OTC Global Holdings from April 2019 were obtained from S&P Global and compared to the most recent AEO Reference and High Resource/Tech Cases. For this purpose, projections taken from the AEO reflected constant dollars and were adjusted to future years based on Santee Cooper's general inflation assumption. As depicted in **Figure B-8**, this comparison indicated that the forward market was most similar to the most recent AEO High Resource/Tech Case, particularly in the early years. As the escalation rates reflected in the forward prices were somewhat higher than those reflected in the AEO High Resource/Tech Case, an extrapolation of the forwards could be expected to close the remaining gap over the longer horizon of the AEO.

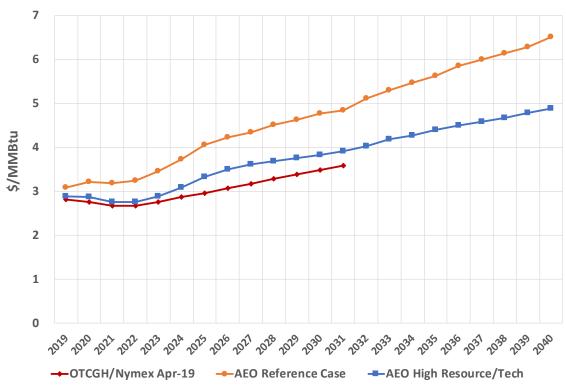


Figure B-8: AEO Forecast Versus Forward Prices for Natural Gas at Henry Hub

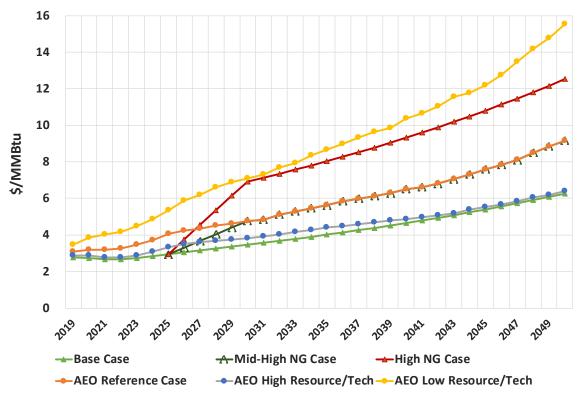
Based on the analyses described above, nFront Consulting developed a Base Case forecast of Henry Hub prices from the April 2019 forwards, extrapolated based on escalation rates reflected in the last few years of data. An additional case, referred to herein as the "Mid-High Case" was developed by adjusting the Base Case forecast upward beginning 2025 to transition to the AEO Reference Case by 2030. Finally, a High Case was developed by similarly transitioning over 2025-2030 to a Henry Hub price that was double the Base Case value. **Figure B-9** depicts these alternative forecasts as compared to the various 2019 AEO cases.

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While the Base Case forecast reflects Henry Hub prices slightly below all of the AEO cases, we considered that the level of projected prices in the AEO Reference and High Resource/Tech Cases have been progressively adjusted downward with each successive iteration of the AEO over the last several years. Given the prevailing market conditions reflect prices at or below the 2019 AEO High Resource/Tech Case, these cases to be published in the 2020 AEO may once again be adjusted downward. To that point, updated forward prices from OTC Global Holdings over the last several weeks are 20-30 cents/MMBtu lower than the forwards from earlier this year that informed this Study's Base Case.

# Firm Natural Gas Transportation

Both the 1x1 and 2x1 NGCC options considered in this study are assumed to utilize firm natural gas transportation. Use of firm natural gas supply for the base loaded NGCC resources is important for several reasons:

- Santee Cooper must be able to rely on the NGCC resources during peak load events, but if fuel supply is not firm, such reliance would not be possible (and reliance may not be permitted from a regulatory perspective);
- (ii) NGCC resources are projected to operate at very high capacity factors over the Study Period and loss of these resources due to an interruption of fuel supply to significantly impact the value of these resources; and

(iii) costs for interruptible transportation service is generally the same as for firm transportation service and high utilization and, given the projected high capacity factors for the NGCC units, little to no cost savings would be expected for interruptible natural gas supply.

The projected cost of firm transportation was developed for each potential NGCC site and delivery configuration based on rate information obtained directly from natural gas pipeline companies or from existing tariffs and gas supply requirements assuming full load operation. For delivery configurations reflecting multiple pipeline systems, rates were effectively pancaked, or added together, in developing the overall cost of firm gas supply.

**Table B-8** provides the firm transportation (FT) reservation rates that were assumed for the various pipeline systems and delivery configurations, with rates being additive for delivery paths going through multiple systems (e.g., delivery over Dominion from Transco to Santee Cooper's Pee Dee site was assumed to reflect a cost rate of Transco Zone 5, or \$0.78/MMBtu, plus the Dominion rate via Transco, or \$1.87/MMBtu, for a total of \$2.65/MMBtu). Similarly, variable transportation service costs (fuel use charges and variable transportation service rates and fees) were added to projected natural gas hub/zone prices to compute the delivered price of natural gas at each site.

At Santee Cooper's direction, for certain scenarios, including the New Resource Plan, it was assumed that the cost of firm gas transportation from the Atlantic Coast Pipeline (ACP) could be reduced by 10 percent through a negotiation process and given wider efforts to establish strategic partnerships with surrounding utilities, including those that make up the consortium of natural gas utilities that are developing the ACP.

TABLE B-8
NG TRANSPORTATION RATES FOR POTENTIAL SITES AND DELIVERY CONFIGURATIONS

		FT Rsrv	<b>Fuel Use</b>	Variable
Santee Site	Report Name	\$/MMBtu	%	\$/MMBtu
	Transco Zone 4	0.7800	1.500%	0.0303
	Transco Zone 5	0.7800	1.500%	0.0303
	SONAT Aiken	0.6900	4.310%	0.0600
	SONAT Elba Express	0.3200	0.980%	0.0013
	<b>Atlantic Coast Pipeline</b>	2.1600	1.000%	0.0041
Jasper	<b>Dominion Elba</b>	0.1300	0.399%	0.0202
Pee Dee	<b>Dominion Transco</b>	1.8700	1.233%	0.0258
Pee Dee	<b>Dominion ACP</b>	0.7100	1.233%	0.0258
Winyah	<b>Dominion Elba</b>	1.1600	1.233%	0.0258
Winyah	<b>Dominion ACP</b>	1.4600	1.233%	0.0258
Summer	<b>Dominion Transco</b>	0.8400	1.233%	0.0258
Summer	<b>Dominion ACP</b>	1.3000	1.233%	0.0258
Pee Dee + Winyah	<b>Dominion Transco</b>	1.5500	1.233%	0.0258
Pee Dee + Winyah	<b>Dominion ACP</b>	0.8400	1.233%	0.0258

#### Natural Gas Pipeline Lateral and Interconnection

For certain potential resource sites, nFront Consulting worked with Santee Cooper to develop alternative delivery configurations involving the building of a lateral from an existing pipeline to the

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plant site. Cost estimates were developed based on data regarding typical pipeline equipment, right-of-way acquisition, permitting, and construction costs and timeframes. **Table B-9** provides the resulting cost estimates for a pipeline lateral intended to deliver natural gas to a 2x1 NGCC unit at full load operation, including both the pipeline itself and compressor station, as needed. These costs are exclusive of the actual natural gas interconnection to the plant site, which is addressed in Site Costs as identified previously.

TABLE B-9
NG PIPELINE LATERAL COST ESTIMATES FOR POTENTIAL SITES AND INTER-STATE PIPELINE SOURCES

Name	Total \$Millions	Cost of Lateral	Compr. Station
ACP to Pee Dee	\$200.0	\$170.0	\$30.0
ACP to Winyah	\$355.0	\$325.0	\$30.0
Transco Z5 to Summer	\$210.0	\$180.0	\$30.0
ACP to Pee Dee + Winyah	\$440.0	\$410.0	\$30.0
TZ4 to Rainey	\$25.0	\$25.0	\$0.0

# Delivered Natural Gas Prices by Generating Site

Utilizing the Base Case Henry Hub forecast described above, nFront Consulting developed forecasts of natural gas prices delivered to each of the existing and proposed sites evaluated for the Study. For each site, delivered natural gas prices were computed by applying variable pipeline transportation fees to forecast prices for specific natural gas hubs and zones assumed to serve each site (i.e., Henry Hub, Transco Zone 4, Transco Zone 5 South, and Dominion South). Forecast hub and zone prices were computed by applying a basis to the forecast Base Case Henry Hub price with the basis computed from hub and zone prices forecast through 2029 by OTC Global Holdings in April 2019 and assuming the basis is constant through the end of the Study Period. Variable transportation costs consistent with fees depicted in Table B-9 were modeled for all new NGCC and NGCT units, and a dollar per MMBtu interruptible transportation charge equivalent to the firm transportation charges depicted in Table B-9 was added to the delivered natural gas price for NGCT's. Additionally, near-term contract arrangements were modeled for the existing generating units at the Rainey Plant.

#### **POWER MARKET PRICES**

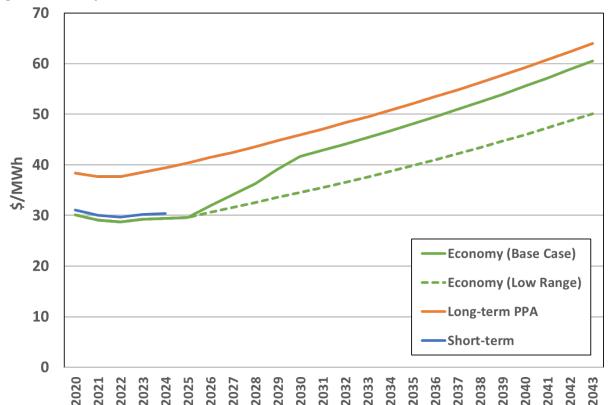
Santee Cooper initially obtained projections from The Energy Authority (TEA) regarding prices for economy energy, as well as pricing for a short-term firm purchase product and a long-term firm purchase power agreement (PPA) that Santee Cooper may be able to secure. It is our understanding that these projections were based on market indicators available to TEA, actual offers TEA was aware of in the market, and projected natural gas prices reflecting a blend of various sources. Detailed parameters of each of the products are discussed below.

• **Economy energy** reflects daily and short-term purchases, with prices varying monthly with natural gas prices and daily based on assumed market conditions. Pricing includes two tiers—Tier 1 for economy purchases up to 650 MW and Tier 2 for all other requirements up to assumed import limits. Tier 1 assumes day-ahead firm energy, while Tier 2 is assumed to be interruptible.

- Long-term PPA reflects a unit-contingent tolling agreement based on NGCC operating and cost parameters. PPA terms of five to twenty years are assumed available beginning no later than 2024.
- Short-term Market reflects 7x24 purchases at fixed annual prices with up to a 5-year term and a maximum purchase of 300 MW. Short-term market transactions were assumed available during the 2020-2025 period.

nFront Consulting adjusted the power market projections to be consistent with each of the natural gas price scenarios for this Study, utilizing the implied heat rate from TEA projections or directly assuming natural gas prices consistent with this study (e.g., for the tolling parameters). In addition to projections of economy energy prices utilizing a Base Case implied heat rate (IHR) from TEA projections, which reflected considerable increases over 2025-2030, nFront Consulting developed a Low Range projection, which reflected a constant implied heat rate beginning 2025.

**Figure B-10** depicts the resulting projections of economy pricing and short-term and long-term firm PPAs to which Santee Cooper was assumed to have access under the Base Case natural gas price scenario.



**Figure B-10: Projected Power Market Prices** 

#### **CARBON REGULATION SCENARIO**

In order to assess the sensitivity and adaptability of potential power supply portfolios to carbon emissions regulation, this Study includes a scenario reflecting a carbon emissions tax. For this

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purpose, nFront Consulting reviewed various legislative proposals and assumptions used in the resource plans of utilities neighboring Santee Cooper. A CO2 Tax scenario has been included in the sensitivity analyses reflecting a CO2 tax of \$15/ton beginning 2027 and escalating annually at \$5/ton until a cap of \$80/ton is reached. **Figure B-11** below depicts the CO2 Tax level assumed for the CO2 Tax Scenario in this Study versus those reflected in recent legislative proposals and those assumed in the recent Integrated Resource Plans of Duke Energy Carolinas and South Carolina Electric and Gas (now Dominion Energy South Carolina).

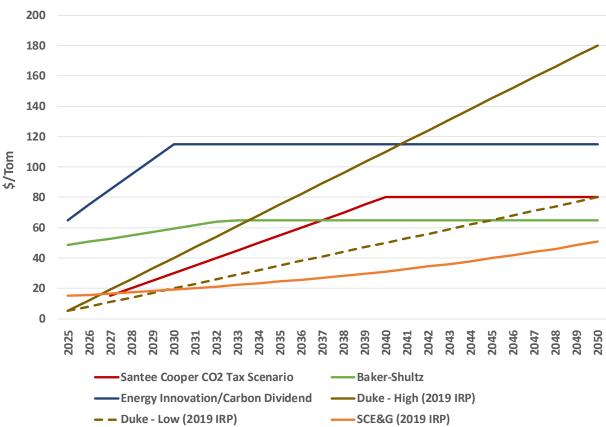


Figure B-11: CO2 Tax Scenario

For this scenario, power market prices were adjusted to reflect a pass through of CO2 costs, based on implied heat rate and representative CO2 emissions rates of natural gas-fired generation.

# BENEFITS OF STRATEGIC PARTNERSHIPS WITH NEIGHBORING UTILITIES

Santee Cooper has a strategic goal to aggressively identify and implement opportunities to reduce costs for customers. This includes efficiencies that can be gained through cooperative efforts with other entities in the areas of coordination of system dispatch, developing new generation, more favorable natural gas supply, capacity and energy transactions, and other efforts to reduce operational costs. To this end, Santee Cooper has initiated discussions with surrounding electric and gas utilities on potential opportunities to reduce capital and operating costs for both entities through coordination and joint efforts regarding operations and future resource development.

In the analysis of the New Resource Plan, based on initial discussions between Santee Cooper and other parties, projected benefits from these efforts are assumed to reduce fuel and O&M costs by approximately \$10M and \$5M per year, respectively. In addition, the projections assume that favorable arrangements regarding firm gas supply can be negotiated and economies of scale in developing and operating new NGCC resources can be achieved through cooperative efforts with other utilities.

#### RESOURCE IMPLEMENTATION SCHEDULES

In order to ensure that changes comprising potential future portfolios are realistic, nFront Consulting developed a series of generation, natural gas pipeline, and transmission facility development schedules based on its experience and in consultation with Santee Cooper.

**Table B-11** provides the estimated time requirements of the major project development phases for NGCC and NGCT resources. An estimate of the duration in months of each phase is provided along with an overall project development duration, reflecting some overlap across the phases, as certain phases tend to be initiated during the final months of the preceding phase.

TABLE B-10
NATURAL GAS RESOURCE DEVELOPMENT SCHEDULE (MONTHS)

	NGCC		NG	CT	
Resource Development Phases	2x1 H	1x1 H	7FA/7HA	LM6000	
Air Permitting Preparation/Submittal/Approval	27	27	18	18	
Engineering (Begins upon Final Approval of Air Permit)	30	27	22	9	
Equipment Procurement (Begins upon Final Approval of Air Permit)	24	24	6	3	
Site Preparation/Construction (Begins during Eng / Equip Procurement)	33	27	12	9	
Project Development Period	66	60	33	30	

**Table B-12** provides the estimated duration (in months) of various required steps in the acquisition of natural gas supply for the potential NGCC resource sites and delivery configurations. The steps include arrangements with major interstate pipeline companies, including both service agreements and upgrade construction by those companies, and permitting and construction of pipeline laterals and related equipment. The former affects all of the potential sites and configurations, while the latter affects only those configurations reflecting supply via a lateral from the source major pipeline. For delivery configuration reflecting delivery over multiple major pipelines, negotiation of service agreements and construction of upgrades would likely reflect concurrent timeframes. Certain aspects

# **2019 Resource Planning Study**

STUDY ASSUMPTIONS

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of the pipeline lateral development would likely be concurrent with construction of major pipeline upgrades.

TABLE B-11
NATURAL GAS SUPPLY ACQUISITION SCHEDULE REQUIREMENTS (MONTHS)

# **Estimated Schedule for Santee Cooper to Acquire New Natural Gas Service Months**

Months	Sites / Pipelines / Lateral						
	Pee	Pee Dee		yah		Summer	
	APC	APC	APC	APC	-	Transco Z5	
Activity	Dominion	Lateral	Dominion	Lateral	Dominion	Lateral	
Pipeline Agreements and							
<u>Upgrades</u>							
Pipeline Service Arrangement(s)	9	9	9	9	9	9	
Pipeline Upgrade Construction Transco	-	-	-	-	36	36	
Pipeline Upgrade Construction Dominion	24	-	24	-	24	-	
Santee Cooper Lateral Construction							
Lateral Planning/Permitting	-	24	-	24	-	24	
Lateral Construction	-	14	-	14	-	14	
Lateral Compressor Construction		4	-	4	-	4	
Schedule Overall - Months	33	51	33	51	45	51	

**Table B-12** provides estimated implementation timeframes for transmission system upgrades required to address potential portfolio changes analyzed as part of the Study.

TABLE B-12
TRANSMISSION SYSTEM UPGRADE IMPLEMENTATION SCHEDULE

Project	Years	Notes
Lead time for Santee decision and required transmission studies	2	Occurs prior to the following construction periods (added to the following schedules)
Planning, design, and permitting		Included in the following.
System upgrades if Winyah is retired	8 - 10	
NGCC at Pee Dee Site (and Winyah retired)	3 - 5	
NGCC at Jasper Site (incremental system upgrade project)	8 - 10	Can be occur simultaneously with the Winyah retire upgrades.
NGCC at Winyah Site	2	No upgrades required. Site interconnection mods only.
Site Interconnection Facilities (part of gen projects)		Can occur simultaneously with the system upgrades.

**Table B-13** provides estimated consolidated implementation schedules across several potential resource options and encompassing the required duration of generation facility development, natural gas supply procurement, and transmission upgrades, as well as the implementation of solar facilities under a PPA arrangement. Based on the assumed approximate timing of a decision to proceed by Santee Cooper of early 2020 and these implementation schedules, the table provides the earliest commercial on-line date. Importantly, these schedule timeframes were developed for modeling purposes to establish reasonable constraints regarding the timing of resource availability and may reflect some conservatism. It should be recognized that Santee Cooper could likely accelerate certain portions of the development timeframes shown below, particularly to the extent it initiates certain early steps in the schedule before making a firm decision and committing significant funds to the implementation of a particular resource.

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TABLE B-13
ESTIMATED NEW RESOURCE IMPLEMENTATION SCHEDULE

				Implementation Schedule (Months)							
Potential Resources	Location	Cap. MW	#	Staging Delay	PPA	Gen	NG	Trans	Max	Total	Earliest CO Date
Convert Existing Rainey F-											
Class CTs to 2x1 NGCC and Retire or Relocate Older CTs	Rainey	550	1	-	-	42	12	24	42	42	Jul-24
	Winyah										
New NGCC-2x1 H-Class	(ACP,	1,081	1	-	-	66	51	24	66	66	Jul-26
	Lateral)										
New NGCC-2x1 H-Class wo	Summer										
ACP	(T Z5,	1,081	1	-	-	66	51	120	120	120	Jan-31
ACP	Lateral)										
New NGCC-2x1 H-Class	PeeDee										
(Second NGCC)	(ACP,	1,081	1	24	-	66	51	72	72	96	Jan-29
(Second NGCC)	Lateral)										
New NGCC-2x1 H-Class wo	Near										
	Summer	1,081	1	24	-	66	51	120	120	144	Jan-33
ACP (Second NGCC)	(T Z5, Lat)										
	PeeDee										
New NGCC-1x1 H-Class	(ACP,	541	2	-	-	60	51	72	72	72	Jan-27
	Lateral)										
New NGC 4-4 H Clearne	Summer										
New NGCC-1x1 H-Class wo	(T Z5,	541	2	-	-	60	51	120	120	120	Jan-31
ACP	Lateral)										
	PeeDee										
New CT H-Class - Dual Fueled	(ACP,	337	2	_	-	33	51	TBD	51	51	Apr-25
	Lateral)										•
	PeeDee										
New CT F-Class - Dual Fueled	(ACP,	231	2	-	-	33	51	TBD	51	51	Apr-25
	Lateral)										•
New LM6000 - Dual Fueled	PeeDee										
	(ACP,	45	#	-	-	30	51	TBD	51	51	Apr-25
	Lateral)										•
	Winyah										
New LM6000 - Dual Fueled	(DOM)	45	#	-	-	30		TBD	30	30	Jul-23
	(2011)										
Long-term NGCC Unit	Off-	600	1	_	12				12	12	Jan-22
Contingent Purchase	system	300	•	_	14	_			12	12	Jan-22

# **APPENDIX C**

**2019 Resource Planning Study** 

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# APPENDIX C — QUALIFICATIONS OF NFRONT CONSULTING

#### INTRODUCTION TO NFRONT CONSULTING

**nFront Consulting LLC** is a consulting firm that brings together very experienced power industry consultants who provide high quality, creative and strategic solutions to complex energy issues. Our services are provided to public power utilities, joint action agencies, power and transmission project developers, organizations involved in the financing of energy projects, consumer-owned and member-owned utilities, and other electric utilities. We are very experienced and aligned with the issues, interests and values of the organizations we serve. Our name "nFront Consulting" represents a commitment on our part to help our clients remain "in front" as they pursue the opportunities and master the challenges presented to them.

We believe nFront Consulting provides special value to Clients for the following reasons:

- **Experience, Talent, and National Reputation**: nFront Consulting provides especially talented consultants prepared to make significant contributions to our client's interests. Each consultant is widely recognized as being exceptionally effective and capable in their areas of expertise. We have extensive experience providing services to a wide range of clients throughout the United States, and in other countries.
- **Services from a Balanced Perspective**: Our team's uniquely balanced analytical, policy, and utility management experience provides special value to each assignment.

nFront Consulting staff have had long term consulting relationships assisting a number of electric utilities at different times throughout their professional careers. Certain of these business relationships have existed on a continuous basis since the utility in question was formed. In addition to serving Santee Cooper, members of nFront Consulting have conducted consulting assignments for the following utilities over many years:

- Alabama Municipal Electric Authority
- Central Municipal Power Agency/Services (formerly CMMPA)
- City of Tallahassee
- City of Gainesville
- Florida Municipal Power Agency
- Golden Spread Electric Cooperative, Inc.
- Idaho Power Company
- Indiana Municipal Power Agency
- Jacksonville Energy Authority ("JEA")
- Kentucky Municipal Power Agency
- Kentucky Municipal Energy Agency
- Lakeland Electric

# **APPENDIX C**

#### 2019 Resource Planning Study

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- Los Angeles Department of Water and Power
- MEAG Power
- Michigan South Central Power Agency
- Nebraska Public Power District
- Orlando Utilities Commission
- Piedmont Municipal Power Agency
- Southern Minnesota Municipal Power Agency
- Wabash Valley Power Association

The consulting services provided to these organizations and others have ranged from feasibility studies, financing reports, annual consulting reports, generation and transmission planning studies, integrated resource planning studies, rate studies, litigation related assistance, contract negotiations, fuel supply analysis, assistance establishing rate and operating policies to improve bond ratings, rating agency meeting assistance, testimony before federal, state, and local courts and regulatory bodies and power supply RFPs. The power supply projects in question across these power supply-related studies have included nuclear, coal, combined cycle, combustion turbine and various types of renewable resources.

Four nFront Consulting team members have significant utility management experience as follows:

- i. Vice President of a large public power utility's generation business unit responsible for coal and natural gas combined cycle resources, fuel procurement, hedging programs, and wholesale market transactions;
- ii. Vice President of Operations responsible for directing operations, engineering, and technical services of the largest natural gas company in Florida;
- iii. Vice President and Chief Operations Officer for a large joint action municipal power agency with responsibility for transmission planning and policy, NERC compliance, and power supply planning and operations; and
- iv. Vice President responsible for managing energy and water regulatory and compliance matters

#### **PROJECT TEAM**

nFront Consulting's 9 project team members bring extensive experience to this project through years of serving in the following roles for public power and investor owned utilities and national consulting firms.

- Senior management of power companies and of generation and planning business units;
- Leading power industry consultants with respect to planning, analysis, financing, cost of service, wholesale and retail electric rates, and decisions to construct and retire generation resources;
- Power plant construction and operations managers;

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- Power supply, demand response, load forecasting, risk analysis, market and fuel price forecasting expertise;
- Senior management responsible for asset, market and bi-lateral transactions; decisions with respect to new generation units and changes in plant construction plans; transmission arrangements; and fuel procurement; and
- Senior management responsible for managing energy and water regulatory and compliance matters.

A brief description of each project team member's experience is included in the following table. Full resumes are available upon request.

LIST OF KEY PERSONNEL	EXPERIENCE AND QUALIFICATIONS
John Painter Executive Consultant	John Painter with nFront Consulting has over 25 years of experience primarily working with joint action agencies and municipal clients. Mr. Painter has assisted with wholesale and retail utility cost of service, cost allocation and rate design; planning, corporate strategic planning, financing, valuing, acquiring, divesting, purchasing, selling, and integrating power supply and demand-side assets, transactions, and portfolios; negotiating and administering related contracts; merger analyses; and related regulatory, arbitration, and litigation proceedings. Mr. Painter is particularly adept at communicating results to public, management, and governing groups in a manner that enables appropriate action by decision-makers. He also has significant experience in facilitating meetings of groups that include individuals with diverse disciplines, backgrounds, and interests.
Bob Davis Executive Consultant	Bob Davis with nFront Consulting has 30 years of experience in the energy industry covering a diversity of subject matter, including: power supply planning, power and fuel procurement, renewable energy, environmental assessments, demand-side planning, market price forecasting, risk management, project development and financing, end-use modeling, load forecasting, wholesale and retail rate design, and strategic business planning. Mr. Davis has served as an expert witness on several subject matters, having testified in federal and several state regulatory proceedings pertaining to integrated resource plans, demand-side plans, distributed energy storage, electric market deregulation, power supply and demand-side RFPs, power project permitting, certification of need, and market power concerns.

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LIST OF KEY PERSONNEL	EXPERIENCE AND QUALIFICATIONS
<i>Jonathan Nunes</i> Senior Economist	Jonathan Nunes with nFront Consulting has more than 25 years of experience in providing consulting services to the electric utility industry, primarily in the areas of power supply resource planning, economic and statistical analysis, and risk analysis. He has led numerous power supply planning efforts, including integrated resource plans, evaluations of supply- and demand-side energy resources (including distributed energy resources), development of demand-side management programs, and feasibility studies that supported bond financing. He has also been responsible for numerous load forecasts and load analytics studies for electric utilities for use in power supply and delivery facilities planning and ratemaking.
Fred Haddad Executive Consultant	Fred Haddad with nFront Consulting has over 35 years of management experience, primarily focused in the electric and water utility industry with demonstrated expertise in power generation development, operations, retail and wholesale power marketing, asset optimization, commodity fuel procurement and risk management, and the negotiation of complex physical and financial transactions. Mr. Haddad has been responsible for the planning, construction, and operation of state-of-the-art traditional and renewable generation assets using best available environmental control technologies.
<b>Brad Kushner</b> Executive Consultant	Brad Kushner with nFront Consulting has more than 15 years of experience in the electric utility consulting industry. During that time, Mr. Kushner has managed or otherwise been involved in various types of engagements, including integrated resource plans (IRPs), power supply studies, and independent engineering assessments (for conventional and renewable technologies). Mr. Kushner has been involved in production cost modeling associated with utility system expansion planning, as well as feasibility studies and economic analysis. He has also provided demand-side management evaluations. Mr. Kushner has been involved in the issuance of power supply requests for proposals (RFPs), evaluations of responses to RFPs, and portfolio evaluations. Mr. Kushner has also presented expert testimony and prepared other experts for testimony related to determination of need proceedings and has also testified under cross examination by intervening parties. He also supports clients in their efforts to comply with the requirements of applicable regulatory framework.

LIST OF KEY PERSONNEL	EXPERIENCE AND QUALIFICATIONS
Frank Gaffney	As Chief Operating Officer for an electric utility, and as National Director for a highly regarded consulting firm, he managed highly successful operations, with a generating fleet performing well above industry average in reliability and efficiency, and highly profitable consulting practices with excellent reputations. He also successfully launched new services / projects for the businesses he served while building partnerships with key business decision makers.
Executive Consultant	Mr. Gaffney led the development of one of the largest municipally sponsored solar projects in the USA. He led the creation of a NERC Standards consulting practice. He co-led the creation of a Security Constrained Economic Dispatch (SCED) / Locational Marginal Pricing (LMP) consulting practice. He led development of a jointly owned transmission project in the Florida Keys to install STATCOMs and a series capacitor. He was a thought leader who influenced NERC regulations in several areas, including risk-based registration and "paragraph 81" efforts. He was a thought leader who created a joint Transmission Operator for municipal utilities in Florida.
Bruce Christmas President, RBC Resources	Mr. Christmas has been involved in the utilities business for over 25 years. As Vice President of Operations at TECO Peoples Gas, he was responsible for directing the operations, engineering, and technical services of the largest natural gas company in Florida from 1997-2001. He then directed fuels management and strategy, including all commodity origination at Tampa Electric and Peoples Gas and wholesale power purchases at Tampa Electric as Vice President. During this time, in addition to management of commodities, he was responsible for large project origination including the development and construction of TECO's first intrastate pipeline, SeaCoast Gas Transmission. Additional responsibilities included the acquisition and integration of a natural gas marketing company with \$800 million in annual revenue. Prior to TECO Peoples Gas, he directed all operations of West Florida Natural Gas until the acquisition by TECO. In his 12 years of directing Natural Gas Operations, he was responsible for the largest distribution pipe expansions in Florida history as well as significant improvements to operating and construction procedures. In his current role as President of RBC Resources, he regularly consults with companies of all sizes concerning their energy related operations.

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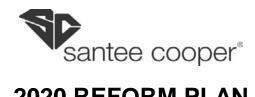
LIST OF KEY PERSONNEL	EXPERIENCE AND QUALIFICATIONS
	As Vice President of Legislative, Regulatory & Compliance, Mr. Merriam was responsible for managing energy and water regulatory and compliance matters for Orlando Utilities Commission ("OUC") from 2009 through June 2019. In that role, he was heavily involved in the development of State of Florida and federal legislative policy. He has worked with the EPA on the development of the Clean Air Act, and Clean Water Act and corresponding Numeric Nutrient Criterion. In addition, Mr. Merriam is responsible for OUC-specific development and implementation of transmission and reliability standards under the Federal Energy Regulatory Commission (FERC), as well as the North American Energy Reliability Commission (NERC).
Chip Merriam Executive Consultant	On behalf of OUC, Mr. Merriam served as a member of the various committees of the Large Public Power Council (LPPC) including the Climate Policy Group, the Nuclear Strategy Group, the Governmental Relations Task Force, Cyber Security Task Force and the Environmental Task Force. He also served on Boards of Directors for the New Water Coalition and is the immediate past Board President of the Florida Municipal Electric Association (FMEA). In addition, he coordinated with the St. Johns River and South Florida water management districts on rule making and policy development issues impacting Central Florida.
	From 1990-2009, Mr. Merriam served as the Deputy Executive Director, Water Resources for the South Florida Water Management District, Florida's largest water management district, serving 16 counties, more than 150 municipalities and more than 7.1 million people.
<b>Matthew Eckhart</b> Consultant	Matt Eckhart with nFront Consulting has 3 years of experience providing consulting services to electric utilities, primarily in the areas of energy resource planning, financial analysis and load and distributed generation data analytics. He has supported a variety of projects including integrated resource planning, supply and demand-side resource evaluations, system load forecasts, distributed generation studies, consulting engineer's reports, benchmarking analysis, and independent transmission assessments



#### **8.4 Financial Forecasts**



## **8.4.1 2020 Reform Plan Electric Operations Financial Forecast**



#### 2020 REFORM PLAN FINANCIAL FORECAST CALENDAR YEAR 2020-2039

**ELECTRIC SYSTEM ONLY** 

**DEVELOPED IN RESPONSE TO ACT 95** 

**DATE: NOVEMBER 2019** 

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### **SECTION I**

# SANTEE COOPER ELECTRIC SYSTEM FORECAST

# SANTEE COOPER ELECTRIC SYSTEM SUMMARY REPORTS

# SANTEE COOPER ELECTRIC SYSTEM GENERATING FACILITY INFORMATION

	FACILITY	IN-SERVICE <u>DATE</u>	LITY (MW) (1) SUMMER	ENERGY SOURCE	
	EXISTING:				
1.	JEFFERIES HYDROELECTRIC GENERATING				
	STATION	1942	140	140	HYDRO
2.	WILSON DAM GENERATING STATION	1950	2	2	HYDRO
3.	MYRTLE BEACH COMBUSTION TURBINES				
	NOS. 1 AND 2	1962	20	16	OIL
	NOS. 3 AND 4	1972	40	38	OIL
	NO. 5	1976	25	21	OIL
4.	HILTON HEAD COMBUSTION TURBINES				
	NO. 1	1973	20	16	OIL
	NO. 2	1974	20	16	OIL
	NO. 3	1979	60	52	OIL
5.	WINYAH GENERATING STATION				
	NO. 1	1975	280	275	COAL
	NO. 2	1977	290	285	COAL
	NO. 3	1980	290	285	COAL
	NO. 4	1981	290	285	COAL
6.	SUMMER NUCLEAR STATION	1983	322	322	NUCLEAR
7.	CROSS GENERATING STATION				
	NO. 1	1995	585	580	COAL
	NO. 2	1983	570	565	COAL
	NO. 3	2007	610	610	COAL
	NO. 4	2008	615	615	COAL
8.	LANDFILL GAS				
	HORRY	2001	3	3	METHANE GAS
	LEE	2005	11	11	METHANE GAS
	RICHLAND	2006	8	8	METHANE GAS
	ANDERSON	2008	3	3	METHANE GAS
	GEORGETOWN	2010	1	1	METHANE GAS
	BERKELEY	2011	3	3	METHANE GAS
9.	J.S. RAINEY GENERATING STATION				
0.	COMBINED CYCLE NO. 1	2002	520	460	GAS
	COMBUSTION TURBINE NO. 2A	2002	180	146	GAS
	COMBUSTION TURBINE NO. 2B	2002	180	146	GAS
	COMBUSTION TURBINE NO. 3, 4, & 5	2004	<u>270</u>	225	GAS
			<u>=.v</u>	==-	5. 10

<u>5,358</u>

<u>5,129</u>

TOTAL EXISTING CAPABILITY

10.

<sup>(1)</sup> EXISTING GENERATING UNIT NET RATINGS.

## SANTEE COOPER ELECTRIC SYSTEM ESTIMATED FINANCING REQUIREMENTS (DOLLARS IN MILLIONS)

	<u>DATE</u>	DESCRIPTION	<u>PURPOSE</u>	AMOUNT ISSUED (1)	DEBT <u>RETIRED</u>	NEW MONEY ISSUED-NET
1.	2020	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS PEE DEE PROJECT ECONOMIC DEVELOPMENT LOAN 2015BC REFUNDING TRANSITION RULE VOLVO PROJECT TRUNKED RADIO UPGRADE FUEL INVENTORY/LEVELIZATION ENVIRONMENTAL PROJECTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS FERC CAPITAL	0.0 0.0 9.9 0.0 0.0 0.7 0.0 52.1 21.9 8.6 4.2	9.9 10.5 10.0 5.8 2.5 0.0 16.1 0.0 0.0 0.0	(9.9) (10.5) (0.1) (5.8) (2.5) 0.7 (16.1) 52.1 21.9 8.6 4.2
2.	2021	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS FERC CAPITAL FUEL INVENTORY/LEVELIZATION CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS	37.5 12.9 0.1 49.4 19.5 26.6 1.4 2.7 0.0 67.4 82.2	1.9 12.4 0.0 82.2 0.0 63.6 0.0 0.0 10.0 0.0	35.6 0.4 0.1 (32.9) 19.5 (37.0) 1.4 2.7 (10.0) 67.4 82.2
3.	2022	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE WORKING CAPITAL ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS FERC CAPITAL CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CTS TRANSMISSION SPECIAL PROJECTS FUTURE NATURAL GAS CTS TRANSMISSION SPECIAL PROJECTS FERC CAPITAL	0.0 6.9 0.0 0.0 50.3 11.1 36.2 23.2 12.3 3.9 23.2 135.3 55.7 40.3 10.8	1.9 11.5 1.1 20.9 135.3 0.0 55.7 23.2 40.3 10.8 0.0 0.0 0.0	(1.9) (4.6) (1.1) (20.9) (85.0) 11.1 (19.5) 0.0 (28.0) (6.9) 23.2 135.3 55.7 40.3 10.8
4.	2023	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS FERC CAPITAL	0.0 0.0 3.1 0.0 52.1 22.4 53.9 19.3 20.2 2.1	1.9 0.5 8.6 1.1 0.0 0.0 0.0 0.0 0.0	(1.9) (0.5) (5.5) (1.1) 52.1 22.4 53.9 19.3 20.2 2.1
5.	2024	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS TRANSMISSION SPECIAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL	0.0 0.0 3.5 0.0 72.3 105.7 5.5 24.5 19.0 24.8 2.6 43.8 124.4 139.2 59.3 39.2 24.8 4.7	1.9 0.5 7.1 1.1 124.4 139.2 59.3 43.8 39.2 24.8 4.7 0.0 0.0 0.0 0.0 0.0 0.0	(1.9) (0.5) (3.5) (1.1) (52.1) (33.5) (53.9) (19.3) (20.2) 0.0 (2.1) 43.8 124.4 139.2 59.3 39.2 24.8 4.7
6.	2025	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS 2003-A CASH DEFEASANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL	0.0 0.0 3.8 0.0 19.6 149.7 26.2 16.8 1.8	1.9 0.5 9.5 1.1 0.0 0.0 0.0 0.0 0.0	(1.9) (0.5) (5.7) (1.1) 19.6 149.7 26.2 16.8 1.8
7.	2026	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL	0.0 0.0 2.8 0.0 8.8 123.9 31.6 4.6 20.2 1.2 57.8 28.4 273.6 21.4 22.0 2.5	1.9 0.5 8.7 1.1 28.4 273.6 57.8 21.4 22.0 2.5 0.0 0.0 0.0	(1.9) (0.5) (5.9) (1.1) (19.6) (149.7) (26.2) (16.8) (1.8) (1.2) 57.8 28.4 273.6 21.4 22.0 2.5
8.	2027	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 CAPITAL TRANSMISSION BATTERY STORAGE	0.0 0.0 2.1 0.0 9.2 28.5 35.0 4.5	1.9 0.5 14.9 1.1 0.0 0.0 0.0	(1.9) (0.5) (12.8) (1.1) 9.2 28.5 35.0 4.5

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ESTIMATED FINANCING REQUIREMENTS (DOLLARS IN MILLIONS)

	<u>DATE</u>	<u>DESCRIPTION</u>	<u>PURPOSE</u>	AMOUNT ISSUED (1)	DEBT <u>RETIRED</u>	NEW MONEY ISSUED-NET
9.	2028	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 CAPITAL TRANSMISSION BATTERY STORAGE CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 BATTERY STORAGE FERC CAPITAL	0.0 0.0 1.7 0.0 14.6 17.1 36.9 37.9 71.9 23.8 45.6 40.2 2.2	1.9 0.5 2.9 1.1 23.8 45.6 71.9 42.4 0.0 0.0 0.0	(1.9) (0.5) (1.2) (1.1) (9.2) (28.5) (35.0) (4.5) 71.9 23.8 45.6 40.2 2.2
10.	2029	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS CAPITAL TRANSMISSION BATTERY STORAGE	0.0 0.0 1.7 0.0 12.6 33.7 1.1	1.9 0.5 1.7 1.1 0.0 0.0	(1.9) (0.5) 0.0 (1.1) 12.6 33.7 1.1
11.	2030	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN2 TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS CAPITAL TRANSMISSION FERC CAPITAL CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS FERC CAPITAL	0.0 0.0 1.6 0.0 0.3 30.4 1.5 64.1 13.0 2.6	1.9 0.5 1.6 1.1 13.0 64.1 2.6 0.0 0.0	(1.9) (0.5) 0.0 (1.1) (12.6) (33.7) (1.1) 64.1 13.0 2.6
12.	2031	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 1.1 0.0 31.2 6.1	1.9 0.5 1.1 1.1 0.0 0.0	(1.9) (0.5) 0.0 (1.1) 31.2 6.1
13.	2032	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 1.1 0.0 31.6 10.8 62.8 16.8	1.9 0.5 1.1 1.1 62.8 16.8 0.0	(1.9) (0.5) 0.0 (1.1) (31.2) (6.1) 62.8 16.8
14.	2033	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.6 0.0 33.6 11.1	1.9 0.6 1.1 0.0 0.0	(1.9) 0.0 (1.1) 33.6 11.1
15.	2034	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.1 0.0 50.8 10.5 84.5 21.5	1.9 0.1 1.1 84.5 21.5 0.0 0.0	(1.9) 0.0 (1.1) (33.6) (11.1) 84.5 21.5
16.	2035	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 32.3 5.7	1.9 1.1 0.0 0.0	(1.9) (1.1) 32.3 5.7
17.	2036	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 29.5 5.7 61.7 11.3	1.9 1.1 61.7 11.3 0.0 0.0	(1.9) (1.1) (32.3) (5.7) 61.7 11.3
18.	2037	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 36.1 5.3	1.9 1.1 0.0 0.0	(1.9) (1.1) 36.1 5.3
19.	2038	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 34.1 1.2 98.1 7.7	1.9 1.1 70.2 6.6 0.0 0.0	(1.9) (1.1) (36.1) (5.3) 98.1 7.7
20.	2039	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS TRUNKED RADIO UPGRADE	0.0 0.0	1.9 1.1	(1.9) (1.1)

<u>3,727.7</u> <u>2,079.8</u> <u>1,647.9</u> TOTAL

2020 REFORM PLAN

# SANTEE COOPER ELECTRIC SYSTEM PROJECTED POWER SUPPLY RESOURCES AND LOADS FOR THE CALENDAR YEARS 2020 - 2039 (MW)

	<b>2020</b> <u>Winter</u>	Summer	202	1 Summer	202 Winter	2 Summer	202 Winter	3 Summer	2024 Winter	Summer	2025 Winter	Summer	2026 Winter	Summer	2027 Winter	7 Summer	202 Winter	8 Summer	202 Winter	9 Summer	203 Winter	0 Summer	203 Winter	1 Summer	203 Winter	2 Summer	2033 Winter	Summer	2034 Winter	Summer	2035 Winter	Summer	2030 Winter	6 Summer	203 Winter	Summer	203 Winter	8 Summer	<b>203</b> Winter	Summer
POWER SUPPLY RESOURCES: GENERATING CAPABILITY  1. EXISTING 2. FUTURE CC 3. FUTURE CTS 4. LESS: OTHER RETIREMENTS 5. LESS: WINYAH 1 & 2 6. LESS: WINYAH 3 & 4 7. TOTAL GENERATING CAPABILITY	0 0 20 0 0	5,129 0 0 19 0 0 5,110	5,358 0 0 20 0 0 5,338	5,129 0 0 19 0 0	5,358 0 0 20 0 0 0	5,129 0 0 19 0 0	5,358 0 100 20 0 580 4,858	5,129 0 76 19 0 570 4,616	5,358 0 100 20 0 <u>580</u> 4,858	5,129 0 76 19 0 <u>570</u>	5,358 0 100 20 0 580 4,858	5,129 0 76 19 0 <u>570</u>	5,358 0 100 20 0 580 4,858	5,129 0 76 19 0 570 4,616	5,358 549 100 20 570 580 4,837	5,129 511 76 19 560 <u>570</u> 4,567	5,358 549 100 20 570 580 4,837	5,129 511 76 19 560 <u>570</u> 4,567	5,358 549 100 20 570 <u>580</u> 4,837	5,129 511 76 19 560 <u>570</u> 4,567	5,358 549 100 20 570 <u>580</u> 4,837	5,129 511 76 19 560 570 4,567	5,358 549 100 20 570 580 4,837	5,129 511 76 19 560 570 4,567	5,358 549 100 20 570 580 4,837	5,129 511 76 19 560 <u>570</u> 4,567	5,358 549 100 20 570 580 4,837	5,129 511 76 19 560 570 4,567	5,358 549 100 20 570 580 4,837	5,129 511 76 19 560 570 4,567	5,358 549 100 20 570 580 4,837	5,129 511 76 19 560 <u>570</u> 4,567	5,358 549 100 20 570 580 4,837	5,129 511 76 19 560 570 4,567	5,358 549 100 20 570 <u>580</u> 4,837	5,129 511 76 19 560 <u>570</u> 4,567	5,358 549 100 20 570 580 4,837	5,129 511 76 19 560 <u>570</u> 4,567	5,358 549 100 20 570 580 4,837	5,129 511 76 19 560 570 4,567
SEPA ALLOCATION     ST. STEPHEN HYDRO PLANT	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84	305 84
DIRECT LOAD CONTROL/DEMAND     RESPONSE & BATTERY STORAGE     CONTRACT PURCHASES	10 227	10 227	15 227	15 227	25 <u>227</u>	25 227	50 252	50 227	125 227	125 227	150 227	150 227	225 189	225 189	250 189	250 189	355 189	355 189	360 <u>36</u>	360 <u>36</u>	365 <u>36</u>	365 <u>36</u>	370 <u>71</u>	370 <u>71</u>	375 126	375 126	380 <u>176</u>	380 <u>176</u>	385 231	385 231	390 286	390 286	395 346	395 <u>346</u>	400 401	400 401	400 461	400 <u>461</u>	400 <u>526</u>	400 <u>526</u>
12. TOTAL POWER SUPPLY RESOURCES	<u>5,979</u>	<u>5,736</u>	<u>5,969</u>	<u>5,741</u>	<u>5,979</u>	<u>5,751</u>	<u>5,549</u>	<u>5,282</u>	<u>5,599</u>	<u>5,357</u>	5,624	<u>5,382</u>	<u>5,661</u>	<u>5,419</u>	<u>5,665</u>	<u>5,395</u>	<u>5,770</u>	<u>5,500</u>	<u>5,622</u>	<u>5,352</u>	<u>5,627</u>	<u>5,357</u>	<u>5,667</u>	5,397	<u>5,727</u>	<u>5,457</u>	<u>5,782</u>	<u>5,512</u>	<u>5,842</u>	5,572	<u>5,902</u>	<u>5,632</u>	5,967	5,697	6,027	<u>5,757</u>	6,087	<u>5,817</u>	<u>6,152</u>	<u>5,882</u>
TERRITORIAL PEAK DEMAND     INC LOSSES (1)      OFF SYSTEM SALES      NON-FIRM SALES (2)      FUTURE DEMAND-SIDE	203 (401)	281 (404)	5,161 184 (401)	4,647 289 (404)	5,197 190 (401)	4,681 296 (404)	5,231 196 (401)	4,712 303 (404)	5,273 152 (401)	4,745 260 (404)	5,313 159 (401)	4,787 235 (404)	141 (401)	4,825 241 (404)	5,398 125 (401)	4,865 232 (404)	5,447 130 (401)	4,904 239 (404)	5,288 136 (401)	4,748 245 (404)	5,325 141 (401)	4,784 251 (404)	5,366 146 (401)	4,826 257 (404)	5,413 152 (401)	4,867 263 (404)	5,456 157 (401)	4,916 270 (404)	5,503 162 (401)	4,961 276 (404)	5,551 168 (401)	5,007 276 (404)	5,605 173 (401)	5,052 282 (404)	5,652 179 (401)	5,104 288 (404)	5,703 184 (401)	5,153 295 (404)	5,753 190 (401)	5,202 301 (404)
MANAGEMENT PROGRAMS	<u>(14)</u>	(15)	(14)	(15)	(14)	(15)	(14)	<u>(15)</u>	(14)	<u>(15)</u>	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	<u>(15)</u>
TOTAL  18. LOAD NOT REQUIRING RESERVES	•	4,485	4,933	4,520 (595)	4,975 (EDE)	4,561 (EDE)	5,015 (EDE)	4,599 (EDE)	5,014	4,590	5,060	4,606	-	4,650	(543)	(543)	5,165	4,726	5,012	4,5//	5,054	4,619	5,100	4,668	5,153	4,/15	5,201	4,770	.,	4,821	5,307	(390)	5,366	4,925	5,419	4,983	5,475	5,039	5,532	5,094
TOTAL LOAD REQUIRING RESERVES  19. TOTAL LOAD REQUIRING RESERVES	<u>(595)</u> 4,296	(595) 3,890	(595) 4 339	3.925	(595) 4 380	(595) 3,966	( <u>595)</u> 4.420	(595) 4,003	<u>(544)</u> 4,470	<u>(544)</u> 4 046	<u>(543)</u> 4.517	<u>(543)</u> 4,063	<u>(543)</u> 4,541	<u>(543)</u> 4,107	4,568	4,138	(543) 4 622	(543) 4.183	4.623	4.188	(389) 4 665	(389) 4,230	4,711	(389) 4,279	(389) 4,764	(389) 4 326	4.812	(389) 4 381	(389) 4 864	(389) 4.432	(389) 4 918	(389) 4.485	(389) 4 977	4 536	(389) 5.030	<u>(389)</u> 4 594	(389) 5,086	(389) 4 650	(389) 5,143	<u>(389)</u> 4,705
20. POWER SUPPLY RESERVES	·	1,251	1,036	1,221	1,003	1,190	533	684	584	767	563	776	576	769	553	714	604	774	609	775	572	738	566	729	573	742	580	742	588	751	595	758	601	772	608	774	612	778	620	788
21. PERCENT RESERVE MARGIN	25%	32%	24%	31%	23%	30%	12%	17%	13%	19%	12%	<u>19%</u>	13%	19%	12%	17%	13%	19%	13%	19%	12%	<u>17%</u>	12%	17%	12%	<u>17%</u>	12%	<u>17%</u>	12%	<u>17%</u>	12%	<u>17%</u>	12%	<u>17%</u>	12%	<u>17%</u>	<u>12%</u>	<u>17%</u>	<u>12%</u>	<u>17%</u>
22. EXCESS CAPACITY ABOVE PLANNING RESERVES (3)	<u>573</u>	668	<u>515</u>	<u>631</u>	<u>476</u>	<u>594</u>	<u>2</u>	<u>83</u>	<u>48</u>	<u>160</u>	<u>20</u>	<u>166</u>	<u>31</u>	<u>153</u>	<u>5</u>	<u>92</u>	<u>49</u>	146	<u>53</u>	<u>146</u>	<u>12</u>	<u>103</u>	<u>o</u>	<u>87</u>	<u>0</u>	<u>93</u>	<u>2</u>	<u>84</u>	<u>4</u>	<u>85</u>	<u>4</u>	<u>84</u>	<u>3</u>	<u>91</u>	<u>3</u>	<u>84</u>	1	<u>80</u>	<u>2</u>	<u>81</u>

DEMAND PROJECTIONS ARE BASED ON LF 1902 INCLUDING CSP.
 INCLUDES INTERRUPTIBLE AND ECONOMY POWER SALES.
 PLANNING RESERVES REPRESENT: 2020-2039: WINTER 12%, SUMMER 15%.

SANTEE COOPER EXHIBIT IV

### ELECTRIC SYSTEM GENERATION SOURCES

FOR THE CALENDAR YEARS 2020 - 2039 (GWH)

		<u>2020</u>	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	2032	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1.	HYDRO	414	401	400	400	402	399	398	398	399	398	397	397	398	399	398	398	399	399	397	397
2.	SOLAR	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7
3.	WINYAH NO. 1	42	98	17	66	38	66	75	0	0	0	0	0	0	0	0	0	0	0	0	0
4.	WINYAH NO. 2	213	409	397	314	299	265	455	0	0	0	0	0	0	0	0	0	0	0	0	0
5.	WINYAH NO. 3	12	25	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.	WINYAH NO. 4	17	27	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.	CROSS 1	1,926	1,657	2,148	2,177	1,715	1,739	2,132	1,335	1,369	1,445	1,538	1,535	1,462	1,479	1,624	1,559	1,354	1,410	1,211	1,216
8.	CROSS 2	120	54	131	286	117	101	242	187	192	212	231	221	335	260	254	286	304	268	293	153
9.	CROSS 3	3,310	3,935	3,698	3,908	3,101	3,717	3,377	2,876	2,713	3,546	3,101	3,449	3,093	3,442	2,741	3,470	2,740	2,879	2,617	2,946
10.	CROSS 4	3,760	3,796	4,431	4,132	4,681	3,658	4,646	3,604	4,127	3,932	4,022	3,608	4,183	3,687	3,814	3,681	3,691	3,200	3,805	3,258
11.	SUMMER NUCLEAR	2,486	2,494	2,820	2,516	2,524	2,821	2,556	2,556	2,828	2,555	2,557	2,820	2,564	2,552	2,820	2,555	2,564	2,820	2,556	2,548
12.	MYRTLE BEACH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13.	HILTON HEAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14.	RAINEY COMBUSTION TURBINES 2A, 2B, 3, 4, & 5	2,583	2,504	1,922	1,737	1,108	349	674	214	50	131	79	86	70	35	32	34	40	18	36	32
15.	COMBUSTION TURBINESFUTURE	0	0	0	0	1	1	2	1	1	1	1	0	1	1	1	1	1	1	1	1
16.	RAINEY COMBINED CYCLES	3,812	3,873	3,927	3,781	3,638	4,076	4,005	3,777	3,921	3,314	3,870	3,867	3,640	3,849	3,797	3,240	3,950	3,937	3,689	3,973
17.	COMBINED CYCLEFUTURE	0	0	0	0	0	0	0	4,290	4,274	4,260	4,235	3,962	3,968	3,900	3,903	3,900	3,895	3,877	3,944	3,942
18.	LANDFILL GAS	76	76	76	76	76	76	76	75	75	75	74	74	75	74	74	74	74	74	74	74
19.	SEPA PURCHASES	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172
20.	RENEWABLE RESOURCE PURCHASES	705	945	1,298	2,118	3,297	3,174	2,651	3,228	3,460	3,610	3,770	3,753	3,748	3,719	3,702	3,685	3,680	3,651	3,635	3,618
20.	PURCHASED POWER AGREEMENTS 2031	0	0	0	0	0	0	0	0	0	0	0	307	791	1,226	1,708	2,190	2,718	3,145	3,532	3,765
21.	OTHER PURCHASES	<u>4,843</u>	<u>4,226</u>	<u>3,382</u>	<u>3,370</u>	<u>3,871</u>	<u>4,482</u>	<u>3,725</u>	<u>2,593</u>	2,007	<u>1,725</u>	<u>1,536</u>	<u>1,538</u>	<u>1,529</u>	<u>1,437</u>	<u>1,427</u>	<u>1,442</u>	<u>1,379</u>	<u>1,303</u>	<u>1,285</u>	<u>1,371</u>
22.	TOTAL GENERATION SOURCES	<u>24,499</u>	<u>24,700</u>	<u>24,894</u>	<u>25,061</u>	<u>25,048</u>	<u>25,104</u>	<u>25,194</u>	<u>25,314</u>	<u>25,596</u>	<u>25,384</u>	<u>25,591</u>	<u>25,797</u>	<u>26,037</u>	<u>26,240</u>	<u> 26,474</u>	<u>26,694</u>	<u>26,968</u>	<u>27,161</u>	<u>27,254</u>	<u>27,473</u>

SANTEE COOPER
11/20/19

SANTEE COOPER
ELECTRIC SYSTEM

ELECTRIC SALES FOR THE CALENDAR YEARS 2020 - 2039

(GWH)

EXHIBIT V

			<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1. 2.	DISTRIBUTION SERVICE:	RESIDENTIAL COMMERCIAL	1,808 2,018	1,819 2,018	1,845 2,039	1,867 2,066	1,892 2,093	1,925 2,121	1,954 2,148	1,982 2,173	2,007 2,197	2,032 2,219	2,055 2,240	2,077 2,269	2,097 2,298	2,119 2,328	2,141 2,350	2,163 2,373	2,184 2,395	2,205 2,418	2,229 2,440	2,251 2,462
3.	INDUSTRIAL (1)		4,890	4,912	4,912	4,912	4,912	4,912	4,912	4,912	4,912	4,492	4,492	4,492	4,492	4,492	4,492	4,492	4,492	4,492	4,492	4,492
4. 5. 6.	WHOLESALE:	MUNICIPAL CENTRAL OFF-SYSTEM (2)	174 14,597 <u>731</u>	173 14,761 <u>739</u>	173 14,888 <u>754</u>	173 14,982 <u>769</u>	172 15,134 <u>552</u>	172 15,222 <u>458</u>	172 15,340 <u>370</u>	171 15,468 <u>303</u>	171 15,642 <u>359</u>	171 15,748 <u>417</u>	171 15,863 <u>459</u>	170 15,994 <u>483</u>	170 16,169 <u>500</u>	170 16,269 <u>547</u>	170 16,415 <u>587</u>	170 16,568 <u>604</u>	170 16,770 <u>630</u>	169 16,892 <u>662</u>	169 17,052 <u>546</u>	169 17,213 <u>561</u>
7.	TOTAL ELECTRIC SALES		<u>24,218</u>	24,422	<u>24,611</u>	<u>24,769</u>	<u>24,755</u>	<u>24,810</u>	24,896	<u>25,009</u>	<u>25,288</u>	<u>25,079</u>	<u>25,280</u>	<u>25,485</u>	<u>25,726</u>	<u>25,925</u>	<u> 26,155</u>	<u>26,370</u>	<u> 26,641</u>	<u> 26,838</u>	<u>26,928</u>	<u>27,148</u>

(1) INCLUDES NON-FIRM SALES FOR INTERRUPTIBLE AND ECONOMY POWER AND EXCLUDES CUSTOMER SUPPLIED POWER
(2) INCLUDES SALES TO SCE&G FOR NAVY, PMPA, AMEA, CITY OF SENECA, TOWN OF WAYNESVILLE, AND MARKET SALES.

SANTEE COOPER 2020 REFORM PLAN EXHIBIT VI

#### **ELECTRIC SYSTEM**

ELECTRIC OPERATING REVENUES FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		2020	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	<u>2026</u>	2027	2028	<u>2029</u>	<u>2030</u>	<u>2031</u>	2032	2033	<u>2034</u>	2035	<u>2036</u>	<u>2037</u>	2038	2039
1	1. DISTRIBUTION SERVICE	391,398	391,979	393,565	398,427	404,767	413,316	423,542	430,652	439,665	451,020	458,305	467,140	478,755	487,117	496,403	507,969	514,366	523,442	535,846	544,298
2	2. INDUSTRIAL (1)	234,911	234,396	229,277	229,411	230,086	233,283	236,737	229,491	234,228	212,522	215,173	217,906	222,180	223,918	226,453	231,502	232,757	235,926	241,191	244,074
3 4 5	3. WHOLESALE: MUNICIPAL 4. CENTRAL 5. OFF-SYSTEM (2)	10,208 1,042,087 44,801	10,116 1,046,998 43,890	9,937 1,034,856 44,467	9,906 1,034,953 45,686	9,913 1,039,378 32,038	9,979 1,063,781 29,060	10,101 1,089,346 25,267	10,148 1,107,625 20,523	10,290 1,126,090 23,736	10,503 1,164,395 26,820	10,574 1,176,767 29,513	10,673 1,196,695 31,210	10,860 1,225,120 32,918	10,927 1,240,234 35,794	11,060 1,263,325 38,418	11,280 1,290,760 40,344	11,312 1,311,796 42,501	11,441 1,336,338 45,066	11,674 1,391,187 39,357	11,776 1,413,351 41,044
6	6. OTHER	16,909	16,397	18,346	19,140	19,638	20,033	20,597	21,292	21,703	22,251	23,859	23,398	25,630	25,867	26,574	27,343	28,306	29,093	30,089	<u>31,185</u>
7	7. SUBTOTAL	1,740,314	1,743,776	1,730,448	1,737,523	1,735,820	1,769,452	1,805,590	1,819,731	1,855,712	1,887,511	1,914,191	1,947,022	1,995,463	2,023,857	2,062,233	2,109,198	2,141,038	2,181,306	2,249,344	2,285,728
8	8. PROJECTED RATE ADJUSTMENTS (3)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>833</u>	<u>5,075</u>	<u>5,150</u>	5,227	<u>5,305</u>	<u>5,384</u>	<u>5,464</u>	<u>5,545</u>	<u>5,628</u>	<u>5,712</u>	<u>5,797</u>	<u>5,883</u>	<u>5,971</u>	6,060
9	9. TOTAL OPERATING REVENUES	1,740,314	1,743,776	1,730,448	1,737,523	1,735,820	1,769,452	1,806,423	1,824,806	1,860,862	1,892,738	1,919,496	1,952,406	2,000,927	2,029,402	2,067,861	2,114,910	2,146,835	2,187,189	2,255,315	2,291,788

<sup>(1)</sup> INCLUDES REVENUES FROM INTERRUPTIBLE AND ECONOMY POWER.

<sup>(2)</sup> INCLUDES SALES TO SCE&G FOR NAVY, PMPA, AMEA, CITY OF SENECA, TOWN OF WAYNESVILLE, AND MARKET SALES.

<sup>(3)</sup> ADJUSTMENTS ARE CUMULATIVE

11/20/19

**SANTEE COOPER** 2020 REFORM PLAN EXHIBIT VII

#### **ELECTRIC SYSTEM**

#### CASH RECEIPTS & DISBURSEMENTS STATEMENT

**REVENUE & OPERATING FUNDS** FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	2023	<u>2024</u>	2025	2026	2027	2028	2029	<u>2030</u>	<u>2031</u>	2032	2033	2034	<u>2035</u>	<u>2036</u>	2037	<u>2038</u>	2039
1. 2. 3.	RECEIPTS: OPERATING REVENUES FRANCHISE TAXES INTEREST AND MISCELLANEOUS INCOME (1)	1,740,314 5,824 <u>11,151</u>	1,743,776 5,833 <u>11,309</u>	1,730,448 5,856 12,404	1,737,523 5,929 12,487	1,735,820 6,023 13,427	1,769,452 6,150 <u>13,167</u>	1,806,423 6,302 12,841	1,824,806 6,408 12,021	1,860,862 6,542 12,149	1,892,738 6,711 <u>11,494</u>	1,919,496 6,820 <u>11,484</u>	1,952,406 6,951 <u>11,311</u>	2,000,927 7,124 <u>11,205</u>	2,029,402 7,248 11,018	2,067,861 7,386 11,083	2,114,910 7,559 10,653	2,146,835 7,654 10,428	2,187,189 7,789 <u>10,742</u>	2,255,315 7,973 10,831	2,291,788 8,099 10,419
4.	TOTAL RECEIPTS	1,757,289	1,760,918	1,748,708	1,755,939	1,755,270	1,788,769	1,825,566	1,843,235	1,879,553	1,910,943	1,937,800	1,970,668	2,019,256	2,047,668	2,086,330	2,133,122	2,164,917	2,205,720	<u>2,274,119</u>	<u>2,310,306</u>
5. 6.	DISBURSEMENTS: OPERATION & MAINTENANCE EXPENSES SUMS IN LIEU AND FRANCHISE TAXES	1,113,537 10,419	1,117,978 10,453	1,090,167 10,448	1,100,198 10,542	1,108,075 10,640	1,130,690 10,859	1,152,075 11,115	1,152,232 11,262	1,188,090 11,489	1,236,776 11,741	1,252,676 11,918	1,287,625 12,134	1,338,818 12,421	1,372,950 12,575	1,420,505 12,811	1,486,524 13,102	1,517,024 13,291	1,561,501 13,515	1,627,561 13,870	1,670,279 14,089
7. 8.	REVENUE OBLIGATION LONG-TERM DEBT - PRINCIPAL - INTEREST	95,251 321,137	140,646 298,921	166,330 293,063	160,883 293,980	162,847 282,552	176,621 275,236	188,096 268,975	221,096 261,410	219,408 254,837	203,384 248,670	226,039 239,990	230,274 230,493	231,904 219,507	236,076 209,060	235,897 195,511	221,340 180,232	251,928 151,966	255,883 138,265	258,550 127,376	266,520 112,831
9. 10.	COMMERCIAL PAPER/DIRECT PURCHASE - PRINCIPAL - INTEREST	28,679 11,086	1,875 11,459	3,530 10,230	3,530 10,610	3,530 11,386	3,530 11,225	3,530 10,945	3,530 8,109	3,530 8,472	3,530 7,309	3,530 7,077	3,530 6,941	3,530 6,912	2,981 6,920	2,981 7,026	2,981 6,729	2,981 6,637	2,981 6,741	2,981 6,613	2,981 5,853
11.	INTEREST ON CUSTOMER DEPOSITS	498	523	550	578	608	639	671	705	741	779	819	861	905	951	999	1,050	1,104	1,160	1,219	1,281
12. 13.	CONTRIBUTIONS TO CAPITAL IMPROVEMENT FUND PAYMENT TO STATE	148,224 <u>17,403</u>	148,532 <u>17,438</u>	147,492 <u>17,304</u>	148,100 <u>17,375</u>	148,036 <u>17,358</u>	150,872 <u>17,695</u>	153,987 <u>18,064</u>	155,480 <u>18,248</u>	158,556 <u>18,609</u>	161,209 <u>18,927</u>	163,482 19,195	166,263 <u>19,524</u>	170,377 <u>20,009</u>	172,780 20,294	176,054 20,679	180,015 <u>21,149</u>	182,708 <u>21,468</u>	186,133 <u>21,872</u>	191,931 <u>22,553</u>	194,996 <u>22,918</u>
14.	SUBTOTAL	1,746,234	1,747,825	1,739,114	1,745,796	1,745,032	1,777,367	1,807,458	1,832,072	1,863,732	1,892,325	1,924,726	1,957,645	2,004,383	2,034,587	2,072,463	2,113,122	2,149,107	2,188,051	2,252,654	2,291,748
15. 16.	DIFFERENCE IN FOSSIL FUEL INVENTORY ADJUSTMENT TO O&M (CASH BASIS)	(43,168) <u>547</u>	(19,915) <u>4,852</u>	(751) (11,718)	(4,371) <u>9,533</u>	(4,808) <u>5,781</u>	(4,218) (6,691)	(16,568) <u>4,843</u>	1,523 <u>6,777</u>	1,416 (8,657)	1,423 <u>6,792</u>	1,857 <u>7,115</u>	(21) (9,257)	(114) <u>7,135</u>	139 <u>7,479</u>	512 (9,888)	628 <u>7,224</u>	1,741 <u>7,535</u>	2,119 (10,946)	2,397 <u>7,447</u>	2,458 <u>7,778</u>
17.	TOTAL DISBURSEMENTS	<u>1,703,613</u>	1,732,762	1,726,645	1,750,958	1,746,005	1,766,458	1,795,733	1,840,372	<u>1,856,491</u>	1,900,540	1,933,698	1,948,367	2,011,404	2,042,205	2,063,087	2,120,974	2,158,383	2,179,224	2,262,498	2,301,984
18. 19. 20. 21. 22. 23.	NET REMAINING BEGINNING BALANCE MISCELLANEOUS (REIMBURSEMENT) / FUNDING PRIOR YEAR CENTRAL ADJUST-TO-ACTUAL TRANSFER (TO)/FROM NUCLEAR FUND TRANSFER (TO)/FROM OTHER FUNDS	53,676 86,552 (19,464) (4,966) (1,522) <u>0</u>	28,156 114,276 (12,126) 0 (1,131) <u>0</u>	22,063 129,174 (22,238) 0 0 0	4,981 128,999 (1,436) 0 0	9,265 132,544 (1,657) 0 (952) (4,245)	22,311 134,956 (2,034) 0 0 (17,258)	29,833 137,975 (1,937) 0 0 (29,094)	2,863 136,777 (1,850) 0 0	23,062 137,790 11,216 0 0 (24,368)	10,403 147,700 13,738 0 0 (24,098)	4,102 147,743 13,981 0 0 (15,247)	22,301 150,579 8,630 0 0 (28,381)	7,852 153,129 (356) 0 0 (4,567)	5,463 156,058 372 0 0 (3,023)	23,243 158,870 1,119 0 0 (20,099)	12,148 163,133 (115) 0 0 (10,584)	6,534 164,582 (85) 0 0 (1,142)	26,496 169,889 (78) 0 0 (22,650)	11,621 173,657 (98) 0 0 (7,002)	8,322 178,178 (113) 0 0 (4,150)
24.	ENDING BALANCE	<u>114,276</u>	129,174	128,999	132,544	<u>134,956</u>	<u>137,975</u>	<u>136,777</u>	<u>137,790</u>	<u>147,700</u>	147,743	<u>150,579</u>	<u>153,129</u>	<u>156,058</u>	<u>158,870</u>	<u>163,133</u>	<u>164,582</u>	<u>169,889</u>	<u>173,657</u>	<u>178,178</u>	<u>182,237</u>

(1) INCLUDES REVENUES FROM LEASED LOT SALES AND CAMP HALL

21. INCLUDING COMMERCIAL PAPER/DIRECT PURCHASE

0.77

<u>0.74</u>

0.73

<u>0.72</u>

<u>0.71</u>

0.70

SANTEE COOPER EXHIB

#### **ELECTRIC SYSTEM**

#### DEBT SERVICE AND GENERAL CONSTRUCTION COVERAGE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	2027	2028	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1. 2.	OPERATING REVENUES INTEREST INCOME	1,740,314 <u>7,408</u>	1,743,776 <u>7,445</u>	1,730,448 <u>8,490</u>	1,737,523 <u>8,657</u>	1,735,820 <u>9,680</u>	1,769,452 <u>9,504</u>	1,806,423 <u>9,262</u>	1,824,806 <u>8,525</u>	1,860,862 <u>8,735</u>	1,892,738 <u>8,162</u>	1,919,496 <u>8,224</u>	1,952,406 <u>8,113</u>	2,000,927 <u>8,068</u>	2,029,402 <u>7,940</u>	2,067,861 <u>8,062</u>	2,114,910 <u>7,714</u>	2,146,835 <u>7,574</u>	2,187,189 <u>7,617</u>	2,255,315 <u>7,811</u>	2,291,788 <u>7,506</u>
3.	TOTAL	1,747,722	1,751,221	<u>1,738,938</u>	<u>1,746,180</u>	1,745,500	<u>1,778,956</u>	1,815,685	<u>1,833,331</u>	1,869,597	1,900,900	1,927,720	1,960,519	2,008,995	<u>2,037,342</u>	2,075,923	2,122,624	<u>2,154,409</u>	<u>2,194,806</u>	<u>2,263,126</u>	2,299,294
4. 5.	LESS: OPERATION & MAINTENANCE EXPENSES SUMS IN LIEU OF TAXES	1,113,537 <u>4,595</u>	1,117,978 <u>4,620</u>	1,090,167 <u>4,592</u>	1,100,198 <u>4,613</u>	1,108,075 <u>4,617</u>	1,130,690 <u>4,709</u>	1,152,075 <u>4,813</u>	1,152,232 <u>4,854</u>	1,188,090 <u>4,947</u>	1,236,776 <u>5,030</u>	1,252,676 <u>5,098</u>	1,287,625 <u>5,183</u>	1,338,818 <u>5,297</u>	1,372,950 <u>5,327</u>	1,420,505 <u>5,425</u>	1,486,524 <u>5,543</u>	1,517,024 <u>5,637</u>	1,561,501 <u>5,726</u>	1,627,561 <u>5,897</u>	1,670,279 <u>5,990</u>
6.	NET REVENUE PRIOR TO DISTRIBUTION TO STATE	629,590	628,623	644,179	641,369	632,808	643,557	658,797	676,245	676,560	659,094	669,946	<u>667,711</u>	664,880	659,065	649,993	630,557	631,748	627,579	629,668	623,025
7.	PAYMENT TO STATE	<u>17,403</u>	<u>17,438</u>	<u>17,304</u>	<u>17,375</u>	<u>17,358</u>	17,695	18,064	18,248	18,609	18,927	19,195	19,524	20,009	20,294	20,679	21,149	21,468	21,872	22,553	22,918
8.	NET REVENUE AFTER DISTRIBUTION TO STATE	612,187	611,185	626,875	623,994	615,450	625,862	640,733	657,997	657,951	640,167	650,751	648,187	644,871	638,771	629,314	609,408	610,280	605,707	607,115	600,107
9. 10. 11.	LESS DEBT SERVICE: REVENUE OBLIGATION LONG-TERM DEBT INTEREST ON CUSTOMER DEPOSITS COMMERCIAL PAPER/DIRECT PURCHASE	416,387 498 <u>39,764</u>	439,567 523 <u>13,334</u>	459,391 550 <u>13,760</u>	454,861 578 <u>14,140</u>	445,401 608 <u>14,916</u>	451,857 639 <u>14,755</u>	457,070 671 <u>14,475</u>	482,506 705 <u>11,639</u>	474,246 741 <u>12,001</u>	452,053 779 <u>10,839</u>	466,029 819 <u>10,607</u>	460,768 861 <u>10,470</u>	451,406 905 <u>10,442</u>	445,140 951 <u>9,901</u>	431,408 999 <u>10,007</u>	401,572 1,050 <u>9,710</u>	403,892 1,104 <u>9,618</u>	394,145 1,160 <u>9,722</u>	385,926 1,219 <u>9,594</u>	379,347 1,281 <u>8,834</u>
12.	TOTAL SUBORDINATED DEBT	456,649	453,424	473,701	469,579	460,925	467,251	472,216	494,850	486,988	463,671	477,455	472,099	462,753	455,992	442,414	412,332	414,614	405,027	396,739	389,462
14.	NET AVAILABLE FOR GENERAL CONSTRUCTION LESS: CONTRIBUTION TO CAPITAL IMPROVEMENT FUND BALANCE AVAILABLE AFTER CAPITAL	155,538 148,224	157,761 148,532	153,174 147,492	154,415 148,100	154,525 148,036	158,611 150,872	168,517 <u>153,987</u>	163,147 <u>155,480</u>	170,963 <u>158,556</u>	176,496 161,209	173,296 <u>163,482</u>	176,088 <u>166,263</u>	182,118 <u>170,377</u>	182,779 <u>172,780</u>	186,900 <u>176,054</u>	197,076 180,015	195,666 <u>182,708</u>	200,680 <u>186,133</u>	210,376 191,931	210,645 194,996
15.	IMPROVEMENT FUND	<u>7,314</u>	9,229	<u>5,682</u>	<u>6,315</u>	<u>6,489</u>	<u>7,739</u>	14,530	<u>7,667</u>	<u>12,407</u>	<u>15,287</u>	9,814	<u>9,825</u>	<u>11,741</u>	9,999	10,846	<u>17,061</u>	12,958	<u>14,547</u>	<u>18,445</u>	<u>15,649</u>
	DEBT SERVICE COVERAGE																				
16. 17.	EXCLUDING COMMERCIAL PAPER/DIRECT PURCHASE: PRIOR TO DISTRIBUTIONS TO STATE AFTER DISTRIBUTIONS TO STATE	<u>1.51</u> <u>1.46</u>	1.42 1.38	<u>1.40</u> <u>1.36</u>	<u>1.40</u> <u>1.37</u>	<u>1.41</u> <u>1.37</u>	<u>1.42</u> <u>1.38</u>	1.43 1.39	<u>1.39</u> <u>1.36</u>	1.42 1.38	<u>1.45</u> <u>1.41</u>	1.43 1.39	<u>1.44</u> <u>1.40</u>	<u>1.46</u> <u>1.42</u>	<u>1.47</u> <u>1.43</u>	<u>1.50</u> <u>1.45</u>	<u>1.56</u> <u>1.51</u>	<u>1.55</u> <u>1.50</u>	<u>1.58</u> <u>1.53</u>	<u>1.62</u> <u>1.56</u>	<u>1.63</u> <u>1.57</u>
18. 19.		<u>1.37</u> 1.34	<u>1.38</u> <u>1.34</u>	<u>1.35</u> <u>1.32</u>	<u>1.36</u> <u>1.32</u>	<u>1.37</u> 1.33	1.37 1.33	<u>1.39</u> 1.35	<u>1.36</u> 1.32	<u>1.38</u> <u>1.35</u>	<u>1.42</u> 1.38	<u>1.40</u> 1.36	<u>1.41</u> 1.37	<u>1.43</u> 1.39	<u>1.44</u> 1.40	<u>1.46</u> 1.42	<u>1.52</u> 1.47	<u>1.52</u> 1.47	<u>1.54</u> 1.49	<u>1.58</u> <u>1.53</u>	<u>1.59</u> 1.54
20.	DEBT/CAPITAL RATIO: EXCLUDING COMMERCIAL PAPER/DIRECT PURCHASE	<u>0.76</u>	<u>0.73</u>	0.72	<u>0.71</u>	<u>0.70</u>	0.68	<u>0.68</u>	0.66	0.66	0.64	0.63	<u>0.61</u>	0.60	<u>0.58</u>	<u>0.56</u>	<u>0.54</u>	<u>0.52</u>	<u>0.50</u>	0.48	<u>0.45</u>

<u>0.67</u>

0.62

<u>0.61</u>

0.59

<u>0.49</u>

<u>0.46</u>

2020 REFORM PLAN EXHIBIT IX

#### ELECTRIC SYSTEM

EARNINGS STATEMENT FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1.	TOTAL OPERATING REVENUES	1,740,314	1,743,776	1,730,448	<u>1,737,523</u>	1,735,820	<u>1,769,452</u>	1,806,423	1,824,806	1,860,862	1,892,738	1,919,496	<u>1,952,406</u>	2,000,927	2,029,402	<u>2,067,861</u>	<u>2,114,910</u>	<u>2,146,835</u>	<u>2,187,189</u>	<u>2,255,315</u>	2,291,788
	OPERATING EXPENSES:																				
2.	PRODUCTION: FUEL BURNED	475,712	484,704	481,958	468,625	426,121	419,842	477,993	496,724	532,799	556,226	574,632	583,463	600,244	611,065	610,030	627,421	630,047	635,630	653,253	663,906
3.	PURCHASED POWER	196,880	180,531	161,209	183,272	227,666	244,151	199,453	184,940	176,574	174,741	175,825	190,361	214,060	232,872	261,117	296,917	320,823	345,654	373,307	401,776
4.	OTHER	<u>253,776</u>	260,317	250,743	247,275	248,868	<u>257,174</u>	260,856	<u>251,684</u>	255,055	277,239	268,658	275,238	280,704	279,739	294,488	301,672	299,800	307,937	322,542	319,832
5.	TOTAL PRODUCTION	926,368	925,552	893,910	899,172	902,655	921,167	938,302	933,348	964,428	1,008,206	1,019,115	1,049,062	1,095,008	1,123,676	1,165,635	1,226,010	1,250,670	1,289,221	1,349,102	1,385,514
6.	TRANSMISSION	36,993	34,457	35,191	36,201	36,980	37,402	37,825	38,077	38,933	39,868	40,886	41,990	43,183	44,469	45,851	47,333	48,919	50,613	52,419	54,342
7.	DISTRIBUTION	17,431	17,656	18,363	18,748	19,029	19,313	19,601	19,893	20,188	20,486	20,789	21,095	21,404	21,718	22,035	22,355	22,680	23,008	23,340	23,676
8.	CUSTOMER ACCOUNTING	15,007	15,397	15,402	15,726	16,056	16,393	16,737	17,089	17,448	17,814	18,188	18,570	18,960	19,358	19,765	20,180	20,604	21,036	21,478	21,929
9.	SALES EXPENSE	10,122	11,118	11,184	11,680	12,167	12,681	13,206	13,769	14,296	14,804	15,242	15,533	15,907	16,330	16,712	17,049	17,317	17,566	17,792	18,029
10.	ADMINISTRATIVE & GENERAL	<u>107,617</u>	<u>113,797</u>	<u>116,118</u>	<u>118,671</u>	<u>121,188</u>	<u>123,734</u>	<u>126,402</u>	<u>130,056</u>	132,798	<u>135,598</u>	<u>138,456</u>	<u>141,375</u>	<u>144,356</u>	<u>147,400</u>	<u>150,508</u>	<u>153,596</u>	<u>156,834</u>	<u>160,056</u>	<u>163,429</u>	<u>166,789</u>
11.	TOTAL OPERATION & MAINTENANCE EXPENSES	1,113,538	1,117,977	1,090,168	1,100,198	1,108,075	1,130,690	1,152,073	1,152,232	1,188,091	1,236,776	1,252,676	1,287,625	1,338,818	1,372,951	1,420,506	1,486,523	1,517,024	1,561,500	1,627,560	1,670,279
12.	SUMS IN LIEU OF TAXES	4,595	4,620	4,592	4,613	4,617	4,709	4,813	4,854	4,947	5,030	5,098	5,183	5,297	5,327	5,425	5,543	5,637	5,726	5,897	5,990
13.	DEPRECIATION	227,284	232,700	237,800	247,607	252,651	257,731	264,512	292,412	297,197	301,847	306,336	310,826	315,092	319,537	324,281	327,985	332,036	336,023	339,770	343,835
14.	AMORTIZATION OF DEFERRED DEBITS (1)	<u>21</u>	<u>20</u>	<u>19</u>	<u>18</u>	<u>18</u>	<u>16</u>	<u>12</u>	<u>11</u>	<u>11</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
15.	TOTAL OPERATING EXPENSES	1,345,438	1,355,317	1,332,579	1,352,436	1,365,361	1,393,146	1,421,410	1,449,509	1,490,246	1,543,656	1,564,113	1,603,637	1,659,210	1,697,818	1,750,215	1,820,054	<u>1,854,700</u>	1,903,252	1,973,230	2,020,107
16.	OPERATING INCOME	<u>394,876</u>	<u>388,459</u>	<u>397,869</u>	385,087	<u>370,459</u>	<u>376,306</u>	385,013	375,297	370,616	349,082	<u>355,383</u>	348,769	<u>341,717</u>	331,584	<u>317,646</u>	294,856	<u>292,135</u>	283,937	282,085	<u>271,681</u>
17.	INTEREST, MISCELLANEOUS & OTHER INCOME (2)(3)	(86,023)	97,456	<u>1,541</u>	<u>1,081</u>	(25,159)	(20,911)	(53,132)	(49,034)	(36,088)	(38,099)	(31,898)	(17,328)	(65,803)	(51,624)	(70,319)	(477,843)	(129,109)	(145,992)	(220,052)	(155,432)
	INTEREST CHARGES:																				
18.	INTEREST ON LONG-TERM DEBT	321,137	298,921	293,063	293,980	282,552	275,236	268,975	261,410	254,837	248,670	239,990	230,493	219,507	209,060	195,511	180,232	151,966	138,265	127,376	112,831
19.	INTEREST ON COMMERCIAL PAPER/DIRECT PURCHASE	11,086	11,459	10,230	10,610	11,386	11,225	10,945	8,109	8,472	7,309	7,077	6,941	6,912	6,920	7,026	6,729	6,637	6,741	6,613	5,853
20.	INTEREST ON CUSTOMER DEPOSITS	498	523	550	578	608	639	671	705	741	779	819	861	905	951	999	1,050	1,104	1,160	1,219	1,281
21.	AMORTIZATION OF DEBT EXPENSE (NET)	(12,598)	(13,517)	(15,100)	(26,494)	(37,141)	(46,307)	(53,793)	(55,097)	(54,926)	(56,667)	(54,878)	(57,410)	(56,688)	(54,178)	(64,535)	(70,296)	(72,226)	(74,497)	(71,584)	(74,435)
22.	TOTAL INTEREST CHARGES	320,123	<u>297,386</u>	288,743	278,674	<u>257,405</u>	240,793	226,798	<u>215,127</u>	209,124	200,091	193,008	<u>180,885</u>	170,636	162,753	<u>139,001</u>	<u>117,715</u>	<u>87,481</u>	<u>71,669</u>	63,624	<u>45,530</u>
23.	LESS: COSTS TO BE RECOVERED FROM FUTURE REVENUES	<u>952</u>	(2,631)	36,762	<u>51,685</u>	18,240	17,321	11,527	50,684	49,434	24,267	105,068	79,320	81,802	40,190	46,480	48,934	30,392	73,663	<u>76,440</u>	94,296
24.	REINVESTED EARNINGS	(12,222)	<u>191,160</u>	<u>73,905</u>	<u>55,809</u>	<u>69,655</u>	97,281	93,556	60,452	<u>75,970</u>	<u>86,625</u>	<u>25,409</u>	<u>71,236</u>	23,476	<u>77,017</u>	<u>61,846</u>	(349,636)	<u>45,153</u>	(7,387)	<u>(78,031)</u>	(23,577)

<sup>(1)</sup> INCLUDES AMORTIZATION OF REBATES FOR DSM PROGRAMS.

<sup>(2)</sup> INCLUDES RECOGNITION OF TOSHIBA PARENTAL GUARANTY INCOME, AND LOSS ON DISPOSITION OF PROPERTY FOR NUCLEAR UNITS 2 & 3 AND PEE DEE. SEE SCHEDULE 16.

<sup>(3)</sup> INCLUDES REVENUES FROM LEASED LOT SALES AND CAMP HALL

2020 REFORM PLAN EXHIBIT X

## ELECTRIC SYSTEM STATEMENT OF FINANCIAL CONDITION FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN MILLIONS)

		<u>2019</u>	<u>2020</u>	<u>2021</u>	2022	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	2027	2028	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	2039
1.	ELECTRIC PLANT IN SERVICE &																					
••	CONSTRUCTION WORK IN PROGRESS	8.769.3	8,919.6	9.128.0	9,329.2	9,548.9	9,830.8	10.114.6	10,396.8	10,558.4	10,728.2	10,851.2	10,954.8	11,060.1	11,183.1	11,295.2	11,432.6	11,560.6	11.661.2	11.772.8	11,892.4	11,996.3
2.	LONG LIVED ASSETS - ARO	265.1	265.1	265.1	265.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1
3.	ACCUMULATED DEPRECIATION	(3,805.3)	(3,996.0)	(4,190.5)	(4,389.0)	(4,596.1)	(4,807.1)	(5,021.9)	(5,242.2)	(5,489.0)	(5,739.3)	(5,992.8)	(6,249.3)	(6,508.9)	(6,771.2)	(7,036.3)	(7.304.5)	(7,574.8)	(7,847.4)	(8,122.2)	(8,398.9)	(8,677.8)
4.	ACCUMULATED DEPRECIATION OF LLA - ARO	(261.5)	(261.5)	(261.9)	(262.3)	(250.8)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)
5.	NUCLEAR FUEL - NET	<u>85.8</u>	86.8	82.5	77.7	79.7	<u>81.0</u>	<u>65.6</u>	49.9	36.4	39.3	23.3	<u>31.9</u>	38.8	33.9	43.1	<u>36.1</u>	45.7	<u>55.4</u>	48.0	<u>58.1</u>	<u>52.6</u>
6.	TOTAL NET UTILITY PLANT	5,053.4	<u>5,014.0</u>	5,023.2	5,020.7	5,032.8	<u>5,104.7</u>	<u>5,158.3</u>	<u>5,204.5</u>	<u>5,105.8</u>	5,028.2	4,881.7	<u>4,737.4</u>	<u>4,590.0</u>	4,445.8	4,302.0	4,164.2	<u>4,031.5</u>	3,869.2	3,698.6	<u>3,551.6</u>	<u>3,371.1</u>
7.	OPERATING FUNDS	86.6	114.3	129.2	129.0	132.5	135.0	138.0	136.8	137.8	147.7	147.7	150.6	153.1	156.1	158.9	163.1	164.6	169.9	173.7	178.2	182.2
8.	CONSTRUCTION FUNDS	198.3	25.8	22.5	30.7	46.2	51.5	69.9	74.3	88.3	113.8	126.5	157.7	193.8	219.9	260.0	293.0	144.3	191.1	234.8	250.8	265.9
9.	NUCLEAR FUEL FUND	20.6	17.6	7.5	17.3	15.4	8.3	21.5	37.3	50.7	53.8	63.8	68.3	61.7	59.9	57.9	58.0	56.0	55.5	55.7	53.4	51.3
10.	REGULATORY ASSET (1)	4,678.5	4,451.8	4,032.7	3,990.1	3,953.3	3,891.7	3,838.3	3,749.3	3,664.4	3,584.1	3,495.3	3,400.8	3,311.2	3,208.6	3,132.4	3,045.8	2,557.3	2,418.4	2,262.3	2,032.2	1,867.0
11.	OTHER RESERVE FUNDS (2)	294.3	296.9	300.0	302.6	305.1	311.0	329.6	359.8	360.8	386.3	411.4	427.7	457.1	462.7	466.7	487.9	342.0	344.1	367.7	375.7	378.7
12.	FOSSIL FUEL INVENTORY	147.8	96.6	76.7	75.9	71.6	66.8	62.6	46.0	47.5	48.9	50.3	52.2	52.2	52.1	52.2	52.7	53.3	55.1	57.2	59.6	62.1
13.	DEFERRED DEBIT (NET)	213.0	194.0	175.0	157.0	140.0	123.0	107.0	96.0	85.0	74.0	71.0	68.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
14.	COSTS TO BE RECOVERED																					
	FROM FUTURE REVENUES	229.8	228.8	231.4	194.6	142.9	124.7	107.4	95.9	45.2	(4.2)	(28.5)	(133.6)	(212.9)	(294.7)	(334.9)	(381.4)	(430.3)	(460.7)	(534.4)	(610.8)	(705.1)
15.	BONDS FUND-CURRENT PORTION	56.4	160.6	149.5	146.5	147.0	141.3	137.6	134.5	130.7	127.4	124.3	120.0	115.2	109.8	104.5	97.8	90.1	76.0	69.2	63.7	56.4
16.	OTHER NET ASSETS/ LIABILITIES	<u>(258.7)</u>	(196.8)	<u>(81.1)</u>	<u>(46.7)</u>	<u>14.5</u>	<u>121.9</u>	<u>153.8</u>	<u>175.3</u>	<u>201.0</u>	<u>211.9</u>	<u>239.6</u>	<u>237.2</u>	<u>230.6</u>	<u>245.7</u>	<u>246.5</u>	<u>246.0</u>	<u>248.1</u>	<u>256.3</u>	<u>254.8</u>	<u>256.5</u>	<u>277.2</u>
17.	TOTAL ASSETS	10,720.0	10,403.6	10,066.6	10,017.8	10,001.3	10,080.0	<u>10,124.1</u>	<u>10,109.6</u>	9,917.2	9,771.9	<u>9,583.1</u>	9,286.2	9,016.9	<u>8,731.0</u>	<u>8,511.3</u>	<u>8,292.1</u>	<u>7,321.8</u>	<u>7,039.9</u>	<u>6,704.6</u>	<u>6,275.9</u>	<u>5,871.8</u>
18.	OUTSTANDING REV OBLG LONG-TERM DEBT	6,553.1	6,318.6	5,850.6	5,909.6	5,595.6	5,604.5	5,288.8	5,283.0	5,059.9	4.973.6	4,760.2	4,587.8	4,324.7	4.144.8	3,823.4	3,557.5	2,952.3	2.701.9	2,436.0	2,193.7	1,917.2
19.	UNAMORTIZED DEBT DISC. & PREMIUM	236.2	222.3	254.7	270.8	387.1	608.2	691.7	846.4	782.8	764.5	700.1	654.8	613.2	568.5	583.5	640.3	611.2	596.6	517.9	476.7	399.1
20.	OUTSTANDING COMMERCIAL PAPER/DIRECT PURCHASE	306.2	339.3	<u>329.1</u>	<u>171.7</u>	332.7	144.6	350.7	125.9	186.7	104.8	148.6	97.7	<u>131.5</u>	90.6	132.4	84.7	119.6	<u>78.7</u>	<u>117.2</u>	<u>72.8</u>	<u>69.8</u>
21.	TOTAL DEBT LIABILITIES	7,095.5	6,880.2	6,434.4	6,352.2	<u>6,315.4</u>	<u>6,357.3</u>	6,331.2	<u>6,255.3</u>	6,029.5	5,842.9	<u>5,609.0</u>	<u>5,340.3</u>	<u>5,069.4</u>	<u>4,803.9</u>	<u>4,539.3</u>	<u>4,282.5</u>	<u>3,683.1</u>	3,377.2	<u>3,071.1</u>	<u>2,743.2</u>	<u>2,386.0</u>
22.	ARO- LIABILITY	696.6	681.1	666.1	657.0	652.4	650.6	655.1	659.3	673.5	681.1	677.1	661.4	644.8	636.0	639.5	651.4	667.0	683.3	699.7	716.0	732.3
23.	OPEB- LIABILITY (3)	172.8	186.7	182.0	177.0	172.5	167.8	162.9	157.9	152.6	147.2	141.7	135.9	129.9	123.7	117.3	110.6	103.8	96.7	89.3	81.7	73.8
24.	PENSION- LIABILITY	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7
25.	DEFERRED CREDIT (4)	363.9	294.0	248.7	239.6	230.7	221.8	212.7	199.4	181.6	163.4	150.4	137.4	109.9	101.0	92.1	83.3	74.4	65.5	56.6	47.7	38.9
26.	CAPITAL CONTRIBUTIONS	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4
27.	ACCUMULATED REINVESTED EARNINGS	<u>2,031.1</u>	<u>2,001.5</u>	<u>2,175.2</u>	<u>2,231.8</u>	<u>2,270.2</u>	<u>2,322.5</u>	<u>2,402.1</u>	<u>2,477.6</u>	<u>2,519.8</u>	<u>2,577.2</u>	<u>2,644.9</u>	<u>2,651.1</u>	<u>2,702.8</u>	<u>2,706.3</u>	<u>2,763.0</u>	2,804.2	<u>2,433.4</u>	<u>2,457.1</u>	<u>2,427.8</u>	<u>2,327.2</u>	<u>2,280.7</u>
28.	TOTAL LIABILITIES &																					
	EQUITY	<u>10,720.0</u>	<u>10,403.6</u>	<u>10,066.6</u>	<u>10,017.8</u>	<u>10,001.3</u>	<u>10,080.0</u>	<u>10,124.1</u>	<u>10,109.6</u>	<u>9,917.2</u>	<u>9,771.9</u>	<u>9,583.1</u>	<u>9,286.2</u>	<u>9,016.9</u>	<u>8,731.0</u>	<u>8,511.3</u>	<u>8,292.1</u>	<u>7,321.8</u>	<u>7,039.9</u>	<u>6,704.6</u>	<u>6,275.9</u>	<u>5,871.8</u>

<sup>(1)</sup> INCLUDES UNAMORTIZED LOSS ON DISPOSITION OF PROPERTY FOR NUCLEAR UNITS 2 & 3 AND PEE DEE; INCLUDES NUCLEAR AND ASH POND ASSET RETIREMENT OBLIGATIONS.

<sup>(2)</sup> INCLUDES SUMMER NUCLEAR PLANT DECOMMISSIONING FUND AND OTHER RESTRICTED FUNDS.

<sup>(3)</sup> INCLUDES PROJECTED GASB 75 POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS.

<sup>(4)</sup> REFLECTS BALANCE OF UNRECOGNIZED INCOME ASSOCIATED WITH TOSHIBA PARENTAL GUARANTY FUNDS.

SANTEE COOPER ELECTRI 11/20/19

CONSTRUCT FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

RIC SYSTEM	PAGE 1 OF 2
CTION SCHEDULE	

EXHIBIT XI

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
	TRANSMISSION:																				
1.	CONSTRUCTION	35,867	35,948	31,421	25,266	32,401	33,993	41,670	46,523	49,435	45,261	40,357	41,660	42,046	42,461	69,921	49,158	38,338	48,265	45,373	46,260
2.	CAPITAL EQUIPMENT	3,996	2,098	1,314	2,202	1,038	2,219	3,809	2,693	2,123	2,283	3,208	3,619	3,621	4,325	2,455	2,963	3,219	<u>1,755</u>	<u>1,855</u>	<u>3,861</u>
		00.000	00.040	00.705	07.400	00.400	00.040	45.470	40.040	E4 EE0	47.544	40 505	45.070	45.007	40.700	70.070	50.404	44 557	50.000	47.000	50.404
3.	TOTAL TRANSMISSION	<u>39,863</u>	<u>38,046</u>	<u>32,735</u>	<u>27,468</u>	33,439	<u>36,212</u>	<u>45,479</u>	<u>49,216</u>	<u>51,558</u>	<u>47,544</u>	<u>43,565</u>	<u>45,279</u>	<u>45,667</u>	<u>46,786</u>	72,376	<u>52,121</u>	<u>41,557</u>	<u>50,020</u>	<u>47,228</u>	<u>50,121</u>
	DISTRIBUTION:																				
4.	CONSTRUCTION	60,917	58,424	42,327	43,424	43,893	45,281	45,615	46,279	46,722	49,198	49,054	49,822	50,898	53,286	52,914	54,450	55,169	57,524	57,863	59,012
5.	CAPITAL EQUIPMENT	1,605	948	1,221	919	926	881	858	1,028	1,052	1,075	1,050	1,076	1,153	1,133	1,211	<u>1,191</u>	1,221	1,252	1,284	<u>1,366</u>
6.	TOTAL DISTRIBUTION	62,522	59,372	43,548	44,343	44,819	<u>46,162</u>	46,473	47,307	47,774	50,273	50,104	50,898	52,051	<u>54,419</u>	<u>54,125</u>	<u>55,641</u>	<u>56,390</u>	<u>58,776</u>	<u>59,147</u>	60,378
	GENERATION:																				
7.	CONSTRUCTION	78,815	106,692	79,148	74,877	79,586	65,992	55,698	70,548	48,263	62,457	47,024	47,028	57,454	46,774	46,664	63,782	47,019	50,594	67,387	47,972
8.	CAPITAL EQUIPMENT	3,334	4,138	2,639	2,468	2,544	2,484	2,540	2,141	2,208	2,221	2,245	2,349	<u>2,415</u>	2,455	2,510	<u>2,513</u>	2,674	2,692	2,687	2,808
9.	TOTAL GENERATION	<u>82,149</u>	<u>110,830</u>	<u>81,787</u>	<u>77,345</u>	<u>82,130</u>	<u>68,476</u>	<u>58,238</u>	<u>72,689</u>	<u>50,471</u>	<u>64,678</u>	<u>49,268</u>	<u>49,377</u>	<u>59,868</u>	49,229	<u>49,173</u>	<u>66,295</u>	49,692	<u>53,286</u>	<u>70,074</u>	<u>50,779</u>
	CUSTOMER SERVICES:																				
10.	CONSTRUCTION	997	1,168	943	1,035	75	87	887	888	88	88	968	969	89	89	1,058	1,058	90	91	1,156	1,156
11.	CAPITAL EQUIPMENT	<u>86</u>	<u>28</u>	<u>86</u>	<u>28</u>	<u>28</u>	<u>28</u>	<u>29</u>	<u>29</u>	<u>30</u>	<u>30</u>	<u>31</u>	<u>31</u>	<u>32</u>	<u>32</u>	<u>33</u>	<u>34</u>	<u>34</u>	<u>35</u>	<u>36</u>	<u>37</u>
12.	TOTAL CUSTOMER SERVICES	1,084	<u>1,195</u>	1,029	<u>1,063</u>	<u>103</u>	<u>115</u>	<u>916</u>	917	<u>117</u>	<u>118</u>	999	1,000	<u>121</u>	<u>122</u>	<u>1,091</u>	<u>1,092</u>	<u>125</u>	<u>126</u>	<u>1,192</u>	<u>1,193</u>
	CORPORATE SERVICES:																				
13.		14,396	15,748	11,985	6,321	5,876	6,164	8,454	4,611	4,803	6.828	7,609	4,062	7,113	3,637	2,973	2,393	2,465	2,449	2,866	2,372
14.	CAPITAL EQUIPMENT	(197)	(415)	994	2,552	2,244	2,924	2,993	4,298	4,449	3,193	3,136	2,237	2,137	2,728	3,762	3,424	5,129	3,470	1,983	3,856
45	TOTAL CORPORATE SERVICES	14 100	15,333	12,979	8,873	8,120	0.000	11,447	8,909	9,252	10,021	10,745	6,299	9,250	<u>6,365</u>	<u>6,735</u>	5.817	<u>7,594</u>	5,919	<u>4,849</u>	6,228
15.	TOTAL CORPORATE SERVICES	<u>14,199</u>	10,000	12,919	0,013	0,120	9,088	11,447	0,909	9,202	10,021	10,743	0,299	9,200	<u>0,303</u>	<u>0,733</u>	<u>0,011</u>	1,394	<u>5,919</u>	4,049	0,220
16.	CONSTRUCTION REQUIREMENTS (1)																				
	SUBTOTAL	<u>199,817</u>	<u>224,776</u>	<u>172,078</u>	<u>159,093</u>	<u>168,611</u>	<u>160,052</u>	<u>162,553</u>	<u>179,038</u>	<u>159,173</u>	<u>172,634</u>	<u>154,681</u>	<u>152,852</u>	<u>166,957</u>	<u>156,921</u>	<u>183,500</u>	<u>180,966</u>	<u>155,359</u>	<u>168,127</u>	<u>182,490</u>	<u>168,700</u>

(1) ACCRUAL BASIS.

SANTEE COOPER EXHIBIT XI ELECTRIC SYSTEM PAGE 2 OF 2

CONSTRUCTION SCHEDULE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	2023	2024	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	2029	2030	<u>2031</u>	2032	2033	2034	<u>2035</u>	<u>2036</u>	<u>2037</u>	2038	2039
17.	CAPITAL AND GENERAL IMPROVEMENT CONSTRUCTION COST	199,817	224,776	172,078	159,093	168,611	160,052	162,553	179,038	159,173	172,634	154,681	152,852	166,957	156,921	183,500	180,966	155,359	168,127	182,490	168,700
18.	COMBUSTION TURBINES-FUTURE CONSTRUCTION COST	0	16,660	34,150	58,224	5,964	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19.	ENVIRONMENTAL COMPLIANCE PROJECTS CONSTRUCTION COST	49,351	47,982	50,300	49,800	77,028	20,558	8,790	8,747	14,670	13,738	370	0	0	0	0	0	0	0	0	0
20.	FERC CAPITAL CONSTRUCTION COST	4,254	2,319	4,054	2,038	2,755	1,248	1,262	1,103	1,088	1,104	1,136	5,638	10,731	11,074	10,893	5,662	5,682	5,702	1,223	1,245
21.	BATTERY STORAGE CONSTRUCTION COST	0	0	0	0	24,800	0	22,000	0	40,200	0	0	0	0	0	0	0	0	0	0	0
22.	COMBINED CYCLE - FUTURE CONSTRUCTION COST	0	0	9,809	15,204	101,604	151,272	132,528	29,376	18,636	0	0	0	0	0	0	0	0	0	0	0
23.	TRANSMISSION SPECIAL PROJECTS CONSTRUCTION COST	<u>8,586</u>	<u>466</u>	11,552	20,348	19,061	17,889	4,994	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
24.	TOTAL CONSTRUCTION REQUIREMENTS (1)	<u>262,008</u>	<u>292,204</u>	281,942	304,708	<u>399,823</u>	<u>351,018</u>	332,127	218,264	233,767	<u>187,476</u>	<u>156,187</u>	<u>158,490</u>	<u>177,688</u>	<u>167,995</u>	194,393	<u>186,628</u>	<u>161,041</u>	<u>173,829</u>	<u>183,713</u>	<u>169,945</u>

(1) ACCRUAL BASIS.

SANTEE COOPER 2020 REFORM PLAN EXHIBIT XII **ELECTRIC SYSTEM** 11/20/19 PAGE 1 OF 3

#### CASH RECEIPTS & DISBURSEMENTS STATEMENT CONSTRUCTION AND MISCELLANEOUS FUNDS

FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

									(20)		,									
	<u>2020</u>	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	<u>2026</u>	2027	2028	2029	2030	2031	<u>2032</u>	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	2038	<u>2039</u>
CAPITAL & GENERAL IMPROVEMENT FUNDS																				
1. BEGINNING BALANCE	198,331	20,750	8,395	13,168	23,184	29,654	49,323	64,292	75,229	105,899	120,092	150,847	186,511	212,530	250,891	286,013	137,631	183,815	228,101	214,956
PROCEEDS FROM LONG-TERM DEBT - NET     PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE	0	37,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. TRANSFER (TO)/FROM OTHER FUNDS	Ő	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ö	Ö	0	Ö
5. TRANSFER (TO)/FROM DEBT REDUCTION FUND	(155,000)	(12,000)	0	0	0	0	(10,000)	(2,000)	(7,500)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(180,000)	(10,000)	(10,000)	(56,645)	(10,000)
TRANSFER (TO)/FROM REVENUE FUND: CIF REQUIREMENT     SUBTOTAL	<u>148,224</u> 191,555	148,532 194,782	147,492 155,887	148,100 161,268	148,036 171,220	150,872 180,526	<u>153,987</u> 193,310	<u>155,480</u> 217,772	158,556 226,285	161,209 257,108	163,482 273,574	166,263 307,110	170,377 346,888	<u>172,780</u> 375,310	<u>176,054</u> 416,945	<u>180,015</u> 286,028	<u>182,708</u> 310,339	<u>186,133</u> 359,948	<u>191,931</u> 363,387	<u>194,996</u> 399,952
7. SUBTOTAL	191,000	134,702	155,007	101,200	17 1,220	100,320	190,010	211,112	220,203	237,100	213,314	307,110	340,000	373,310	410,343	200,020	310,339	339,940	303,307	399,932
8. CONSTRUCTION EXPENDITURES (1)	170,805	186,387	142,719	138,084	141,566	131,203	129,018	142,543	120,386	137,016	122,727	120,599	134,358	124,419	130,932	148,397	126,524	131,847	148,431	134,088
REPAY COMMERCIAL PAPER/DIRECT PURCHASE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
10. ENDING BALANCE	20,750	<u>8,395</u>	<u>13,168</u>	23,184	29,654	49,323	64,292	<u>75,229</u>	105,899	120,092	150,847	<u>186,511</u>	212,530	<u>250,891</u>	<u>286,013</u>	<u>137,631</u>	<u>183,815</u>	<u>228,101</u>	<u>214,956</u>	265,864
TAX-EXEMPT CAPITAL TRANSMISSION																				
11. BEGINNING BALANCE	0	2,237	5,756	5,362	5,820	5,937	6,396	6,692	6,884	6,620	6,317	6,387	6,419	6,449	8,162	6,502	6,191	6,811	6,626	34,608
12. PROCEEDS FROM LONG-TERM DEBT - NET	0	67,388	23,222	10.246	43,847	0	57,839	0	71,928	0	64,099	0	62,822	0	84,473	0	61,713	0	98,129	0
<ol> <li>PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE</li> <li>TRANSFER (TO)/FROM OTHER FUNDS</li> </ol>	21,905 0	26,575 0	23,222	19,346 0	24,501 0	26,247 0	31,592 0	35,040 0	36,888 0	33,681 0	30,418 0	31,220 0	31,602 0	33,645 0	50,828 0	32,257 0	29,456 0	36,091 0	34,102 0	0
15. TRANSFER (TO)/FROM CIGI FUND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ö
16. TRANSFER (TO)/FROM REVENUE FUND	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
17. SUBTOTAL	21,905	96,200	52,200	24,708	74,168	32,184	95,827	41,732	115,700	40,301	100,834	37,607	100,843	40,094	143,463	38,759	97,360	42,902	138,857	34,608
18. CONSTRUCTION EXPENDITURES (1)	19,668	26,844	23,616	18,888	24,384	25,788	31,296	34,848	37,152	33,984	30,348	31,188	31,572	31,932	52,488	32,568	28,836	36,276	34,056	34,608
19. REPAY COMMERCIAL PAPER/DIRECT PURCHASE	<u>0</u>	63,600	23,222	<u>0</u>	43,847	<u>0</u>	57,839	<u>0</u>	71,928	<u>0</u>	64,099	<u>0</u>	62,822	<u>0</u>	84,473	<u>0</u>	61,713	<u>0</u>	70,193	<u>0</u>
20. ENDING BALANCE	2,237	<u>5,756</u>	<u>5,362</u>	<u>5,820</u>	<u>5,937</u>	<u>6,396</u>	6,692	6,884	6,620	6,317	6,387	6,419	6,449	<u>8,162</u>	6,502	<u>6,191</u>	<u>6,811</u>	<u>6,626</u>	<u>34,608</u>	<u>0</u>
TRANSMISSION SPECIAL PROJECTS																				
TRANSMISSION SPECIAL PROJECTS  21. BEGINNING BALANCE	0	0	963	1,696	1,588	1,491	416	0	0	0	0	0	0	0	0	0	0	0	0	0
22. PROCEEDS FROM LONG-TERM DEBT - NET	0	0	40,264	0	39,203	0	21,393	0	0	0	0	0	0	0	0	0	0	0	0	0
23. PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE	8,580	1,431	12,289	20,244	18,959	16,817	4,576	0	0	0	0	0	0	0	0	0	0	0	0	0
24. TRANSFER (TO)/FROM OTHER FUNDS 25. TRANSFER (TO)/FROM CIGI FUND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26. TRANSFER (TO)/FROM REVENUE FUND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27. SUBTOTAL	8,5 <del>8</del> 0	1,431	53,516	21,940	59,750	18,308	26,385	0	0	0	0	0	0	0	0	0	0	0	0	0
ON CONCEDUCTION EXPENDED IN DEC (4)	0.500	460	11 FEC	20.252	10.056	47.000	4.000	0	0	0	0	0	0	0	0	0	0	0	0	0
CONSTRUCTION EXPENDITURES (1)     REPAY COMMERCIAL PAPER/DIRECT PURCHASE	8,580 0	468 0	11,556 <u>40,264</u>	20,352 <u>0</u>	19,056 39,203	17,892 0	4,992 21,393	0 0	0	0 <u>0</u>	0	0	0 0	0 0	0 <u>0</u>	0	0	0 0	0	<u>0</u>
	_	-		_		_		_	_		_	_	_	_	_	_	_	_	_	
30. ENDING BALANCE	<u>0</u>	<u>963</u>	<u>1,696</u>	<u>1,588</u>	<u>1,491</u>	<u>416</u>	<u>0</u>	<u>0</u>	<u>u</u>	<u>0</u>	<u>u</u>	<u>¥</u>	<u>0</u>	<u>u</u>	<u>u</u>	<u>u</u>	<u>u</u>	<u>0</u>	<u>0</u>	<u>0</u>
FERC CAPITAL	_																			
31. BEGINNING BALANCE	0	0	338 10,790	170 0	230 4,734	104 0	105 2,496	92 0	91 2,196	92 0	95 2,622	470 0	894 16,821	923 0	908 21,521	472 0	473 11,343	475 0	102 7,697	1,248
PROCEEDS FROM LONG-TERM DEBT - NET     PROCEEDS FROM COMMERCIAL PAPER FINANCING	4,248	2,654	3,888	2,100	2,634	1,249	1,247	1,103	1,093	1,107	1,515	6,064	10,021	11,061	10,460	5,665	5,678	5,327	1,226	0
34. TRANSFER (TO)/FROM OTHER FUNDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35. TRANSFER (TO)/FROM CIGI FUND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36. TRANSFER (TO)/FROM REVENUE FUND 37. SUBTOTAL	<u>0</u> 4,248	<u>0</u> 2,654	<u>0</u> 15,016	<u>0</u> 2,270	<u>0</u> 7,598	<u>0</u> 1,353	<u>0</u> 3,848	<u>0</u> 1,195	<u>0</u> 3,380	<u>0</u> 1,199	<u>0</u> 4,232	<u>0</u> 6,534	<u>0</u> 28,472	<u>0</u> 11,984	<u>0</u> 32,889	<u>0</u> 6,137	<u>0</u> 17.494	<u>0</u> 5,802	<u>0</u> 9,025	<u>0</u> 1,248
31. GOBTOTAL	4,240	2,004	10,010	2,210	7,000	1,000	0,040	1,100	0,000	1,100	7,202	0,004	20,472	11,504	02,000	0,107	17,454	3,002	3,020	1,240
38. CONSTRUCTION EXPENDITURES (1)	4,248	2,316	4,056	2,040	2,760	1,248	1,260	1,104	1,092	1,104	1,140	5,640	10,728	11,076	10,896	5,664	5,676	5,700	1,224	1,248
39. REPAY COMMERCIAL PAPER/DIRECT PURCHASE	<u>0</u>	<u>0</u>	10,790	<u>0</u>	<u>4,734</u>	<u>0</u>	<u>2,496</u>	<u>0</u>	<u>2,196</u>	<u>0</u>	2,622	<u>0</u>	<u>16,821</u>	<u>0</u>	<u>21,521</u>	<u>0</u>	<u>11,343</u>	<u>0</u>	<u>6,553</u>	<u>0</u>
40. ENDING BALANCE	0	338	170	230	104	105	92	91	92	95	470	894	923	908	472	473	475	102	1,248	0
MISC CAPITAL IMPROVEMENTS PAID THROUGH DEBT (CAMP HALL SUBSTATION, INFRAS	STRUCTURE, AND	TRUNKED RAI	DIO)																	
41. BEGINNING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42. PROCEEDS FROM LONG-TERM DEBT - NET	10.624	12.006	6.059	2 110	2 524	2 926	2 926	2.070	1 707	1 674	1 649	1 002	1.054	0 501	0	0	0	0	0	0
<ol> <li>PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE</li> <li>TRANSFER (TO)/FROM OTHER FUNDS</li> </ol>	10,624 0	12,906 0	6,958 0	3,118 0	3,524 0	3,836 0	2,836 0	2,070 0	1,707 0	1,674 0	1,648 0	1,092 0	1,054 0	591 0	81 0	0	0	0	0	0 0
45. TRANSFER (TO)/FROM CIGI FUND	Ö	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Õ	ő	ő	Ő	0
46. TRANSFER (TO)/FROM REVENUE FUND	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
47. SUBTOTAL	10,624	12,906	6,958	3,118	3,524	3,836	2,836	2,070	1,707	1,674	1,648	1,092	1,054	591	81	0	0	0	0	0
48. CONSTRUCTION EXPENDITURES (1)	9,338	11,545	5,741	2,123	2,664	3,060	2,237	1,645	1,630	1,630	1,605	1,063	1,026	575	80	0	0	0	0	0
49. INTEREST ON COMMERCIAL PAPER/REVOLVING CREDIT NOT PAID FROM REVENUE	1,286	1,361	1,217	995	860	776	599	425	77	44	43	29	28	16	1	0	0	0	0	0
50. REPAY COMMERCIAL PAPER/DIRECT PURCHASE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
51. ENDING BALANCE	<u>0</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>
	=	=	=	=	=	=	=	=	=	-	=	-	=	=	=	=	=	=	=	=

(1) CASH BASIS.

SANTEE COOPER EXHIBIT XII **ELECTRIC SYSTEM** 11/20/19 PAGE 2 OF 3

#### CASH RECEIPTS & DISBURSEMENTS STATEMENT CONSTRUCTION AND MISCELLANEOUS FUNDS FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

	<u>2020</u>	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	2026	<u>2027</u>	2028	2029	2030	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	2038	2039
ENVIRONMENTAL COMPLIANCE PROJECTS  52. BEGINNING BALANCE  53. PROCEEDS FROM LONG-TERM DEBT - NET  54. PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE  55. TRANSFER (TO)/FROM OTHER FUNDS  56. TRANSFER (TO)/FROM CIGI FUND  57. TRANSFER (TO)/FROM REVENUE FUND  58. SUBTOTAL	5 0 52,146 0 0 0 0 52,151	2,795 82,236 49,373 0 0 0 0	4,192 135,309 50,262 0 0 0 189,763	4,150 0 52,069 0 0 0 56,219	6,419 124,391 72,322 0 0 0 203,132	1,713 0 19,576 0 0 0 21,289	733 28,368 8,792 0 0 0 0 37,893	729 0 9,242 0 0 0	1,223 23,840 14,598 0 0 0 39,661	1,145 0 12,626 0 0 0	31 12,967 341 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0						
<ul><li>59. CONSTRUCTION EXPENDITURES (1)</li><li>60. REPAY COMMERCIAL PAPER/DIRECT PURCHASE</li></ul>	49,356 <u>0</u>	47,976 82,236	50,304 135,309	49,800 <u>0</u>	77,028 124,391	20,556 <u>0</u>	8,796 28,368	8,748 <u>0</u>	14,676 23,840	13,740 <u>0</u>	372 12,967	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>
61. ENDING BALANCE	<u>2,795</u>	<u>4,192</u>	<u>4,150</u>	<u>6,419</u>	<u>1,713</u>	<u>733</u>	<u>729</u>	<u>1,223</u>	<u>1,145</u>	<u>31</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
COMBINED CYCLE - FUTURE  62. BEGINNING BALANCE  63. PROCEEDS FROM LONG-TERM DEBT - NET  64. PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE  65. TRANSFER (TO)/FROM OTHER FUNDS  66. TRANSFER (TO)/FROM CIGI FUND  67. TRANSFER (TO)/FROM REVENUE FUND  68. SUBTOTAL	0 0 0 0 0 0	0 0 0 0 0 0	0 0 11,071 0 0 0 11,071	1,267 0 22,404 0 0 0 23,671	8,467 139,218 105,743 0 0 0 253,428	12,606 0 149,710 0 0 0 162,316	11,044 273,642 123,932 0 0 0	2,448 0 28,481 0 0 0 30,929	1,553 45,564 17,083 0 0 0 64,200	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
<ul><li>69. CONSTRUCTION EXPENDITURES (1)</li><li>70. REPAY COMMERCIAL PAPER/DIRECT PURCHASE</li></ul>	0 <u>0</u>	0 <u>0</u>	9,804 <u>0</u>	15,204 <u>0</u>	101,604 139,218	151,272 <u>0</u>	132,528 273,642	29,376 <u>0</u>	18,636 45,564	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>
71. ENDING BALANCE	<u>0</u>	<u>0</u>	<u>1,267</u>	<u>8,467</u>	<u>12,606</u>	11,044	<u>2,448</u>	<u>1,553</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
COMBUSTION TURBINES - FUTURE  72. BEGINNING BALANCE  73. PROCEEDS FROM LONG-TERM DEBT - NET  74. PROCEEDS FROM COMMERCIAL PAPER FINANCING  75. TRANSFER (TO)/FROM OTHER FUNDS  76. TRANSFER (TO)/FROM CIGI FUND  77. TRANSFER (TO)/FROM REVENUE FUND  88. SUBTOTAL	0 0 0 0 0 0	0 0 19,502 0 0 0	2,846 55,660 36,158 0 0 0 94,664	4,852 0 53,869 0 0 0 58,721	497 59,336 5,467 0 0 0 65,300	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
79. CONSTRUCTION EXPENDITURES (1) 80. REPAY COMMERCIAL PAPER/DIRECT PURCHASE	0	16,656 0	34,152 55,660	58,224 0	5,964 <u>59,336</u>	0	0	0	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0	0	0	0	0	0	0 <u>0</u>	0	0 <u>0</u>
81. ENDING BALANCE	<u>0</u>	<u>2,846</u>	4,852	<u>497</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>
BATTERY STORAGE  82. BEGINNING BALANCE  83. PROCEEDS FROM LONG-TERM DEBT - NET  84. PROCEEDS FROM COMMERCIAL PAPER FINANCING  85. TRANSFER (TO)/FROM OTHER FUNDS  86. TRANSFER (TO)/FROM CIGI FUND  87. TRANSFER (TO)/FROM REVENUE FUND  88. SUBTOTAL  89. CONSTRUCTION EXPENDITURES (1)  90. REPAY COMMERCIAL PAPER/DIRECT PURCHASE	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 24,804 24,804 0 0 0 49,608 24,804	0 0 1,833 0 0 0 0 1,833	1,833 21,996 20,163 0 0 0 43,992 21,996 21,996	0 0 3,350 0 0 0 0 3,350	3,350 40,200 36,850 0 0 0 80,400 40,200 40,200	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0

91. ENDING BALANCE (1) CASH BASIS.

<u>0 0 0 1.833 0 3.350 0 0 0 0 0 0 0 0 0 0 0 0</u>

SANTEE COOPER
ELECTRIC SYSTEM

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## CASH RECEIPTS & DISBURSEMENTS STATEMENT CONSTRUCTION AND MISCELLANEOUS FUNDS FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
	TOTAL CONSTRUCTION FUND: (1)																				
92.	BEGINNING BALANCE	198,336	25,782	22,490	30,665	46,205	51,505	69,850	74,253	88,330	113,756	126,535	157,704	193,824	219,902	259,961	292,987	144,295	191,101	234,829	250,812
93.	PROCEEDS FROM LONG-TERM DEBT - NET	0	149,624	265,245	0	435,533	0	405,734	0	183,728	0	79,688	0	79,643	0	105,994	0	73,056	0	105,826	0
94.	PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE	97,503	149,941	143,848	173,150	257,954	219,268	193,138	79,286	108,219	49,088	33,922	38,376	43,413	45,297	61,369	37,922	35,134	41,418	35,328	0
95.	TRANSFERS (TO)/FROM OTHER FUNDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96.	TRANSFERS (TO)/FROM CIGI FUND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97.	TRANSFER (TO)/FROM DEBT REDUCTION FUND	(155,000)	(12,000)	0	0	0	0	(10,000)	(2,000)	(7,500)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(180,000)	(10,000)	(10,000)	(56,645)	(10,000)
98.	TRANSFER (TO)/FROM REVENUE FUND: CIF REQUIREMENT	148,224	148,532	147,492	148,100	148,036	150,872	153,987	155,480	158,556	161,209	163,482	166,263	170,377	172,780	176,054	180,015	182,708	186,133	191,931	194,996
99.	SUBTOTAL	289,063	461,879	579,075	351,915	887,728	421,645	812,709	307,019	531,333	314,053	393,627	352,343	477,257	427,979	593,378	330,924	425,193	408,652	511,269	435,808
100.	CONSTRUCTION EXPENDITURES (2)	261,995	292,192	281,948	304,715	399,829	351,019	332,123	218,264	233,772	187,474	156,192	158,490	177,685	168,002	194,396	186,629	161,036	173,823	183,711	169,944
101.	INTEREST ON COMMERCIAL PAPER/REVOLVING CREDIT NOT PAID FROM REVENUE	1,286	1,361	1,217	995	860	776	599	425	77	44	43	29	28	16	1	0	0	0	0	0
102.	REPAY COMMERCIAL PAPER/DIRECT PURCHASE	<u>0</u>	145,836	<u>265,245</u>	<u>0</u>	435,533	<u>0</u>	405,734	<u>0</u>	183,728	<u>0</u>	79,688	<u>0</u>	79,643	<u>0</u>	105,994	<u>0</u>	<u>73,056</u>	<u>0</u>	<u>76,746</u>	<u>0</u>
103.	ENDING BALANCE	25,782	22,489	30,665	46,205	<u>51,505</u>	69,850	74,253	88,330	113,756	126,535	157,704	193,825	219,902	259,962	292,987	144,295	<u>191,101</u>	234,829	250,812	265,864
100.	ENDING BALANCE	20,102	<u> </u>	00,000	10,200	<u>01,000</u>	<u>50,000</u>	1-1,200	<u>00,000</u>	110,100	120,000	101,104	100,020	210,002	200,002	202,001	111,200	101,101	20-1,020	200,012	200,007
	MISCELLANEOUS NUCLEAR PROCEEDS																				
1.	BEGINNING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.	PROCEEDS FROM NUCLEAR SALES	0	425,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.	USED TO DEFEASE DEBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.	USED TO AVOID FUTURE DEBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.	USED TO PAYDOWN EXISTING DEBT	0	(425,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.	ENDING BALANCE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

(1) SEE INDIVIDUAL FUND SHEETS FOR DETAILS RELATED TO TRANSFERS BETWEEN FUNDS. (2) CASH BASIS.

# SANTEE COOPER ELECTRIC SYSTEM DETAIL REPORTS

SANTEE COOPER 2020 REFORM PLAN SCHEDULE 1 **ELECTRIC SYSTEM** 11/20/19 PAGE 1 OF 2

#### CASH FLOW STATEMENT FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	2023	2024	<u>2025</u>	<u>2026</u>	2027	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	2032	<u>2033</u>	2034	<u>2035</u>	<u>2036</u>	2037	2038	2039
	REVENUES:																				
1.	OPERATING REVENUES	1,740,314	1.743.776	1.730.448	1,737,523	1,735,820	1.769.452	1,805,590	1,819,731	1.855.712	1,887,511	1,914,191	1,947,022	1,995,463	2,023,857	2.062.233	2,109,198	2.141.038	2.181.306	2.249.344	2.285.728
2.	FRANCHISE TAXES	5,824	5,833	5,856	5,929	6,023	6.150	6.302	6.408	6.542	6.711	6,820	6,951	7.124	7,248	7,386	7,559	7.654	7.789	7.973	8,099
3.	PROJECTED RATE ADJUSTMENTS (1)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	833	<u>5,075</u>	<u>5,150</u>	5,227	<u>5,305</u>	<u>5,384</u>	<u>5,464</u>	<u>5,545</u>	<u>5,628</u>	<u>5,712</u>	<u>5,797</u>	<u>5,883</u>	<u>5,971</u>	<u>6,060</u>
4.	TOTAL REVENUES	<u>1,746,138</u>	1,749,609	1,736,304	<u>1,743,452</u>	1,741,843	<u>1,775,602</u>	<u>1,812,725</u>	<u>1,831,214</u>	<u>1,867,404</u>	1,899,449	1,926,316	<u>1,959,357</u>	2,008,051	2,036,650	2,075,247	2,122,469	<u>2,154,489</u>	2,194,978	2,263,288	2,299,887
	OPERATING EXPENSES:																				
5.	PRODUCTION: MISCELLANEOUS	17.460	15,524	12,228	12.545	14.123	14.848	14.325	20.118	20.158	20,262	17,238	17.594	17.405	17,937	19.038	18.168	20.144	21.020	20.918	21,786
6.	HYDRO	11,888	12,139	12,130	12,394	12,654	12,920	13,191	13,468	13,751	14,040	14,335	14,636	14,943	15,257	15,577	15,904	16,238	16,579	16,927	17,283
7.	SOLAR	109	109	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.	JEFFERIES 3&4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	GRAINGER 1&2	22	23	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.	WINYAH NO. 1, 2, 3, & 4	47,073	47,928	50,081	34,264	35,718	36.445	37.045	6,835	6.978	7,125	7,274	7.427	7,583	7,742	7,905	8,071	8,240	8,413	8,590	8,771
11.	CROSS 1, 2, 3, & 4	88,272	93.431	87.190	93.888	91.995	100.356	97.563	93,610	97.355	107.995	107.057	110,412	107,208	107,296	116.990	111.841	113.064	114.434	116.971	118,246
12.	EXISTING COMBUSTION TURBINES	5,711	6,352	6,024	7,531	6,109	6.169	6.953	7,697	6.542	6,688	6,826	6,971	7,117	7,264	7,419	7,577	7,738	9,570	11,489	8,240
13.	COMBUSTION TURBINESFUTURE	0,7.11	0,002	0,021	974	1,003	1,025	1,047	1,066	1,082	1,105	1,130	1,143	1,174	1,193	1,221	1,244	1,266	1,293	1,321	1,349
14	EXISTING COMBINED CYCLES	7,651	11,803	8,059	11,428	12,917	8,929	11.149	11,728	9.428	17,639	9.803	10,008	15,334	10,424	10,614	20,038	11,153	11,380	17.466	11,886
15.	COMBINED CYCLEFUTURE	0	0 , 0 . 0	0,000	0	0	0,020	0	14.934	15.188	15,450	15,686	15,187	15,508	15,608	15,930	16,237	16,546	16,817	17,382	17,723
16.	LANDFILL GAS	3,122	3,192	3.178	3.244	3,312	3.382	3.453	3.525	3.599	3,675	3.752	3,831	3,912	3.994	4,078	4,163	4,251	4.340	4.431	4,524
17.	SUMMER NUCLEAR STATION	72,468	69,816	71,720	71.007	71,037	73.100	76.130	78,703	80.974	83,260	85,557	88,029	90,520	93,024	95,716	98,429	101.160	104,091	107,047	110,024
18.	PURCHASED POWER-SEPA	10,433	10.433	10.433	10.433	10.433	10,433	10.433	10,433	10.433	10.433	10.433	10.433	10.433	10.433	10.433	10.433	10.433	10.433	10.433	10.433
19.	-RENEWABLE	47,400	56,074	65,481	87,057	116,522	112,632	84,806	99,355	105,307	109,144	113,276	112,973	113,011	112,385	112,106	111.828	111,877	111.270	111,014	110.751
20.	-PPA 2031	47,400 O	00,074	00,401	07,007	110,322	112,002	04,000	05,555	00,007	005,144	113,270	13,187	34,989	57,192	84,515	114,958	139,474	166,039	192,290	215,251
20.	-FFA 2031 -OTHER	139,047	114,024	<u>85,295</u>	85,782	100,711	121,086	104,214	75,152	60.834	55,164	52,116	53,768	55,627	52,862	54,063	59,698	59,039	57,912	59,570	65,341
21.	-OTHER	100,041	114,024	00,200	00,702	100,711	121,000	104,214	10,102	00,004	30,104	52,110	33,700	55,021	52,002	<del>54,005</del>	<u>55,050</u>	33,033	57,512	33,370	00,041
22.	TOTAL PRODUCTION (EXCLUDING FUEL)	<u>450,656</u>	440,848	411,952	430,547	476,534	501,325	460,309	436,624	431,629	<u>451,980</u>	444,483	465,599	494,764	<u>512,611</u>	<u>555,605</u>	598,589	620,623	<u>653,591</u>	695,849	<u>721,608</u>
23.	FUEL: SOLAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24.	WINYAH 1, 2, 3, & 4	11,790	21,914	18,263	14,533	12,971	13,070	20,400	0	0	0	0	0	0	0	0	0	0	0	0	0
25.	CROSS 1, 2, 3, & 4	280,721	287,989	305,367	313,909	291,025	290,529	331,521	263,070	282,673	314,434	315,468	321,364	338,233	337,812	328,811	357,487	333,146	331,303	349,014	343,362
26.	EXISTING COMBUSTION TURBINES	70,657	68,140	52,667	48,649	31,120	10,463	20,688	6,942	1,887	4,748	3,115	3,411	2,932	1,532	1,454	1,627	1,908	908	1,759	1,695
27.	COMBUSTION TURBINESFUTURE	0	0	0	0	66	91	102	78	51	54	84	15	76	37	74	60	41	56	70	84
28.	EXISTING COMBINED CYCLES	92,236	88,924	88,517	75,486	74,475	86,852	87,503	85,733	97,158	85,738	101,779	104,514	102,526	112,271	114,423	101,605	124,918	128,014	123,805	136,394
29.	COMBINED CYCLESFUTURE	0	0	0	0	0	0	0	122,763	130,441	133,278	135,823	133,574	137,293	139,929	143,385	146,328	149,293	152,079	157,003	160,388
30.	LANDFILL GAS	873	868	868	868	871	868	868	862	864	854	851	851	860	849	848	848	848	850	849	849
31.	SUMMER NUCLEAR STATION	19,435	16,869	16,276	15,180	15,593	17,969	16,911	17,276	19,725	17,120	17,512	19,734	18,324	18,635	21,035	19,466	19,893	22,420	20,753	21,134
32.	TOTAL FUEL BURNED	<u>475,712</u>	<u>484,704</u>	<u>481,958</u>	<u>468,625</u>	<u>426,121</u>	419,842	<u>477,993</u>	496,724	532,799	<u>556,226</u>	<u>574,632</u>	<u>583,463</u>	600,244	<u>611,065</u>	610,030	627,421	630,047	<u>635,630</u>	<u>653,253</u>	<u>663,906</u>
33.	TOTAL PRODUCTION	926,368	925,552	893,910	899,172	902,655	921,167	938,302	933,348	964,428	1,008,206	<u>1,019,115</u>	1,049,062	1,095,008	<u>1,123,676</u>	<u>1,165,635</u>	1,226,010	<u>1,250,670</u>	1,289,221	1,349,102	<u>1,385,514</u>
34.	TRANSMISSION	36,993	34,457	35,191	36,201	36,980	37,402	37,825	38,077	38,933	39,868	40,886	41,990	43,183	44,469	45,851	47,333	48,919	50,613	52,419	54,342
35.	DISTRIBUTION	17,431	17,656	18,363	18,748	19,029	19,313	19,601	19,893	20,188	20,486	20,789	21,095	21,404	21,718	22,035	22,355	22,680	23,008	23,340	23,676
36.	CUSTOMER ACCOUNTING	15,007	15,397	15,402	15,726	16,056	16,393	16,737	17,089	17,448	17,814	18,188	18,570	18,960	19,358	19,765	20,180	20,604	21,036	21,478	21,929
37.	SALES PROMOTION	10,122	11,118	11,184	11,680	12,167	12,681	13,206	13,769	14,296	14,804	15,242	15,533	15,907	16,330	16,712	17,049	17,317	17,566	17,792	18,029
38.	ADMINISTRATIVE & GENERAL	107,617	113,797	116,118	118,671	121,188	123,734	126,402	130,056	132,798	135,598	138,456	141,375	144,356	147,400	150,508	153,596	156,834	160,056	163,429	166,789
39.	FRANCHISE TAXES	5,824	5,833	5,856	5,929	6,023	6,150	6,302	6,408	6,542	6,711	6,820	6,951	7,124	7,248	7,386	7,559	7,654	7,789	7,973	8,099
40.	TAXES PAID FROM REVENUES	212	<u>227</u>	<u>233</u>	236	<u>244</u>	<u>252</u>	<u>264</u>	<u>259</u>	262	<u>265</u>	<u>266</u>	<u>269</u>	262	221	222	223	<u>237</u>	<u>225</u>	226	<u>227</u>
41.	TOTAL OPERATING EXPENSES	<u>1,119,573</u>	<u>1,124,038</u>	1,096,256	<u>1,106,363</u>	1,114,342	<u>1,137,092</u>	<u>1,158,641</u>	<u>1,158,899</u>	<u>1,194,894</u>	1,243,752	1,259,762	<u>1,294,845</u>	<u>1,346,204</u>	1,380,419	1,428,113	1,494,306	<u>1,524,915</u>	<u>1,569,515</u>	1,635,760	<u>1,678,605</u>

(1) ADJUSTMENTS ARE CUMULATIVE

SANTEE COOPER 2020 REFORM PLAN **ELECTRIC SYSTEM** 11/20/19 CASH FLOW STATEMENT

> FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

SCHEDULE 1

PAGE 2 OF 2

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	2027	2028	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
42.	OPERATING INCOME	626,565	625,571	640,048	637,089	627,501	638,510	654,084	672,315	672,510	655,697	666,554	664,512	661,847	656,231	647,134	628,163	629,574	625,463	627,528	621,282
43.	INTEREST AND MISCELLANEOUS INCOME	<u>11,151</u>	<u>11,309</u>	<u>12,404</u>	12,487	13,427	<u>13,167</u>	<u>12,841</u>	<u>12,021</u>	<u>12,149</u>	<u>11,494</u>	<u>11,484</u>	<u>11,311</u>	<u>11,205</u>	<u>11,018</u>	<u>11,083</u>	<u>10,653</u>	<u>10,428</u>	<u>10,742</u>	<u>10,831</u>	<u>10,419</u>
	REVENUE AVAILABLE FOR DEBT																				
44.	SERVICE & OTHER DEDUCTIONS	<u>637,716</u>	636,880	<u>652,452</u>	649,576	640,928	<u>651,677</u>	666,925	<u>684,336</u>	<u>684,659</u>	<u>667,191</u>	678,038	<u>675,823</u>	<u>673,052</u>	667,249	<u>658,217</u>	<u>638,816</u>	640,002	<u>636,205</u>	<u>638,359</u>	<u>631,701</u>
	DEBT SERVICE (SCHEDULE 7):																				
45.	TOTAL LONG TERM DEBT SERVICE	416,387	439,567	459,391	454,861	445,401	451,857	457,070	482,506	474,246	452,053	466,029	460,768	451,406	445,140	431,408	401,572	403,892	394,145	385,926	379,347
46.	REVENUE AFTER DEBT SERVICE	221,329	<u>197,313</u>	<u>193,061</u>	<u>194,715</u>	195,527	199,820	209,855	201,830	210,413	215,138	212,009	215,055	221,646	222,109	226,809	237,244	236,110	242,060	<u>252,433</u>	252,354
	OTHER DEDUCTIONS:																				
47.	COMMERCIAL PAPER/DIRECT PURCHASE - PRINCIPAL	28,679	1,875	3,530	3,530	3,530	3,530	3,530	3,530	3,530	3,530	3,530	3,530	3,530	2,981	2,981	2,981	2,981	2,981	2,981	2,981
48.	- INTEREST	11,086	11,459	10,230	10,610	11,386	11,225	10,945	8,109	8,472	7,309	7,077	6,941	6,912	6,920	7,026	6,729	6,637	6,741	6,613	5,853
49.	INTEREST ON CUSTOMER DEPOSITS	498	523	550	578	608	639	671	705	741	779	819	861	905	951	999	1,050	1,104	1,160	1,219	1,281
50.	PAYMENT TO COUNTIES	4,383 17,403	4,393 17.438	4,359 17,304	4,377 17,375	4,373 17,358	4,457 17,695	4,549 18,064	4,595 18,248	4,685 18,609	4,765 18,927	4,832 19,195	4,914 19,524	5,035 20,009	5,106 20,294	5,203 20,679	5,320 21,149	5,400 21,468	5,501 21,872	5,671 22,553	5,763 22,918
51. 52	PAYMENT TO STATE CAPITAL IMPROVEMENT FUND (1)	148,224	148,532	147,492	148,100	148,036	150,872	153,987	155,480	158,556	161.209	163,482	166,263	170,377	172.780	176,054	180,015	182,708	186,133	191,931	194,996
53.	TOTAL OTHER DEDUCTIONS	210,273	184.220	183,465	184,570	185,291	188,418	191,746	190,667	194,593	196,519	198,935	202,033	206,768	209,032	212,942	217.244	220,298	224,388	230,968	233,792
	70 M2 0 M2 N 2 2 2 2 2 0 0 M 2 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	= 10,210	.0.,220	100,100	10.10.0	.00,20.	.00,0	10.11.10	100,00	101,000	.00,0.0	.00,000	202,000	200,.00	200,002	=,	,			200,000	2001.02
54.	NET REMAINING	<u>11,056</u>	<u>13,093</u>	<u>9,596</u>	<u>10,145</u>	<u>10,236</u>	<u>11,402</u>	<u>18,109</u>	<u>11,163</u>	<u>15,820</u>	<u>18,619</u>	13,074	13,022	<u>14,878</u>	<u>13,077</u>	<u>13,867</u>	20,000	<u>15,812</u>	<u>17,672</u>	<u>21,465</u>	<u>18,562</u>
55.	TOTAL REVENUE AVAILABLE (2)	1,751,465	1,755,085	1,742,852	1,750,010	1,749,247	1,782,619	1,819,264	1,836,827	1,873,011	1,904,232	1,930,980	1,963,717	2,012,132	2,040,420	2,078,944	2,125,563	2,157,263	2,197,931	2,266,146	2,302,207
56.	LESS: REVENUE REQUIRED (3)	1,748,898	1,750,298	1,741,841	1,748,435	1,747,567	1,779,842	1,809,318	1,834,610	1,865,875	1,894,193	1,927,181	1,960,155	2,006,796	2,037,219	2,075,085	2,115,221	2,151,698	2,190,543	2,254,965	2,294,414
57.	WORKING CAPITAL (4)	<u>0</u>	3,208	<u>0</u>	<u>0</u>	<u>0</u>	<u>515</u>	9,223	<u>1,965</u>	<u>5,738</u>	7,298	<u>1,981</u>	<u>2,499</u>	<u>3,970</u>	<u>2,062</u>	<u>2,323</u>	9,284	<u>4,131</u>	<u>5,763</u>	<u>9,303</u>	<u>5,815</u>
58.	REVENUE SURPLUS/(DEFICIENCY)	<u>2,567</u>	<u>1,579</u>	<u>1,011</u>	<u>1,575</u>	<u>1,680</u>	<u>2,262</u>	<u>723</u>	<u>252</u>	<u>1,398</u>	<u>2,741</u>	<u>1,818</u>	<u>1,063</u>	<u>1,366</u>	<u>1,139</u>	<u>1,536</u>	<u>1,058</u>	<u>1,434</u>	<u>1,625</u>	<u>1,878</u>	<u>1,978</u>

<sup>(1)</sup> THIS AMOUNT REFLECTS THE AMOUNTS TRANSFERRED TO THE CAPITAL IMPROVEMENT FUND

<sup>(2)</sup> EXCLUDES FRANCHISE FEES.

<sup>(3)</sup> REVENUE REQUIRED IS BASED ON TOTAL COST PLUS CAPITAL IMPROVEMENT REQUIREMENT OF 9% THROUGH 2039.

<sup>(4)</sup> INCLUDES CAPITAL IMPROVEMENT REQUIREMENT.

11/20/19

SCHEDULE 2

#### SANTEE COOPER ELECTRIC SYSTEM

#### LONG-TERM DEBT OUTSTANDING FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

	2020	<u>2021</u>	2022	2023	2024	2025	2026	2027	2028	2029	<u>2030</u>	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	2039
1. 2009-C REVENUE OBLIGATION BOND	1.830	1,575	1,305	1,000	825	635	435	225	0	0	0	0	0	0	0	0	0	0	0	0
2. 2009-F REVENUE OBLIGATION BOND	100,000	100,000	100.000	100,000	100,000	82.164	63,306	43,368	22,288	0	0	0	0	0	0	0	0	0	0	0
3. 2010-B REVENUE OBLIGATION BOND REFUNDING	64,150	64,150	64,150	64,150	64,150	64,150	64,150	64,150	64,150	64,150	61,850	31,850	0	0	0	0	0	0	0	0
4. 2010-C REVENUE OBLIGATION BOND	360,000	360,000	360,000	360,000	360,000	360,000	360.000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360.000	360,000	360.000
5. 2011-B REVENUE OBLIGATION BOND REFUNDING	35,283	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6. 2011-C REVENUE OBLIGATION BOND REFUNDING	135,855	135,855	135,855	135,855	135,855	135,855	135,855	135,855	135,855	135,855	135,855	135,855	133,239	101,443	66,109	39,009	0	0	0	0
7. 2012-A REVENUE OBLIGATION BOND REFUNDING	62,663	56,488	53,825	51,060	47,558	37,304	28,060	20,116	11,762	3,442	0	0	0	0	0	0	0	0	0	0
8. 2012-B REVENUE OBLIGATION BOND REFUNDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9. 2012-C REVENUE OBLIGATION BOND REFUNDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10. 2012-D REVENUE OBLIGATION BOND	260,547	258,745	255,268	251,136	247,412	243,524	239,474	235,249	231,501	227,597	223,519	219,800	215,937	215,836	215,731	215,626	215,515	215,400	215,400	211,331
11. 2012-E REVENUE OBLIGATION BOND	230,460	228,498	204,957	181,416	157,875	134,335	110,795	86,805	57,870	28,935	0	0	0	0	0	0	0	0	0	0
12. 2013-A REVENUE OBLIGATION BOND	152,655	152,655	152,655	152,655	152,655	152,655	152,655	152,655	152,655	152,655	152,655	152,655	151,536	138,037	123,887	112,274	108,532	103,506	98,855	85,090
13. 2013-B REVENUE OBLIGATION BOND	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	385,387	345,100	302,799	258,380	211,737
14. 2013-C REVENUE OBLIGATION BOND	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	246,703	206,972	164,923	120,417	101,417	82,417	63,417	44,250
15. 2013-E REVENUE OBLIGATION BOND	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765
16. 2014-A REVENUE OBLIGATION BOND	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000
17. 2014-B REVENUE OBLIGATION BOND	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	41,910	37,506	32,877	28,022	22,921	17,567	11,941	6,114	0	0
18. 2014-C REVENUE OBLIGATION BOND REFUNDING	695,076	676,638	656,724	631,700	604,503	567,480	541,406	523,667	492,646	460,523	432,703	400,052	381,815	362,311	353,463	344,234	321,560	306,525	285,638	264,610
19. 2014-D REVENUE OBLIGATION BOND REFUNDING	31,795	31,393	26,556	21,579	16,449	11,149	5,670	0	0	0	0	0	0	0	0	0	0	0	0	0
20. 2015-A REVENUE OBLIGATION BOND	569,315	558,552	552,968	535,178	516,518	496,563	475,200	473,251	451,363	446,440	445,478	434,742	432,955	431,024	429,028	426,961	424,810	422,578	420,266	417,868
21. 2015-B REVENUE OBLIGATION BOND REFUNDING	64,870	63,150	42,521	21,748	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22. 2015-C REVENUE OBLIGATION BOND REFUNDING	88,319	18,278	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23. 2015-D REVENUE OBLIGATION BOND	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657
24. 2015-E REVENUE OBLIGATION BOND	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
25. 2016-A REVENUE OBLIGATION BOND	543,261	537,432	531,845	531,845	531,730	529,643	519,453	505,742	491,486	457,910	422,658	388,936	353,076	305,850	257,240	215,928	161,436	107,220	85,094	80,992
26. 2016-B REVENUE OBLIGATION BOND	508,705	508,705	508,705	508,705	508,705	508,705	508,705	508,705	508,705	508,705	508,071	500,531	493,738	486,609	477,738	453,197	427,431	400,386	371,954	344,383
27. 2016-C REVENUE OBLIGATION BOND REFUNDING	52,400	52,230	50,182	48,033	45,778	43,409	40,923	38,313	35,571	32,694	29,672	26,498	23,168	19,703	15,379	4,001	0	0	0	0
28. 2016-D REVENUE OBLIGATION BOND	174,980	174,980	160,398	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29. 2019-A REVENUE OBLIGATION BOND (VRDB)	143,280	143,280	124,875	117,130	112,120	110,315	109,460	97,210	88,010	72,460	59,460	57,580	46,460	30,920	16,145	0	0	0	0	0
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)	10,000	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>						
31. SUBTOTAL EXISTING LONG-TERM DEBT	<u>6,467,871</u>	<u>6,305,031</u>	6,165,216	<u>5,895,617</u>	5,784,560	5,660,313	5,537,974	<u>5,427,738</u>	5,286,289	5,133,793	5,013,983	<u>4,886,157</u>	4,761,656	4,576,879	4,392,716	4,196,023	3,979,164	3,808,367	3,660,426	<u>3,521,683</u>
32. FUTURE-CAPITAL TRANSMISSION	0	68,069	59,525	32,520	72,736	70,591	126,795	113,455	172,379	148,966	194,738	171,220	215,523	196,019	260,274	248,470	302,803	282,595	348,279	291,082
33. FUTURE-BATTERY STORAGE	0	0	0	0	24,419	23,125	43,435	40,893	77,829	72,991	67,970	62,758	57,349	51,735	45,907	39,859	33,581	27,064	20,301	14,391
34. FUTURE-COMBUSTION TURBINES	0	0	56,222	53,294	108,640	102,333	95,809	89,061	82,081	74,862	67,395	59,671	51,682	43,418	34,871	26,031	16,886	7,428	2,504	0
35. FUTURE TRANSMISSION SPECIAL PROJECTS	0	0	39,612	37,457	73,796	69,393	85,885	80,030	73,974	67,710	61,231	54,529	47,598	40,428	33,013	25,343	17,410	10,961	6,048	2,678
36. FUTURE-FERC CAPITAL	0	0	10,899	10,899	15,681	15,681	17,320	16,342	17,491	16,328	17,703	16,318	31,434	29,051	48,408	44,698	51,722	47,136	49,762	44,437
37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	0	83,067	204,233	176,230	272,911	221,539	196,571	154,943	143,918	103,110	99,206	79,174	63,438	47,161	35,650	23,743	14,323	4,580	3,204	1,781
38. FUTURE-NATURAL GAS 2027	0	0	0	0	140,624	140,624	417,030	379,821	383,076	378,705	293,661	245,001	197,425	192,426	187,258	185,989	185,344	153,344	118,344	84,844
39. SUBTOTAL FUTURE LONG-TERM DEBT	<u>0</u>	<u>151,136</u>	370,491	310,400	708,807	643,286	982,845	<u>874,545</u>	950,748	862,672	801,904	688,671	664,449	600,238	645,381	<u>594,133</u>	622,069	533,108	548,442	439,213
40. ADJUSTMENT FOR REFINANCING (2)	(12,730)	(71,423)	(91,916)	(76,241)	(354,784)	(481,859)	(706,093)	(711,882)	(736,605)	(739,683)	(761,853)	(814,324)	(847,005)	(920,985)	(1,049,448)	(1,147,288)	(1,210,588)	(1,218,540)	(1,293,206)	(1,323,728)
41. ADJUSTMENT FOR DEBT PAYDOWN (3)	(136,548)	(534,158)	(534,158)	(534,158)	(534,063)	(532,923)	(531,737)	(530,504)	(526,808)	(496,539)	(466,217)	(435,840)	(434,339)	(432,778)	(431,155)	(690,545)	(688,790)	(686,964)	(721,993)	(720,018)
42. SUBTOTAL FUTURE LONG-TERM DEBT AND ADJUSTMENTS	(149,278)	(454,445)	(255,583)	(299,999)	(180,040)	(371,496)	(254,985)	(367,841)	(312,665)	(373,550)	(426,166)	(561,493)	(616,895)	(753,525)	(835,222)	(1,243,700)	(1,277,309)	(1,372,396)	(1,466,757)	(1,604,533)
43. TOTAL LONG-TERM DEBT OUTSTANDING	<u>6,318,593</u>	<u>5,850,586</u>	<u>5,909,633</u>	<u>5,595,618</u>	<u>5,604,520</u>	<u>5,288,817</u>	<u>5,282,989</u>	5,059,897	4,973,624	4,760,243	<u>4,587,817</u>	4,324,664	<u>4,144,761</u>	<u>3,823,354</u>	3,557,494	2,952,323	<u>2,701,855</u>	<u>2,435,971</u>	<u>2,193,669</u>	<u>1,917,150</u>

<sup>(1)</sup> BARCLAYS DIRECT PURCHASE AGREEMENT ISSUED FOR FUEL LEVELIZATION.

<sup>(2)</sup> INCLUDES ECONOMIC REFUNDING AND OTHER REFINANCING OF EXISTING DEBT.

<sup>(3)</sup> INCLUDES CALLS OF EXISTING DEBT

11/20/19

SCHEDULE 3

## SANTEE COOPER ELECTRIC SYSTEM RETIREMENT OF LONG-TERM DEBT

FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

									(DULLAR	S IN THOUS	ANDS)									
	<u>2020</u>	<u>2021</u>	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
1. 2009-C REVENUE OBLIGATION BOND	240	255	270	305	175	190	200	210	225	0	0	0	0	0	0	0	0	0	0	0
2. 2009-F REVENUE OBLIGATION BOND	0	0	0	0	0	17,836	18,858	19,938	21,080	22,288	0	0	0	0	0	0	0	0	0	0
3. 2010-B REVENUE OBLIGATION BOND REFUNDING	0	0	0	0	0	0	0	0	0	0	2,300	30,000	31,850	0	0	0	0	0	0	0
4. 2010-C REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5. 2011-B REVENUE OBLIGATION BOND REFUNDING	11,100	35,283	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6. 2011-C REVENUE OBLIGATION BOND REFUNDING	0	0	0	0	0	0	0	0	0	0	0	0	2,616	31,796	35,334	27,100	39,009	0	0	0
7. 2012-A REVENUE OBLIGATION BOND REFUNDING	541	6,175	2,663	2,765	3,501	10,254	9,244	7,944	8,355	8,320	3,442	0	0	0	0	0	0	0	0	0
8. 2012-B REVENUE OBLIGATION BOND REFUNDING	4,583	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9. 2012-C REVENUE OBLIGATION BOND REFUNDING	12,435	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10. 2012-D REVENUE OBLIGATION BOND	138	1,802	3,478	4,132	3,724	3,888	4,050	4,225	3,748	3,904	4,078	3,719	3,863	100	105	105	111	115	0	4,069
11. 2012-E REVENUE OBLIGATION BOND	0	1,962	23,541	23,541	23,541	23,540	23,541	23,990	28,935	28,935	28,935	0	0	0	0	0	0	0	0	0
12. 2013-A REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	1,119	13,499	14,150	11,613	3,742	5,026	4,651	13,765
13. 2013-B REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,343	40,287	42,301	44,419	46,643
<ol> <li>2013-C REVENUE OBLIGATION BOND</li> </ol>	0	0	0	0	0	0	0	0	0	0	0	0	3,297	39,731	42,049	44,506	19,000	19,000	19,000	19,167
<ol> <li>2013-E REVENUE OBLIGATION BOND</li> </ol>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<ol><li>2014-A REVENUE OBLIGATION BOND</li></ol>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<ol> <li>2014-B REVENUE OBLIGATION BOND</li> </ol>	0	0	0	0	0	0	0	0	0	0	365	4,404	4,629	4,855	5,101	5,354	5,626	5,827	6,114	0
<ol> <li>2014-C REVENUE OBLIGATION BOND REFUNDING</li> </ol>	1,529	18,438	19,915	25,024	27,197	37,023	26,074	17,740	31,020	32,123	27,820	32,651	18,238	19,504	8,848	9,230	22,674	15,035	20,887	21,028
<ol><li>2014-D REVENUE OBLIGATION BOND REFUNDING</li></ol>	0	402	4,837	4,978	5,130	5,300	5,479	5,670	0	0	0	0	0	0	0	0	0	0	0	0
20. 2015-A REVENUE OBLIGATION BOND	945	10,764	5,583	17,791	18,660	19,955	21,363	1,949	21,888	4,923	963	10,735	1,788	1,930	1,996	2,067	2,152	2,232	2,312	2,398
21. 2015-B REVENUE OBLIGATION BOND REFUNDING	0	1,720	20,629	20,773	21,748	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22. 2015-C REVENUE OBLIGATION BOND REFUNDING	61,716	70,040	18,278	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23. 2015-D REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24. 2015-E REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25. 2016-A REVENUE OBLIGATION BOND	484	5,829	5,587	0	115	2,087	10,190	13,711	14,256	33,576	35,252	33,722	35,860	47,226	48,610	41,313	54,492	54,217	22,125	4,102
26. 2016-B REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	634	7,540	6,793	7,130	8,870	24,542	25,765	27,045	28,432	27,571
27. 2016-C REVENUE OBLIGATION BOND REFUNDING	0	170	2,048	2,149	2,255	2,370	2,485	2,611	2,741	2,877	3,023	3,173	3,331	3,465	4,324	11,378	4,001	0	0	0
28. 2016-D REVENUE OBLIGATION BOND	0	0	14,582	160,398	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<ol> <li>29. 2019-A REVENUE OBLIGATION BOND (VRDB)</li> </ol>	1,540	0	10 105	7,745	5,010	1,805	855	12,250	9,200	15,550	13,000	1,880	11,120	15,540	14,775	16,145	0	0	0	0
,	,	-	18,405	1,145	0,010			12,200	0,200		.0,000		,0	10,010	,	10,140	0		•	•
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)	<u>16,055</u>	10,000	0 0	0 0	<u>0</u>	0 0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0 0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)	<u>16,055</u>	10,000	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u> 216.859	<u>0</u> 170.798	<u>0</u>	<u>0</u>
,	,	-	,	0 269,601	0 111,056			0 110,238	0 141,448		0 119,812		0 124,504	0 184,776	0 184,162	0 196,696	<u>0</u> 216,859	0 170,798	<u>0</u> 147,940	<u>0</u> 138,743
<ul> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>31. SUBTOTAL EXISTING LONG-TERM DEBT</li> </ul>	<u>16,055</u>	10,000	<u>0</u> 139,816	<u>0</u> <b>269,601</b>	<u>0</u> 111,056	<u>0</u> 124,248	<u>0</u> 122,339	<u>0</u> 110,238	<u>0</u> 141,448	<u>0</u> 152,496	<u>0</u> 119,812	<u>0</u> 127,824	<u>0</u> 124,504	<u>0</u> 184,776	<u>0</u> 184,162	<u>0</u> 196,696		<u></u>		
<ul> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>31. SUBTOTAL EXISTING LONG-TERM DEBT</li> <li>32. FUTURE-CAPITAL TRANSMISSION</li> </ul>	<u>16,055</u>	10,000	<u>0</u>	<u>0</u>	0 111,056 4,074	0 124,248 2,145	<u>0</u> <b>122,339</b> 2,219	0 110,238 13,340	0 141,448 13,730	0 152,496 23,413	0 119,812 18,975	<u>0</u> 127,824 23,517	0 124,504 19,154	0 184,776 19,504	0 184,162 21,071	<u>0</u> <u>196,696</u> 11,804	8,003	20,208	33,436	57,197
<ul> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>31. SUBTOTAL EXISTING LONG-TERM DEBT</li> <li>32. FUTURE-CAPITAL TRANSMISSION</li> <li>33. FUTURE-BATTERY STORAGE</li> </ul>	<u>16,055</u>	10,000	0 139,816 32,000	<u>0</u> <u>269,601</u> 27,005 0	0 111,056 4,074 635	0 124,248 2,145 1,295	0 122,339 2,219 1,907	0 110,238 13,340 2,543	0 141,448 13,730 3,669	0 152,496 23,413 4,838	0 119,812 18,975 5,021	0 127,824 23,517 5,212	0 124,504 19,154 5,409	0 184,776 19,504 5,614	0 184,162 21,071 5,827	0 196,696 11,804 6,049	8,003 6,278	20,208 6,516	33,436 6,764	57,197 5,910
<ul> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>31. SUBTOTAL EXISTING LONG-TERM DEBT</li> <li>32. FUTURE-CAPITAL TRANSMISSION</li> <li>33. FUTURE-BATTERY STORAGE</li> </ul>	<u>16,055</u>	10,000	0 139,816 32,000 0 0	269,601 27,005 0 2,928	0 111,056 4,074 635 4,589	0 124,248 2,145	0 122,339 2,219 1,907 6,524	0 110,238 13,340 2,543 6,748	0 141,448 13,730	0 152,496 23,413	0 119,812 18,975	<u>0</u> 127,824 23,517	0 124,504 19,154	0 184,776 19,504	0 184,162 21,071	<u>0</u> <u>196,696</u> 11,804	8,003 6,278 9,144	20,208	33,436 6,764 4,924	57,197 5,910 2,504
<ul> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>31. SUBTOTAL EXISTING LONG-TERM DEBT</li> <li>32. FUTURE-CAPITAL TRANSMISSION</li> <li>33. FUTURE-BATTERY STORAGE</li> <li>34. FUTURE-COMBUSTION TURBINES</li> </ul>	<u>16,055</u>	10,000	0 139,816 32,000 0	<u>0</u> <u>269,601</u> 27,005 0	0 111,056 4,074 635	0 124,248 2,145 1,295 6,307	0 122,339 2,219 1,907 6,524 5,117	0 110,238 13,340 2,543	0 141,448 13,730 3,669 6,980	0 152,496 23,413 4,838 7,219	0 119,812 18,975 5,021 7,467 6,479	0 127,824 23,517 5,212 7,724 6,701	0 124,504 19,154 5,409 7,989	0 184,776 19,504 5,614 8,263 7,169	0 184,162 21,071 5,827 8,547	0 196,696 11,804 6,049 8,841	8,003 6,278	20,208 6,516 9,458 6,448	33,436 6,764	57,197 5,910 2,504 3,370
<ol> <li>BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>SUBTOTAL EXISTING LONG-TERM DEBT</li> <li>FUTURE-CAPITAL TRANSMISSION</li> <li>FUTURE-BATTERY STORAGE</li> <li>FUTURE-COMBUSTION TURBINES</li> <li>FUTURE-TRANSMISSION SPECIAL PROJECTS</li> <li>FUTURE-FERC CAPITAL</li> </ol>	<u>16,055</u>	10,000	0 139,816 32,000 0 0 1,059 0	0 269,601 27,005 0 2,928 2,155 0	0 111,056 4,074 635 4,589 3,260 0	0 124,248 2,145 1,295 6,307 4,403 0	0 122,339 2,219 1,907 6,524 5,117 882	0 110,238 13,340 2,543 6,748 5,855 978	0 141,448 13,730 3,669 6,980 6,056 1,069	0 152,496 23,413 4,838 7,219 6,264 1,164	0 119,812 18,975 5,021 7,467 6,479 1,273	0 127,824 23,517 5,212 7,724 6,701 1,385	0 124,504 19,154 5,409 7,989 6,932 1,875	0 184,776 19,504 5,614 8,263 7,169 2,382	0 184,162 21,071 5,827 8,547 7,416 2,382	0 196,696 11,804 6,049 8,841 7,670 3,710	8,003 6,278 9,144 7,933 4,434	20,208 6,516 9,458 6,448 4,586	33,436 6,764 4,924 4,913 5,149	57,197 5,910 2,504 3,370 5,326
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION  33. FUTURE-BATTERY STORAGE  34. FUTURE-COMBUSTION TURBINES  35. FUTURE-TRANSMISSION SPECIAL PROJECTS  36. FUTURE-FERC CAPITAL  37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	<u>16,055</u>	10,000	0 139,816 32,000 0 0 1,059	0 269,601 27,005 0 2,928 2,155	0 111,056 4,074 635 4,589 3,260	0 124,248 2,145 1,295 6,307 4,403	0 122,339 2,219 1,907 6,524 5,117	0 110,238 13,340 2,543 6,748 5,855 978 41,628	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907	8,003 6,278 9,144 7,933 4,434 9,420	20,208 6,516 9,458 6,448 4,586 9,743	33,436 6,764 4,924 4,913 5,149 1,376	57,197 5,910 2,504 3,370 5,326 1,423
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION  33. FUTURE-BATTERY STORAGE  34. FUTURE-COMBUSTION TURBINES  35. FUTURE-TRANSMISSION SPECIAL PROJECTS  36. FUTURE-FERC CAPITAL  37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	<u>16,055</u>	10,000	0 139,816 32,000 0 0 1,059 0 15,509	269,601 27,005 0 2,928 2,155 0 28,003	0 111,056 4,074 635 4,589 3,260 0	0 124,248 2,145 1,295 6,307 4,403 0	0 122,339 2,219 1,907 6,524 5,117 882	0 110,238 13,340 2,543 6,748 5,855 978	0 141,448 13,730 3,669 6,980 6,056 1,069	0 152,496 23,413 4,838 7,219 6,264 1,164	0 119,812 18,975 5,021 7,467 6,479 1,273	0 127,824 23,517 5,212 7,724 6,701 1,385	0 124,504 19,154 5,409 7,989 6,932 1,875	0 184,776 19,504 5,614 8,263 7,169 2,382	0 184,162 21,071 5,827 8,547 7,416 2,382	0 196,696 11,804 6,049 8,841 7,670 3,710	8,003 6,278 9,144 7,933 4,434	20,208 6,516 9,458 6,448 4,586	33,436 6,764 4,924 4,913 5,149	57,197 5,910 2,504 3,370 5,326
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION  33. FUTURE-BATTERY STORAGE  34. FUTURE-COMBUSTION TURBINES  35. FUTURE-TRANSMISSION SPECIAL PROJECTS  36. FUTURE-FERC CAPITAL  37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	<u>16,055</u>	10,000	0 139,816 32,000 0 0 1,059 0 15,509	269,601 27,005 0 2,928 2,155 0 28,003	0 111,056 4,074 635 4,589 3,260 0	0 124,248 2,145 1,295 6,307 4,403 0	0 122,339 2,219 1,907 6,524 5,117 882	0 110,238 13,340 2,543 6,748 5,855 978 41,628	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907	8,003 6,278 9,144 7,933 4,434 9,420	20,208 6,516 9,458 6,448 4,586 9,743	33,436 6,764 4,924 4,913 5,149 1,376	57,197 5,910 2,504 3,370 5,326 1,423
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT	16.055 111,306 0 0 0 0 0 0 0	10,000 162,840 0 0 0 0 0 0 0	0 139,816 32,000 0 0 1,059 0 15,509 0	27,005 0 2,928 2,155 0 28,003 0	0 111,056 4,074 635 4,589 3,260 0 28,966 0	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660 113,231	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250	8,003 6,278 9,144 7,933 4,434 9,420 <u>645</u>	20,208 6,516 9,458 6,448 4,586 9,743 32,000 88,959	33,436 6,764 4,924 4,913 5,149 1,376 35,000	57,197 5,910 2,504 3,370 5,326 1,423 33,500
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-NATURAL GAS 2027	<u>16,055</u>	10,000	0 139,816 32,000 0 0 1,059 0 15,509	27,005 0 2,928 2,155 0 28,003	0 111,056 4,074 635 4,589 3,260 0 28,966 0	0 124,248 2,145 1,295 6,307 4,403 0 51,372	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577	0 19,504 5,614 8,263 7,169 2,382 16,276 4,998	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269	8,003 6,278 9,144 7,933 4,434 9,420 <u>645</u>	20,208 6,516 9,458 6,448 4,586 9,743 32,000	33,436 6,764 4,924 4,913 5,149 1,376 35,000	57,197 5,910 2,504 3,370 5,326 1,423 33,500
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-CAPITAL 36. FUTURE-FERC CAPITAL 37. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT	16.055 111,306 0 0 0 0 0 0 0	10,000 162,840 0 0 0 0 0 0 0 0 0	0 139,816 32,000 0 1,059 0 15,509 0 48,568	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660 113,231 241,055	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946	8,003 6,278 9,144 7,933 4,434 9,420 645 45,857	20,208 6,516 9,458 6,448 4,586 9,743 32,000 88,959 259,757	33,436 6,764 4,924 4,913 5,149 1,376 35,000 <b>91,562</b> <b>239,502</b>	57,197 5,910 2,504 3,370 5,326 1,423 33,500 109,230 247,973
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2)	16.055 111,306 0 0 0 0 0 0 0	10,000 162,840 0 0 0 0 0 0 0	0 139,816 32,000 0 0 1,059 0 15,509 0	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692 (168,714)	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580 11,407	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770 (11,963)	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611 6,718	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540 8,252	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827 6,350	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078 240,574	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073 5,343	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660 113,231 241,055	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982 (1,283)	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946 (14,851)	8,003 6,278 9,144 7,933 4,434 9,420 645 45,857 262,716	20,208 6,516 9,458 6,448 4,586 9,743 32,000 88,959 259,757	33,436 6,764 4,924 4,913 5,149 1,376 35,000 <b>91,562</b> <b>239,502</b> 31,023	57,197 5,910 2,504 3,370 5,326 1,423 33,500 109,230 247,973
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-CAPITAL 36. FUTURE-FERC CAPITAL 37. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT	16.055 111,306 0 0 0 0 0 0 0	10,000 162,840 0 0 0 0 0 0 0 0 0	0 139,816 32,000 0 0 1,059 0 15,509 0 48,568 188,384 (22,054)	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660 113,231 241,055	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946	8,003 6,278 9,144 7,933 4,434 9,420 645 45,857	20,208 6,516 9,458 6,448 4,586 9,743 32,000 88,959 259,757	33,436 6,764 4,924 4,913 5,149 1,376 35,000 <b>91,562</b> <b>239,502</b>	57,197 5,910 2,504 3,370 5,326 1,423 33,500 109,230 247,973
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2)	16.055 111,306 0 0 0 0 0 0 0	10,000 162,840 0 0 0 0 0 0 0 0 0	0 139,816 32,000 0 0 1,059 0 15,509 0 48,568 188,384 (22,054)	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692 (168,714)	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580 11,407	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770 (11,963)	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611 6,718	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540 8,252	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827 6,350	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078 240,574	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073 5,343	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660 113,231 241,055	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982 (1,283)	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946 (14,851)	8,003 6,278 9,144 7,933 4,434 9,420 645 45,857 262,716	20,208 6,516 9,458 6,448 4,586 9,743 32,000 88,959 259,757	33,436 6,764 4,924 4,913 5,149 1,376 35,000 <b>91,562</b> <b>239,502</b> 31,023	57,197 5,910 2,504 3,370 5,326 1,423 33,500 109,230 247,973
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION  33. FUTURE-BATTERY STORAGE  34. FUTURE-COMBUSTION TURBINES  35. FUTURE-TRANSMISSION SPECIAL PROJECTS  36. FUTURE-FERC CAPITAL  37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS  38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2)  42. ADJUSTMENT FOR DEBT PAYDOWN (3)	16.055 111,306 0 0 0 0 0 0 0 0 0 0 111,306	10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 0	0 139,816 32,000 0 1,059 0 15,509 0 48,568 188,384 (22,054) 0	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692 (168,714) (95)	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580 11,407 (1,140)	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770 (11,963) (1,186)	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611 6,718 (1,233)	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540 8,252 (3,696)	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827 6,350 (30,269)	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078 240,574 3,132 (30,322)	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073 5,343 (30,377)	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48.660 113,231 241,055 720 (1.501)	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176 14,289 (1,561)	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982 (1,283) (1,623)	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085 1,500 (1,688)	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946 (14,851) (1,755)	8,003 6,278 9,144 7,933 4,434 9,420 <u>645</u> <b>45,857</b> <b>262,716</b> 1,038 (1,826)	20,208 6,516 9,458 6,448 4,586 9,743 32,000 <b>88,959</b> <b>259,757</b> 8,025 (1,899)	33,436 6,764 4,924 4,913 5,149 1,376 35,000 <b>91,562</b> <b>239,502</b> 31,023 (1,975)	57,197 5,910 2,504 3,370 5,326 1,423 33,500 109,230 247,973 34,669 (6,122)
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION  33. FUTURE-BATTERY STORAGE  34. FUTURE-COMBUSTION TURBINES  35. FUTURE-TRANSMISSION SPECIAL PROJECTS  36. FUTURE-FERC CAPITAL  37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS  38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2)  42. ADJUSTMENT FOR DEBT PAYDOWN (3)	16,055 111,306 0 0 0 0 0 0 0 0 0 0 0 111,306	10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 0	0 139,816 32,000 0 1,059 0 15,509 0 48,568 188,384 (22,054) 0	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692 (168,714) (95)	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580 11,407 (1,140)	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770 (11,963) (1,186)	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611 6,718 (1,233)	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540 8,252 (3,696)	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827 6,350 (30,269)	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078 240,574 3,132 (30,322)	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073 5,343 (30,377)	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48.660 113,231 241,055 720 (1.501)	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176 14,289 (1,561)	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982 (1,283) (1,623)	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085 1,500 (1,688)	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946 (14,851) (1,755)	8,003 6,278 9,144 7,933 4,434 9,420 <u>645</u> <b>45,857</b> <b>262,716</b> 1,038 (1,826)	20,208 6,516 9,458 6,448 4,586 9,743 32,000 <b>88,959</b> <b>259,757</b> 8,025 (1,899)	33,436 6,764 4,924 4,913 5,149 1,376 35,000 <b>91,562</b> <b>239,502</b> 31,023 (1,975)	57,197 5,910 2,504 3,370 5,326 1,423 33,500 109,230 247,973 34,669 (6,122)
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION  33. FUTURE-BATTERY STORAGE  34. FUTURE-COMBUSTION TURBINES  35. FUTURE-TRANSMISSION SPECIAL PROJECTS  36. FUTURE-FERC CAPITAL  37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS  38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2)  42. ADJUSTMENT FOR DEBT PAYDOWN (3)  43. TOTAL RETIREMENT PAID FROM ALL SOURCES  44. ADJUSTMENT FOR PRINCIPAL NOT PAID FROM REVENUE (1)	16,055 111,306 0 0 0 0 0 0 0 0 0 111,306 0 0 111,306	10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 162,840 (194) 0 162,646 (10,000)	0 139,816 32,000 0 0 1,059 0 15,509 0 48,568 188,384 (22,054) 0 166,330	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692 (168,714) (95) 160,883	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580 11,407 (1.140) 162,847	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770 (11,963) (1,186) 176,621	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611 6,718 (1,233) 198,096	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540 8,252 (3,696) 223,096	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827 6,350 (30,269) 226,908	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078 240,574 3,132 (30,322) 213,384	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073 5,343 (30,377) 236,039	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660 113,231 241,055 720 (1,501) 240,274	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176 14,289 (1,561) 241,904	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982 (1,283) (1,623) 246,076	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085 1,500 (1,688) 245,897	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946 (14,851) (1,755) 231,340	8,003 6,278 9,144 7,933 4,434 9,420 645 45,857 262,716 1,038 (1,826) 261,928	20,208 6,516 9,458 6,448 4,586 9,743 32,000 88,959 259,757 8,025 (1,899) 265,883	33,436 6,764 4,924 4,913 5,149 1,376 35,000 <b>91,562</b> <b>239,502</b> 31,023 (1,975) <b>268,550</b>	57,197 5,910 2,504 3,370 5,326 1,423 33,500 109,230 247,973 34,669 (6,122) 276,520
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2) 42. ADJUSTMENT FOR DEBT PAYDOWN (3)  43. TOTAL RETIREMENT PAID FROM ALL SOURCES	16,055 111,306 0 0 0 0 0 0 0 0 0 0 0 111,306	10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 0	0 139,816 32,000 0 1,059 0 15,509 0 48,568 188,384 (22,054) 0 166,330	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692 (168,714) (95)	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580 11,407 (1,140) 162,847	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770 (11,963) (1,186) 176,621	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611 6,718 (1,233) 198,096	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540 8,252 (3,696)	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827 6,350 (30,269) 226,908	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078 240,574 3,132 (30,322) 213,384	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073 5,343 (30,377)	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660 113,231 241,055 720 (1,501) 240,274	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176 14,289 (1,561)	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982 (1,283) (1,623) 246,076	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085 1,500 (1,688) 245,897	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946 (14,851) (1,755) 231,340	8,003 6,278 9,144 7,933 4,434 9,420 <u>645</u> <b>45,857</b> <b>262,716</b> 1,038 (1,826) <b>261,928</b>	20,208 6,516 9,458 6,448 4,586 9,743 32,000 <b>88,959</b> <b>259,757</b> 8,025 (1,899)	33,436 6,764 4,924 4,913 5,149 1,376 35,000 <b>91,562</b> <b>239,502</b> 31,023 (1,975)	57,197 5,910 2,504 3,370 5,326 1,423 33,500 109,230 247,973 34,669 (6,122) 276,520
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION  33. FUTURE-BATTERY STORAGE  34. FUTURE-COMBUSTION TURBINES  35. FUTURE-TRANSMISSION SPECIAL PROJECTS  36. FUTURE-FERC CAPITAL  37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS  38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2)  42. ADJUSTMENT FOR DEBT PAYDOWN (3)  43. TOTAL RETIREMENT PAID FROM ALL SOURCES  44. ADJUSTMENT FOR PRINCIPAL NOT PAID FROM REVENUE (1)	16,055 111,306 0 0 0 0 0 0 0 0 0 111,306 0 0 111,306	10,000  162,840  0 0 0 0 0 0 0 0 0 162,840  (194) 0 162,646  (10,000)	0 139,816 32,000 0 1,059 0 15,509 0 48,568 188,384 (22,054) 0 166,330	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692 (168,714) (95) 160,883	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580 11,407 (1.140) 162,847	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770 (11,963) (1,186) 176,621	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611 6,718 (1,233) 198,096 0 198,096	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540 8,252 (3,696) 223,096	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827 6,350 (30,269) 226,908 0	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078 240,574 3,132 (30,322) 213,384	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073 5,343 (30,377) 236,039 0 236,039	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660 113,231 241,055 720 (1,501) 240,274 0 240,274	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176 14,289 (1,561) 241,904	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982 (1,283) (1,623) 246,076	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085 1,500 (1,688) 245,897	0 196,696  11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946 (14,851) (1,755) 231,340 0 231,340	8,003 6,278 9,144 7,933 4,434 9,420 645 45,857 262,716 1,038 (1,826) 261,928	20,208 6,516 9,458 6,448 4,586 9,743 32,000 88,959 259,757 8,025 (1,899) 265,883	33,436 6,764 4,924 4,913 5,149 1,376 35,000  91,562  239,502  31,023 (1,975)  268,550	57,197 5,910 2,504 3,370 5,326 1,423 33,500 109,230 247,973 34,669 (6,122) 276,520
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION  33. FUTURE-BATTERY STORAGE  34. FUTURE-COMBUSTION TURBINES  35. FUTURE-TRANSMISSION SPECIAL PROJECTS  36. FUTURE-FERC CAPITAL  37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS  38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2)  42. ADJUSTMENT FOR DEBT PAYDOWN (3)  43. TOTAL RETIREMENT PAID FROM ALL SOURCES  44. ADJUSTMENT FOR PRINCIPAL NOT PAID FROM REVENUE (1)  45. TOTAL RETIREMENT OF LONG-TERM DEBT	16,055 111,306 0 0 0 0 0 0 0 0 0 111,306 0 0 111,306	10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 162,840 (194) 0 162,646 (10,000)	0 139,816 32,000 0 1,059 0 15,509 0 48,568 188,384 (22,054) 0 166,330 0	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692 (168,714) (95) 160,883 0 160,883	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580 11,407 (1,140) 162,847 0 162,847	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770 (11,963) (1,186) 176,621 0 176,621	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611 6,718 (1,233) 198,096	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540 8,252 (3,696) 223,096	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827 6,350 (30,269) 226,908	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078 240,574 3,132 (30,322) 213,384 0 213,384 (10,000)	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073 5,343 (30,377) 236,039	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660 113,231 241,055 720 (1,501) 240,274	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176 14,289 (1,561) 241,904 0 241,904	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982 (1,283) (1,623) 246,076	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085 1,500 (1.688) 245,897	0 196,696 11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946 (14,851) (1,755) 231,340	8,003 6,278 9,144 7,933 4,434 9,420 645 45,857 262,716 1,038 (1,826) 261,928	20,208 6,516 9,458 6,448 4,586 9,743 32,000 88,959 259,757 8,025 (1,899) 265,883	33,436 6,764 4,924 4,913 5,149 1,376 35,000 91,562 239,502 31,023 (1,975) 268,550 0 268,550 (10,000)	57,197 5,910 2,504 3,370 5,326 1,423 33.500  109,230  247,973  34,669 (6,122)  276,520
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)  31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION  33. FUTURE-BATTERY STORAGE  34. FUTURE-COMBUSTION TURBINES  35. FUTURE-TRANSMISSION SPECIAL PROJECTS  36. FUTURE-FERC CAPITAL  37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS  38. FUTURE-NATURAL GAS 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2)  42. ADJUSTMENT FOR DEBT PAYDOWN (3)  43. TOTAL RETIREMENT PAID FROM ALL SOURCES  44. ADJUSTMENT FOR PRINCIPAL NOT PAID FROM REVENUE (1)  45. TOTAL RETIREMENT OF LONG-TERM DEBT	16,055 111,306 0 0 0 0 0 0 0 0 0 111,306 0 0 111,306	10,000  162,840  0 0 0 0 0 0 0 0 0 162,840  (194) 0 162,646  (10,000)	0 139,816 32,000 0 1,059 0 15,509 0 48,568 188,384 (22,054) 0 166,330	0 269,601 27,005 0 2,928 2,155 0 28,003 0 60,091 329,692 (168,714) (95) 160,883	0 111,056 4,074 635 4,589 3,260 0 28,966 0 41,524 152,580 11,407 (1.140) 162,847	0 124,248 2,145 1,295 6,307 4,403 0 51,372 0 65,522 189,770 (11,963) (1,186) 176,621 0 176,621	0 122,339 2,219 1,907 6,524 5,117 882 53,623 0 70,272 192,611 6,718 (1,233) 198,096 0 198,096	0 110,238 13,340 2,543 6,748 5,855 978 41,628 37,210 108,302 218,540 8,252 (3,696) 223,096	0 141,448 13,730 3,669 6,980 6,056 1,069 35,106 42,769 109,379 250,827 6,350 (30,269) 226,908 0	0 152,496 23,413 4,838 7,219 6,264 1,164 40,809 4,371 88,078 240,574 3,132 (30,322) 213,384	0 119,812 18,975 5,021 7,467 6,479 1,273 17,002 85,044 141,261 261,073 5,343 (30,377) 236,039 0 236,039	0 127,824 23,517 5,212 7,724 6,701 1,385 20,032 48,660 113,231 241,055 720 (1,501) 240,274 0 240,274	0 124,504 19,154 5,409 7,989 6,932 1,875 15,736 47,577 104,672 229,176 14,289 (1,561) 241,904 0 241,904	0 184,776 19,504 5,614 8,263 7,169 2,382 16,276 4,998 64,206 248,982 (1,283) (1,623) 246,076	0 184,162 21,071 5,827 8,547 7,416 2,382 11,511 5,169 61,923 246,085 1,500 (1.688) 245,897	0 196,696  11,804 6,049 8,841 7,670 3,710 11,907 1,269 51,250 247,946 (14,851) (1,755) 231,340 0 231,340	8,003 6,278 9,144 7,933 4,434 9,420 645 45,857 262,716 1,038 (1,826) 261,928	20,208 6,516 9,458 6,448 4,586 9,743 32,000 88,959 259,757 8,025 (1,899) 265,883	33,436 6,764 4,924 4,913 5,149 1,376 35,000  91,562  239,502  31,023 (1,975)  268,550	57,197 5,910 2,504 3,370 5,326 1,423 33.500  109,230  247,973  34,669 (6,122)  276,520

(1) BARCLAYS DIRECT PURCHASE AGREEMENT ISSUED FOR FUEL LEVELIZATION.
(2) INCLUDES ECONOMIC REFUNDING AND OTHER REFINANCING OF EXISTING DEBT.
(3) INCLUDES CALLS OF EXISTING DEBT
(4) DEFEASANCE WITH INTERNAL FUNDS

11/20/19

### SCHEDULE 4

## SANTEE COOPER ELECTRIC SYSTEM

### INTEREST PAID FROM REVENUES FOR LONG-TERM DEBT

FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

	<u>2020</u>	<u>2021</u>	2022	2023	2024	2025	2026	2027	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	2032	2033	2034	<u>2035</u>	<u>2036</u>	<u>2037</u>	2038	2039
2009-C REVENUE OBLIGATION BOND	129	114	98	81	62	51	40	27	14	0	0	0	0	0	0	0	0	0	0	0
2. 2009-F REVENUE OBLIGATION BOND	5,740	5,740	5,740	5,740	5,740	5,740	4,716	3,634	2,489	1,279	0	0	0	0	0	0	0	0	0	0
3. 2010-B REVENUE OBLIGATION BOND REFUNDING	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,793	1,593	0	0	0	0	0	0	0
4. 2010-C REVENUE OBLIGATION BOND	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234
5. 2011-B REVENUE OBLIGATION BOND REFUNDING	2,319	1,764	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6. 2011-C REVENUE OBLIGATION BOND REFUNDING	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,576	5,072	3,305	1,950	0	0	0
7. 2012-A REVENUE OBLIGATION BOND REFUNDING	3,269	3,021	2,715	2,607	2,482	2,319	1,806	1,344	947	539	172	0	0	0	0	0	0	0	0	0
8. 2012-B REVENUE OBLIGATION BOND REFUNDING	229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9. 2012-C REVENUE OBLIGATION BOND REFUNDING	622	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10. 2012-D REVENUE OBLIGATION BOND	12,966	12,959	12,869	12,696	12,496	12,310	12,116	11,913	11,702	11,514	11,319	11,120	10,985	10,791	10,787	10,783	10,779	10,775	10,770	10,770
11. 2012-E REVENUE OBLIGATION BOND	9,682	9,682	9,612	8,768	7,888	6,961	5,989	4,993	3,950	2,634	1,317	0	0	0	0	0	0	0	0	0
12. 2013-A REVENUE OBLIGATION BOND	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,750	7,027	6,319	5,739	5,552	5,300	5,066
13. 2013-B REVENUE OBLIGATION BOND	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,597	17,583	15,468	13,242
14. 2013-C REVENUE OBLIGATION BOND	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,269	11,971	9,539	6,965	5,866	4,767	3,668
15. 2013-E REVENUE OBLIGATION BOND	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609
16. 2014-A REVENUE OBLIGATION BOND	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000
17. 2014-B REVENUE OBLIGATION BOND	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,095	1,875	1,644	1,401	1,146	878	597	306	0
18. 2014-C REVENUE OBLIGATION BOND REFUNDING	33,355	33,279	32,357	31,361	30,145	29,175	27,324	26,020	25,133	23,599	22,176	20,785	19,153	18,253	17,457	17,473	17,020	15,978	15,226	14,182
<ol><li>2014-D REVENUE OBLIGATION BOND REFUNDING</li></ol>	1,052	1,052	1,040	899	746	578	397	204	0	0	0	0	0	0	0	0	0	0	0	0
20. 2015-A REVENUE OBLIGATION BOND	28,051	28,003	27,465	27,186	26,305	25,463	24,466	23,398	23,300	22,206	21,960	21,911	21,377	21,314	21,247	21,176	21,092	21,014	20,932	20,844
21. 2015-B REVENUE OBLIGATION BOND REFUNDING	3,244	3,244	3,158	2,126	1,087	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22. 2015-C REVENUE OBLIGATION BOND REFUNDING	7,502	4,416	914	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23. 2015-D REVENUE OBLIGATION BOND	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093
24. 2015-E REVENUE OBLIGATION BOND	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750
25. 2016-A REVENUE OBLIGATION BOND	25,805	25,781	25,489	25,210	25,210	25,204	25,100	24,590	23,905	23,192	21,513	19,750	18,080	16,459	14,098	11,682	9,776	7,052	4,341	3,240
26. 2016-B REVENUE OBLIGATION BOND	22,835	22,835	22,856	23,085	23,085	23,085	23,085	23,085	23,169	24,085	24,085	24,054	23,677	23,337	22,980	22,537	21,414	21,272	19,919	18,498
27. 2016-C REVENUE OBLIGATION BOND REFUNDING	2,500	2,500	2,491	2,389	2,281	2,168	2,050	1,926	1,795	1,658	1,514	1,363	1,207	1,071	898	682	120	0	Ū	0
28. 2016-D REVENUE OBLIGATION BOND	4,179	4,179	4,179	3,830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29. 2019-A REVENUE OBLIGATION BOND (VRDB)	2,829	2,796	2,796	2,437	2,288	2,188	2,153	2,136	1,899	1,717	1,414	1,160	1,125	907	603	315	0	0	0	0
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)	<u>595</u>	<u>135</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
31. SUBTOTAL EXISTING LONG-TERM DEBT	322,321	316,918	309,197	303,833	295,233	290,660	284,660	278,688	273,721	<u>267,841</u>	260,888	<u>255,450</u>	249,491	243,821	<u>234,991</u>	226,407	<u>217,016</u>	<u>207,375</u>	<u>198,715</u>	<u>191,196</u>
32. FUTURE-CAPITAL TRANSMISSION	0	1,171	2,745	2,048	1,880	2,502	3,433	4,362	5,153	5,930	6,238	6,699	5,890	7,414	8,211	8,953	10,692	10,416	11,426	11,981
33. FUTURE-BATTERY STORAGE	0	0	0	0	475	926	1,299	1,648	2,322	2,953	2,770	2,579	2,382	2,176	1,963	1,742	1,513	1,275	1,027	771
34. FUTURE-COMBUSTION TURBINES	0	0	965	1,931	2,859	3,731	3,514	3,290	3,058	2,819	2,571	2,314	2,049	1,775	1,491	1,197	894	580	255	86
35. FUTURE-TRANSMISSION SPECIAL PROJECTS	0	0	698	1,360	1,965	2,533	2,753	2,948	2,747	2,539	2,324	2,102	1,872	1,634	1,388	1,133	870	598	376	208
36. FUTURE-FERC CAPITAL	0	0	187	375	457	539	583	596	600	602	607	609	854	1,081	1,560	1,633	1,900	1,747	1,857	1,680
37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	0	1,429	6,934	7,019	8,217	9,382	8,108	6,756	5,739	4,946	3,768	3,409	2,720	2,179	1,620	1,224	815	492	157	110
38. FUTURE-NATURAL GAS 2027	0	0	0	0	2,668	5,335	10,579	15,822	15,277	14,519	14,370	11,116	9,279	7,461	7,291	7,114	7,071	7,049	5,804	4,443
39. SUBTOTAL FUTURE LONG-TERM DEBT	<u>0</u>	<u>2,600</u>	<u>11,529</u>	<u>12,733</u>	<u>18,521</u>	24,948	30,269	35,422	<u>34,896</u>	<u>34,308</u>	32,648	28,828	<u>25,046</u>	<u>23,720</u>	<u>23,524</u>	22,996	<u>23,755</u>	<u>22,157</u>	20,902	<u>19,279</u>
40. SUBTOTAL INTEREST ON LONG-TERM DEBT	322,321	319,518	320,726	316,566	<u>313,754</u>	315,608	314,929	<u>314,110</u>	308,617	<u>302,149</u>	<u>293,536</u>	<u>284,278</u>	<u>274,537</u>	267,541	<u>258,515</u>	<u>249,403</u>	<u>240,771</u>	229,532	<u>219,617</u>	<u>210,475</u>
41. ADJUSTMENT FOR REFINANCING (2)	(156)	322	(1,681)	3,460	(4,461)	(13,676)	(19,306)	(26,101)	(27,342)	(28,411)	(29,851)	(31,464)	(32,769)	(36,283)	(40,871)	(47,105)	(53,755)	(56,290)	(57,340)	(60,976)
42. ADJUSTMENT FOR DEBT PAYDOWN (3)	(433)	(20,784)	(25,982)	(26,046)	(26,741)	(26,696)	(26,648)	(26,599)	(26,438)	(25,068)	(23,695)	(22,321)	(22,261)	(22,198)	(22,133)	(22,066)	(35,050)	(34,977)	(34,901)	(36,668)
	<del>,/</del>	<del> ,</del>	<del></del>	<del>,,</del>	,	<del> ,</del>	<del>/</del>		<del></del>	<del>/</del>	<del>/</del>	<del></del>	<del></del>	<del>/</del>	<del>/</del>	<del>/</del>	<del>,/</del>	<del>/</del>	<del> ,</del>	<del></del>
43. TOTAL INTEREST ON LONG-TERM DEBT	321,732	299,056	293,063	293,980	282,552	275,236	268,975	261,410	254,837	248,670	239,990	230,493	219,507	209,060	195,511	180,232	151,966	138,265	127,376	112,831
44. ADJUSTMENT FOR INTEREST NOT PAID FROM REVENUE (1)	<u>(595)</u>	(135)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
45. NET LONG-TERM INTEREST PAID FROM REVENUES	<u>321,137</u>	<u>298,921</u>	293,063	293,980	282,552	<u>275,236</u>	<u>268,975</u>	<u>261,410</u>	<u>254,837</u>	248,670	239,990	230,493	219,507	209,060	<u>195,511</u>	180,232	<u>151,966</u>	<u>138,265</u>	127,376	<u>112,831</u>

<sup>(1)</sup> BARCLAYS DIRECT PURCHASE AGREEMENT ISSUED FOR FUEL LEVELIZATION.

<sup>(2)</sup> INCLUDES ECONOMIC REFUNDING AND OTHER REFINANCING OF EXISTING DEBT.

<sup>(3)</sup> INCLUDES CALLS OF EXISTING DEBT

2020 REFORM PLAN SCHEDULE 5

## RETIREMENT OF SHORT-TERM REVENUE OBLIGATION MINI BONDS <sup>(1)</sup> FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
	REVENUE OBLIGATION MINI BONDS:																				
1.	TOTAL REVENUE OBLIGATION MINI BONDS	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>o</u>	<u>0</u>	<u>0</u>						
2.	TOTAL RETIREMENT OF SHORT-TERM BONDS	<u>o</u>	<u>0</u>	<u>o</u>	<u>0</u>	<u>o</u>	<u>0</u>	<u>o</u>													
		SANTEE COOPER ELECTRIC SYSTEM																			
																S	SCHEDULE 6				
							INTEREST	FAID FROM				ENUE OBLIC	GATION MIN	II BONDS							
										CALENDAR											
									(D0	OLLARS IN TI	HOUSANDS)	)									
		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
	REVENUE OBLIGATION MINI BONDS:																				
3.	TOTAL REVENUE OBLIGATION MINI BONDS	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>0</u>									
4.	SHORT-TERM INTEREST PAID FROM REVENUES	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>o</u>

(1) MINI BOND PROGRAM HAS BEEN RETIRED

SANTEE COOPER 2020 REFORM PLAN SCHEDULE 7 11/20/19

# **ELECTRIC SYSTEM**

### LONG-TERM DEBT SERVICE PAID FROM REVENUES FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN THOUSANDS)

										(00	JELANS IN 11	1003AND3)										
			<u>2020</u>	<u>2021</u>	2022	2023	2024	2025	2026	<u>2027</u>	2028	2029	2030	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	2038	<u>2039</u>
	1.	2009-C REVENUE OBLIGATION BOND	369	369	368	386	237	241	240	237	239	0	0	0	0	0	0	0	0	0	0	0
		2009-F REVENUE OBLIGATION BOND	5,740	5,740	5,740	5,740	5,740	23,576	23,574	23,572	23,569	23,567	0	0	0	0	0	0	0	0	0	0
	3.	2010-B REVENUE OBLIGATION BOND REFUNDING	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	5,185	32,793	33,443	0	0	0	0	0	0	0
	4.	2010-C REVENUE OBLIGATION BOND	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234
	5.	2011-B REVENUE OBLIGATION BOND REFUNDING	13,419	37,047	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6.	2011-C REVENUE OBLIGATION BOND REFUNDING	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	9,315	38,372	40,406	30,405	40,959	0	0	0
	7.	2012-A REVENUE OBLIGATION BOND REFUNDING	3,810	9,196	5,378	5,372	5,984	12,573	11,050	9,288	9,302	8,859	3,614	0	0	0	0	0	0	0	0	0
	8.	2012-B REVENUE OBLIGATION BOND REFUNDING	4,813	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9.	2012-C REVENUE OBLIGATION BOND REFUNDING	13,056	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	10.	2012-D REVENUE OBLIGATION BOND	13,104	14,761	16,347	16,827	16,220	16,198	16,166	16,139	15,449	15,419	15,398	14,839	14,847	10,892	10,892	10,889	10,890	10,889	10,770	14,839
1	11.	2012-E REVENUE OBLIGATION BOND	9,682	11,644	33,153	32,309	31,429	30,501	29,529	28,982	32,886	31,569	30,251	0	0	0	0	0	0	0	0	0
1	12.	2013-A REVENUE OBLIGATION BOND	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	8,929	21,249	21,177	17,932	9,480	10,577	9,952	18,831
1	13.	2013-B REVENUE OBLIGATION BOND	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	23,108	59,884	59,884	59,887	59,885
1	14.	2013-C REVENUE OBLIGATION BOND	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	17,757	54,001	54,020	54,045	25,965	24,866	23,767	22,835
1	15.	2013-E REVENUE OBLIGATION BOND	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609
1	16.	2014-A REVENUE OBLIGATION BOND	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000
1	17.	2014-B REVENUE OBLIGATION BOND	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,479	6,499	6,504	6,499	6,502	6,500	6,505	6,424	6,420	0
1	18.	2014-C REVENUE OBLIGATION BOND REFUNDING	34,884	51,717	52,272	56,385	57,342	66,199	53,398	43,760	56,154	55,722	49,996	53,436	37,390	37,757	26,305	26,703	39,694	31,013	36,113	35,210
1	19.	2014-D REVENUE OBLIGATION BOND REFUNDING	1,052	1,454	5,877	5,876	5,875	5,878	5,876	5,874	0	0	0	0	0	0	0	0	0	0	0	0
2	20.	2015-A REVENUE OBLIGATION BOND	28,995	38,767	33,048	44,977	44,965	45,418	45,829	25,347	45,188	27,128	22,922	32,647	23,164	23,245	23,243	23,243	23,243	23,245	23,244	23,242
2	21.	2015-B REVENUE OBLIGATION BOND REFUNDING	3,244	4,964	23,786	22,899	22,835	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	22.	2015-C REVENUE OBLIGATION BOND REFUNDING	69,218	74,456	19,192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	23.	2015-D REVENUE OBLIGATION BOND	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093
2	24.	2015-E REVENUE OBLIGATION BOND	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750
2	25.	2016-A REVENUE OBLIGATION BOND	26,289	31,610	31,076	25,210	25,325	27,291	35,290	38,301	38,161	56,768	56,765	53,473	53,940	63,685	62,707	52,994	64,268	61,269	26,466	7,342
2	26.	2016-B REVENUE OBLIGATION BOND	22,835	22,835	22,856	23,085	23,085	23,085	23,085	23,085	23,169	24,085	24,719	31,593	30,469	30,466	31,851	47,079	47,179	48,317	48,351	46,069
2	27.	2016-C REVENUE OBLIGATION BOND REFUNDING	2,500	2,670	4,539	4,537	4,536	4,538	4,535	4,537	4,536	4,535	4,537	4,536	4,538	4,536	5,222	12,059	4,121	0	0	0
2	28.	2016-D REVENUE OBLIGATION BOND	4,179	4,179	18,760	164,229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	29.	2019-A REVENUE OBLIGATION BOND (VRDB)	4,369	2,796	21,201	10,182	7,298	3,993	3,008	14,386	11,099	17,267	14,414	3,040	12,245	16,447	15,378	16,460	0	0	0	0
3	30.	BARCLAYS DIRECT PURCHASE AGREEMENT (1)	<u>16,650</u>	10,135	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>						
																=						
' 3	31.	SUBTOTAL EXISTING LONG-TERM DEBT	<u>433,626</u>	<u>479,758</u>	<u>449,011</u>	<u>573,432</u>	<u>406,289</u>	<u>414,909</u>	406,998	<u>388,926</u>	<u>415,170</u>	420,337	<u>380,699</u>	<u>383,275</u>	<u>373,991</u>	<u>428,599</u>	<u>419,153</u>	<u>423,103</u>	<u>433,874</u>	<u>378,170</u>	<u>346,656</u>	<u>329,939</u>
,		FUTURE CARITAL TRANSMISSION	0	4 474	24.745	20.052	5.054	4.047	F 050	47 700	40.000	00.040	05.040	20.240	05.044	00.040	20, 202	00.757	40.005	20.004	44.000	00.477
		FUTURE-CAPITAL TRANSMISSION	0	1,171	34,745	29,053	5,954	4,647	5,652	17,702	18,883	29,343	25,213	30,216	25,044	26,918	29,282	20,757	18,695	30,624	44,862	69,177
-		FUTURE-BATTERY STORAGE	0	0	005	4.050	1,111	2,221	3,206	4,191	5,991	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	6,680
7		FUTURE-COMBUSTION TURBINES	0	0	965	4,859	7,448	10,038	10,038	10,038	10,038	10,038	10,038	10,038	10,038	10,038	10,038	10,038	10,038	10,038	5,179	2,590
		FUTURE-TRANSMISSION SPECIAL PROJECTS	0	0	1,757	3,514 375	5,225	6,936	7,870	8,803 1,574	8,803	8,803 1,765	8,803	8,803	8,803 2,729	8,803	8,803	8,803 5,343	8,803 6,333	7,046	5,289	3,578 7,005
		FUTURE-FERC CAPITAL	0	1 420	187		457	539	1,465	,	1,670	,	1,880	1,994	,	3,463	3,942	,	,	6,333	7,005	,
		FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	0	1,429	22,443	35,023	37,184	60,753	61,730	48,384	40,844	45,755	20,770	23,441	18,456	18,456	13,131	13,131	10,235	10,235	1,533	1,533 37,942
	30.	FUTURE-NATURAL GAS 2027	U	U	U	U	2,668	5,335	10,579	53,032	58,046	18,890	99,414	59,776	56,856	12,459	12,459	8,383	7,716	39,049	40,804	37,942
3	39.	SUBTOTAL FUTURE LONG-TERM DEBT	0	2,600	60,097	72,824	60,047	90,469	100,540	143,724	144,275	122,385	173,909	142,059	129,717	87,928	<u>85,446</u>	74,246	69,611	<u>111,116</u>	112,463	128,505
			<del>-</del>															<del></del>				
4	40.	SUBTOTAL LONG TERM DEBT	433,626	482,358	509,108	646,256	466,336	505,378	507,538	532,650	559,445	542,722	554,608	525,334	503,708	516,527	504,599	497,349	503,485	489,286	459,119	458,444
2		ADJUSTMENT FOR REFINANCING (2)	(156)	128	(23,735)	(165,255)	6,947	(25,639)	(12,586)	(17,849)	(20,992)	(25,279)	(24,506)	(30,745)	(18,481)	(37,566)	(39,370)	(61,956)	(52,718)	(48,266)	(26,318)	(26,307)
4	42.	ADJUSTMENT FOR DEBT PAYDOWN (3)	<u>(433)</u>	(20,784)	(25,982)	(26,140)	(27,882)	(27,882)	(27,882)	(30,295)	<u>(56,707)</u>	(55,390)	(54,073)	(23,821)	(23,821)	(23,821)	(23,821)	(23,821)	(36,875)	(36,875)	<u>(36,875)</u>	(42,790)
	40	TOTAL LONG TERM BERT	422.027	464 700	450 204	454 861	445 404	454.057	467.070	404 EOC	404 746	462.0E2	476 020	470.760	464 406	4EE 440	444 400	444 E70	413.892	404 445	395.926	200 247
2	43.	TOTAL LONG TERM DEBT	433,037	461,702	459,391	454,861	445,401	451,857	467,070	484,506	481,746	462,053	476,029	470,768	461,406	455,140	441,408	411,572	413,892	404,145	395,926	389,347
2	44	CASH DEFEASANCE (4)	<u>0</u>	(12,000)	<u>0</u>	<u>0</u>	0	0	(10,000)	(2,000)	(7,500)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)
			<u>~</u>	1.2,000/	<u>~</u>	<u>~</u>	<u>~</u>	×	1.0,000/	12,000/	1.,000/	1.0,000/	1.0,000	1.0,000	1.0,000	1.0,000	1.0,000	1.0,000/	1.0,000/	1.0,000	1.0,000/	1.0,000
4	45.	NET LONG-TERM DEBT SERVICE	433,037	449,702	459,391	454,861	445,401	451,857	457,070	482,506	474,246	452,053	466,029	460,768	451,406	445,140	431,408	401,572	403,892	394,145	385,926	379,347
2	46.	ADJUSTMENT FOR DEBT NOT PAID FROM REVENUE (1)	(16,650)	(10,135)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>						
			412.22	400 ===	450.004	454.004	445 454	454 055	457.070	400 ===	47/0/0	450 050	400.000	400 ===	454 400	445 445	404 100	404 ===	400 000	004 : :=	005 000	070 6 17
4	47.	NET LONG-TERM DEBT SERVICE PAID FROM REVENUES	<u>416,387</u>	<u>439,567</u>	<u>459,391</u>	<u>454,861</u>	<u>445,401</u>	<u>451,857</u>	<u>457,070</u>	<u>482,506</u>	<u>474,246</u>	<u>452,053</u>	<u>466,029</u>	<u>460,768</u>	<u>451,406</u>	<u>445,140</u>	<u>431,408</u>	<u>401,572</u>	403,892	<u>394,145</u>	<u>385,926</u>	<u>379,347</u>

(1) BARCLAYS DIRECT PURCHASE AGREEMENT ISSUED FOR FUEL LEVELIZATION. (2) INCLUDES ECONOMIC REFUNDING AND OTHER REFINANCING OF EXISTING DEBT. (3) INCLUDES CALLS OF EXISTING DEBT

(4) DEFEASANCE WITH INTERNAL FUNDS

2020 REFORM PLAN SCHEDULE 8

# ELECTRIC SYSTEM

TOTAL INTEREST ON LONG-TERM DEBT FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	2038	2039
1.	2009-C REVENUE OBLIGATION BOND	129	114	98	81	62	51	40	27	14	0	0	0	0	0	0	0	0	0	0	0
2.	2009-F REVENUE OBLIGATION BOND	5,740	5,740	5,740	5,740	5,740	5,740	4,716	3,634	2,489	1,279	0	0	0	0	0	0	0	0	0	0
3.	2010-B REVENUE OBLIGATION BOND REFUNDING	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,793	1,593	0	0	0	0	0	0	0
4.	2010-C REVENUE OBLIGATION BOND	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234
5.	2011-B REVENUE OBLIGATION BOND REFUNDING	2,319	1,764	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.	2011-C REVENUE OBLIGATION BOND REFUNDING	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,576	5,072	3,305	1,950	0	0	0
7.	2012-A REVENUE OBLIGATION BOND REFUNDING	3,269	3,021	2,715	2,607	2,482	2,319	1,806	1,344	947	539	172	0	0	0	0	0	0	0	0	0
8.	2012-B REVENUE OBLIGATION BOND REFUNDING	229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.	2012-C REVENUE OBLIGATION BOND REFUNDING	622	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.	2012-D REVENUE OBLIGATION BOND	12,966	12,959	12,869	12,696	12,496	12,310	12,116	11,913	11,702	11,514	11,319	11,120	10,985	10,791	10,787	10,783	10,779	10,775	10,770	10,770
11.	2012-E REVENUE OBLIGATION BOND	9,682	9,682	9,612	8,768	7,888	6,961	5,989	4,993	3,950	2,634	1,317	0	0	0	0	0	0	0	0	0
12.	2013-A REVENUE OBLIGATION BOND	7.810	7,810	7,810	7,810	7,810	7.810	7,810	7,810	7.810	7,810	7,810	7,810	7,810	7,750	7,027	6,319	5,739	5,552	5,300	5,066
13.	2013-B REVENUE OBLIGATION BOND	19.764	19,764	19,764	19,764	19,764	19,764	19.764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19.764	19,764	19,597	17,583	15,468	13,242
14.	2013-C REVENUE OBLIGATION BOND	14.460	14,460	14,460	14,460	14,460	14.460	14,460	14.460	14,460	14.460	14,460	14.460	14.460	14,269	11,971	9,539	6,965	5,866	4,767	3,668
15.	2013-E REVENUE OBLIGATION BOND	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609
16.	2014-A REVENUE OBLIGATION BOND	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000
17.	2014-B REVENUE OBLIGATION BOND	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,095	1,875	1,644	1,401	1.146	878	597	306	0
18.	2014-C REVENUE OBLIGATION BOND REFUNDING	33,355	33,279	32,357	31,361	30,145	29,175	27,324	26,020	25,133	23,599	22,176	20,785	19,153	18,253	17,457	17,473	17,020	15,978	15,226	14,182
19.	2014-D REVENUE OBLIGATION BOND REFUNDING	1,052	1.052	1,040	899	746	578	397	204	0	0	0	0	0	0	0	0	0	0,07.0	0	0
20.	2015-A REVENUE OBLIGATION BOND	28,051	28,003	27,465	27,186	26,305	25,463	24,466	23,398	23,300	22,206	21,960	21,911	21.377	21,314	21,247	21.176	21,092	21,014	20,932	20,844
21.	2015-B REVENUE OBLIGATION BOND REFUNDING	3,244	3,244	3,158	2,126	1,087	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22.	2015-C REVENUE OBLIGATION BOND REFUNDING	7.502	4.416	914	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23.	2015-D REVENUE OBLIGATION BOND	8,093	8,093	8,093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8,093	8,093	8,093	8,093	8.093	8.093	8.093	8.093	8,093	8.093
24.	2015-E REVENUE OBLIGATION BOND	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15.750	15,750	15,750	15,750	15,750	15,750
25.	2016-A REVENUE OBLIGATION BOND	25,805	25,781	25,489	25,210	25,210	25,204	25,100	24,590	23,905	23,192	21,513	19.750	18,080	16,459	14,098	11,682	9,776	7,052	4,341	3.240
26.	2016-B REVENUE OBLIGATION BOND	22.835	22.835	22,856	23,085	23,085	23,085	23,085	23,085	23,169	24,085	24.085	24,054	23,677	23,337	22,980	22,537	21.414	21,272	19.919	18,498
27.	2016-C REVENUE OBLIGATION BOND REFUNDING	2,500	2,500	2,491	2,389	2,281	2,168	2,050	1,926	1,795	1,658	1,514	1,363	1,207	1,071	898	682	120	0	0,515	0,430
28.	2016-D REVENUE OBLIGATION BOND	4.179	4.179	4,179	3,830	0	2,100	2,000	0	0	1,000	0	0	0	0	000	0	120	0	0	0
29.	2019-A REVENUE OBLIGATION BOND (VRDB)	2,829	2,796	2,796	2,437	2,288	2,188	2,153	2,136	1,899	1,717	1,414	1,160	1,125	907	603	315	0	0	0	0
30.	BARCLAYS DIRECT PURCHASE AGREEMENT (1)	595	135	2,730	2,437	2,200	2,100	2,133	2,130	1,033	1,717	1,414	0	1,123	0	000	0	0	0	0	0
50.	BAROLATO BIRLOTT OROTAGE AGREEMENT (1)	<u>000</u>	100	<u> </u>	<u>~</u>	<u>~</u>	<u> </u>	<u>~</u>	<u> </u>	<u> </u>	<u>~</u>	<u>~</u>	<u> </u>	<u>~</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>~</u>
31.	SUBTOTAL EXISTING LONG-TERM DEBT	322,321	316,918	309,197	303,833	295,233	290,660	284,660	278,688	273,721	267,841	260,888	<u>255,450</u>	249,491	243,821	234,991	226,407	217,016	207,375	<u>198,715</u>	<u>191,196</u>
32.	FUTURE-CAPITAL TRANSMISSION	0	1,171	2,745	2,048	1,880	2,502	3,433	4,362	5,153	5,930	6,238	6,699	5,890	7,414	8,211	8,953	10,692	10,416	11,426	11,981
33.	FUTURE-BATTERY STORAGE	0	0	0	0	475	926	1,299	1,648	2,322	2,953	2,770	2,579	2,382	2,176	1,963	1,742	1,513	1,275	1,027	771
34.	FUTURE-COMBUSTION TURBINES	0	0	965	1,931	2,859	3,731	3,514	3,290	3,058	2,819	2,571	2,314	2,049	1,775	1,491	1,197	894	580	255	86
35.	FUTURE-TRANSMISSION SPECIAL PROJECTS	0	0	698	1,360	1,965	2,533	2,753	2,948	2,747	2,539	2,324	2,102	1,872	1,634	1,388	1,133	870	598	376	208
36.	FUTURE-FERC CAPITAL	0	0	187	375	457	539	583	596	600	602	607	609	854	1,081	1,560	1,633	1,900	1,747	1,857	1,680
37.	FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	0	1,429	6,934	7,019	8,217	9,382	8,108	6,756	5,739	4,946	3,768	3,409	2,720	2,179	1,620	1,224	815	492	157	110
38.	FUTURE-NATURAL GAS 2027	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2,668</u>	<u>5,335</u>	10,579	15,822	15,277	<u>14,519</u>	14,370	<u>11,116</u>	9,279	<u>7,461</u>	7,291	<u>7,114</u>	<u>7,071</u>	7,049	<u>5,804</u>	<u>4,443</u>
39.	SUBTOTAL FUTURE LONG-TERM DEBT	<u>o</u>	<u>2,600</u>	11,529	12,733	<u>18,521</u>	24,948	30,269	35,422	34,896	34,308	32,648	28,828	<u>25,046</u>	23,720	23,524	22,996	23,755	<u>22,157</u>	20,902	<u>19,279</u>
40.	SUBTOTAL INTEREST ON LONG TERM DEBT	322,321	319,518	320,726	316,566	313,754	315,608	314,929	314,110	308,617	302,149	293,536	284,278	274,537	267,541	258,515	249,403	240,771	229,532	219,617	210,475
14	AD ILICTATAIT FOR REFINIANCING (2)	(156)	222	(1 601)	3 460	(4.461)	(12.676)	(10.306)	(26 101)	(27.242)	(20 /11)	(20.951)	(21.464)	(32.760)	(26.202)	(40.974)	(47 10E)	(52.755)	(56.200)	(57.340)	(60.076)
41.	ADJUSTMENT FOR REFINANCING (2)	(156)	322	(1,681)	3,460	(4,461)	(13,676)	(19,306)	(26,101)	(27,342)	(28,411)	(29,851)	(31,464)	(32,769)	(36,283)	(40,871)	(47,105)	(53,755)	(56,290)	(57,340)	(60,976)
42.	ADJUSTMENT FOR DEBT PAYDOWN (3)	<u>(433)</u>	(20,784)	(25,982)	(26,046)	(26,741)	(26,696)	(26,648)	(26,599)	(26,438)	(25,068)	(23,695)	(22,321)	<u>(22,261)</u>	(22,198)	(22,133)	(22,066)	(35,050)	(34,977)	(34,901)	(36,668)
43.	TOTAL INTEREST ON LONG TERM DEBT	321,732	299,056	293,063	293,980	282,552	275,236	268,975	261,410	254,837	248,670	239,990	230,493	219,507	209,060	195,511	180,232	151,966	138,265	127,376	112,831
44.	ADJUSTMENT FOR INTEREST NOT PAID FROM REVENUE (1)	<u>(595)</u>	(135)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
45.	NET LONG-TERM INTEREST PAID FROM REVENUES	<u>321,137</u>	298,921	<u>293,063</u>	<u>293,980</u>	282,552	<u>275,236</u>	<u>268,975</u>	<u>261,410</u>	<u>254,837</u>	<u>248,670</u>	239,990	230,493	<u>219,507</u>	209,060	<u>195,511</u>	<u>180,232</u>	<u>151,966</u>	<u>138,265</u>	<u>127,376</u>	<u>112,831</u>

<sup>(1)</sup> BARCLAYS DIRECT PURCHASE AGREEMENT ISSUED FOR FUEL LEVELIZATION.

<sup>(2)</sup> INCLUDES ECONOMIC REFUNDING AND OTHER REFINANCING OF EXISTING DEBT.

<sup>(3)</sup> INCLUDES CALLS OF EXISTING DEBT

2020 REFORM PLAN SCHEDULE 9

# ELECTRIC SYSTEM

### COMMERCIAL PAPER/DIRECT PURCHASE FINANCING FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

			2020	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	2026	2027	2028	2029	2030	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
Part		OUTSTANDING BALANCE																				
COLUMNIC DEVISION FOR THE COLUMN CORPORATION NOTIFIED   14,846   105,021   100,042   14,845   105,021   100,042   14,845   105,021   12,845   105,021   105,	1.	ISSUES FOR FUTURE CONSTRUCTION	185,727	139,426	11,071	181,103	0	215,432	0	77,216	0	47,414	0	37,284	0	44,706	0	37,922	0	41,418	0	0
4 OFFINISH MINISOPPORTURE A CHIEFE S. \$48.000 \$46.000 \$40.000 \$30.000 \$40.000 \$30.000 \$40.000 \$30.000 \$40.000 \$30.000 \$40.000 \$30.000 \$40.000 \$30.000 \$40.000 \$30.000 \$40.000 \$30.000 \$40.0000 \$40.000 \$40.000	2.	FUEL LEVELIZATION PROGRAM (1)	0	0	0	0	0	0	•	0	0	0	0	0	0	0	0	0	0	0	0	0
Total   19,000   19	3.	ECONOMIC DEVELOPMENT LOANS	,			,						,		,			,	,		,		
## RETENDANTS  5. CENCENT, IMPROVEMENT'S COMER  2.06.79  1.875  3.530  3	4.	GENERAL IMPROVEMENTS & OTHER	<u>48,988</u>																			
Genherk infrontments a cher (asheron infrontment) (asheron infront	5.	TOTAL	<u>339,331</u>	<u>329,114</u>	<u>171,728</u>	<u>332,721</u>	<u>144,551</u>	<u>350,742</u>	<u>125,905</u>	<u>186,742</u>	<u>104,761</u>	<u>148,645</u>	<u>97,701</u>	<u>131,455</u>	<u>90,641</u>	<u>132,366</u>	<u>84,679</u>	<u>119,620</u>	<u>78,717</u>	<u>117,154</u>	<u>72,755</u>	<u>69,774</u>
*** RETIREMENTS PROM PERMENTS**  *** RETIREMENTS PROM PERMENTS**  *** RETIREMENTS PROM PERMENTS**  *** A SUBJECT PROM PUTURE CONSTRUCTION  *** O 1 0 145,836 265,445 0 435,533 0 406,734 0 107,935 0 79,888 0 79,643 0 105,994 0 73,056 0 76,746 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		RETIREMENTS																				
*** RETIREMENTS PROM PERMENTS**  *** RETIREMENTS PROM PERMENTS**  *** RETIREMENTS PROM PERMENTS**  *** A SUBJECT PROM PUTURE CONSTRUCTION  *** O 1 0 145,836 265,445 0 435,533 0 406,734 0 107,935 0 79,888 0 79,643 0 105,994 0 73,056 0 76,746 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6.	GENERAL IMPROVEMENTS & OTHER	28.679	1.875	3.530	3.530	3.530	3.530	3.530	3.530	3.530	3.530	3.530	3.530	3.530	2.981	2.981	2.981	2.981	2.981	2.981	2.981
8. ISSUES FOR FUTURE CONSTRUCTION  9. 145,533  0. 405,734  0. 10 183,728  0. 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7.											3.530		3.530								
FULL ELVELEZATION PROGRAM  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				.,	-,	-,	5,555	2,222	2,222	2,223	-,	-,	-,	-,	-,	_,	_,	_,	_,	_,	_,	_,
CONMIND DEVICE PRINTING NAME & 1,000   1,000	8.	ISSUES FOR FUTURE CONSTRUCTION	0	145,836	265,245	0	435,533	0	405,734	0	183,728	0	79,688	0	79,643	0	105,994	0	73,056	0	76,746	0
11   SENTERAL MERCOVEMENTS & OTHER   0   0   20,910   0   0   0   0   0   0   0   0   0	9.	FUEL LEVELIZATION PROGRAM	Ū	•	•		•	0	•	•	-	•	0		0	0	0	0	0	0	0	0
NITEREST   NITEREST PAID FROM ALL SOURCES   38.553   160.158   30.024   12.158   446.124   13.076   17.375   18.449   190.201   5.204   84.865   4.622   84.227   3.572   199.055   2.981   76.037   2.981   79.727   2.981   NITEREST   NITEREST PAID FROM ALL SOURCES   1.086   1.086   1.086   3.669   3.	10.	ECONOMIC DEVELOPMENT LOANS	9,974	12,447	,	8,628	7,061	9,546	8,711	14,919	2,943	1,674	1,648	1,092	1,054	591	81	0	0	0	0	0
INTEREST	11.		<u>0</u>	<u>0</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	_	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>~</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
13. ISSUES FOR FUTURE CONSTRUCTION 3,648 4,458 3,036 3,780 4,638 4,560 4,362 1,608 2,052 972 822 768 822 912 1,086 780 756 852 792 24 1,608 6,000 1,00	12.	TOTAL RETIREMENTS PAID FROM ALL SOURCES	<u>38,653</u>	<u>160,158</u>	<u>301,234</u>	<u>12,158</u>	<u>446,124</u>	<u>13,076</u>	<u>417,975</u>	<u>18,449</u>	<u>190,201</u>	<u>5,204</u>	<u>84,866</u>	<u>4,622</u>	<u>84,227</u>	<u>3,572</u>	<u>109,056</u>	<u>2,981</u>	<u>76,037</u>	<u>2,981</u>	<u>79,727</u>	<u>2,981</u>
14   COMMIRCAL PAPERDINECT PURCHASE FIXED CHARGES   3,669		INTEREST																				
1.   ECONOMIC DEVELOPMENT LOANS   1.774   1.	13.	ISSUES FOR FUTURE CONSTRUCTION	3,648	4,458	3,036	3,780	4,638	4,560	4,362	1,608	2,052	972	822	768	822	912	1,086	780	756	852	792	24
16. GENERAL MIPROVEMENTS A OTHER 1.955 1.558 1.572 1.387 1.086 1.459 1.023 1.1306 1.223 1.141 1.059 9.77 1.0945 1.	14.	COMMERCIAL PAPER/DIRECT PURCHASE FIXED CHARGES	3,669	3,669	3,669	3,669	3,669	3,669	3,669	3,669	3,669	3,669	3,669	3,669	3,669	3,669		3,669	3,669	3,669	3,669	3,669
17. INTEREST PAID FROM REVENUES 11,086 11,459 10,230 10,610 11,386 11,25 10,945 8,109 8,472 7,309 7,077 6,941 6,912 6,920 7,026 6,729 6,637 6,741 6,613 5,853 18. ISSUES FOR FUTURE CONSTRUCTION 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15.	ECONOMIC DEVELOPMENT LOANS	,	,	,	,		,	,		,	1,774	,	1,774	1,774	1,774	1,774	1,774	1,774	,	,	,
18. ISSUES FOR FUTURE CONSTRUCTION 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	16.	GENERAL IMPROVEMENTS & OTHER	<u>1,995</u>			<u>1,387</u>	<u>1,306</u>	1,223		<u>1,059</u>				<u>730</u>	<u>648</u>	<u>566</u>		<u>506</u>		<u>446</u>		
19. FUEL LEVELIZATION PROGRAM  19. O O O O O O O O O O O O O O O O O O O	17.	INTEREST PAID FROM REVENUES	11,086	11,459	10,230	10,610	11,386	11,225	10,945	8,109	8,472	7,309	7,077	6,941	6,912	6,920	7,026	6,729	6,637	6,741	6,613	5,853
20. ECONOMIC DEVELOPMENT LOANS 1,286 1,361 1,216 995 860 776 599 425 77 44 43 29 28 16 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18.	ISSUES FOR FUTURE CONSTRUCTION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21. TOTAL INTEREST PAID FROM ALL SOURCES 12.372 12.820 11.447 11.605 12.247 12.001 11.545 8.534 8.549 7.353 7.120 6.970 6.940 6.936 7.027 6.729 6.637 6.741 6.613 5.853    TOTAL DEBT SERVICE  22. ISSUES FOR FUTURE CONSTRUCTION 3.648 4.458 3.036 3.780 4.638 4.560 4.362 1.608 2.052 972 822 768 822 912 1.086 780 756 852 792 24   23. COMMERCIAL PAPER/DIRECT PURCHASE FIXED CHARGES 3.669	19.	FUEL LEVELIZATION PROGRAM	O	•	•	0	0	0	Ū	0	•	0	0	0	0	0	0	0	0	0	0	0
TOTAL DEBT SERVICE  22. ISSUES FOR FUTURE CONSTRUCTION 3,648 4,458 3,036 3,780 4,638 4,560 4,362 1,608 2,052 972 822 768 822 912 1,086 780 756 852 792 24 23. COMMERCIAL PAPER/DIRECT PURCHASE FIXED CHARGES 3,669	20.	ECONOMIC DEVELOPMENT LOANS															<u>1</u>	<u>~</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
22. ISSUES FOR FUTURE CONSTRUCTION 3,648 4,458 3,036 3,780 4,638 4,560 4,362 1,608 2,052 972 822 768 822 912 1,086 780 756 852 792 24 23. COMMERCIAL PAPER/DIRECT PURCHASE FIXED CHARGES 3,669 3	21.	TOTAL INTEREST PAID FROM ALL SOURCES	<u>12,372</u>	<u>12,820</u>	<u>11,447</u>	<u>11,605</u>	<u>12,247</u>	<u>12,001</u>	<u>11,545</u>	<u>8,534</u>	<u>8,549</u>	<u>7,353</u>	<u>7,120</u>	<u>6,970</u>	<u>6,940</u>	<u>6,936</u>	<u>7,027</u>	<u>6,729</u>	<u>6,637</u>	<u>6,741</u>	<u>6,613</u>	<u>5,853</u>
23. COMMERCIAL PAPERIDIRECT PURCHASE FIXED CHARGES 3,669 3,6		TOTAL DEBT SERVICE																				
23. COMMERCIAL PAPERIDIRECT PURCHASE FIXED CHARGES 3,669 3,6	22.	ISSUES FOR FUTURE CONSTRUCTION	3.648	4.458	3.036	3.780	4.638	4.560	4.362	1.608	2.052	972	822	768	822	912	1.086	780	756	852	792	24
24. ECONOMIC DEVELOPMENT LOANS       1,774			,	,	,	-,	,	,	,	,	,						,					
25. GENERAL IMPROVEMENTS & OTHER 26. TOTAL DEBT SERVICE PAID FROM REVENUES 27. ISSUES FOR FUTURE CONSTRUCTION 28. FUEL LEVELIZATION PROGRAM 29. ECONOMIC DEVELOPMENT LOANS 21. 13.0674 3.433 5.282 4.917 4.836 4.753 4.671 4.589 4.507 4.424 4.342 4.260 4.178 3.547 3.479 3.487 3.419 3.427 3.359 3.368 4.671 1.639 12.002 10.839 10.607 10.471 10.442 9.901 10.007 9.710 9.618 9.722 9.594 8.834	24.	ECONOMIC DEVELOPMENT LOANS	1,774	1,774	1,774	1,774		1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774
26. <b>TOTAL DEBT SERVICE PAID FROM REVENUES</b> 39,765 13,334 13,760 14,140 14,916 14,755 14,475 11,639 12,002 10,839 10,607 10,471 10,442 9,901 10,007 9,710 9,618 9,722 9,594 8,834  27. ISSUES FOR FUTURE CONSTRUCTION 0 145,836 265,245 0 435,533 0 405,734 0 183,728 0 79,688 0 79,688 0 79,643 0 105,994 0 73,056 0 76,746 0 28. FUEL LEVELIZATION PROGRAM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	25.	GENERAL IMPROVEMENTS & OTHER	30,674	3,433	5,282	4,917	4,836	4,753	4,671	4,589	4,507	4,424	4,342	4,260	4,178	3,547	3,479	3,487			3,359	3,368
28. FUEL LEVELIZATION PROGRAM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	26.	TOTAL DEBT SERVICE PAID FROM REVENUES	39,765			14,140											10,007					
28. FUEL LEVELIZATION PROGRAM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	27.	ISSUES FOR FUTURE CONSTRUCTION	0	145.836	265.245	0	435.533	0	405.734	0	183.728	0	79.688	0	79.643	0	105.994	0	73.056	0	76.746	0
29. ECONOMIC DEVELOPMENT LOANS 11,259 13,809 12,765 9,622 7,921 10,322 9,310 15,343 3,020 1,718 1,692 1,120 1,082 606 82 0 0 0 0 0			0	,	,	-	0	0	0	·	,	-	0	0	0	-	0	-	0	0	0	-
			11.259	13.809	12,765	9,622	7.921	10,322	9,310	15,343	3.020	1.718	1,692	1,120	1,082	606	82	0	0	0	Õ	-
	30.		<u>0</u>	<u>0</u>	20,910	,	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	,	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

<u>25,077</u> <u>429,520</u>

26,983

<u>198,750</u>

(1) SEE SCHEDULE 2 FOR FUEL LEVELIZATION PROGRAM EXISTING DEBT.

31. TOTAL PAID FROM ALL SOURCES

<u>51,024</u> <u>172,979</u>

312,680

23,762

<u>458,371</u>

<u>12,557</u> <u>91,987</u> <u>11,591</u> <u>91,167</u> <u>10,507</u> <u>116,083</u>

<u>9,710</u> <u>82,674</u> <u>9,722</u> <u>86,340</u>

8,834

SANTEE COOPER 2020 REFORM PLAN **ELECTRIC SYSTEM** 11/20/19

**FUEL SCHEDULE** FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN THOUSANDS)

SCHEDULE 10

PAGE 1 OF 3

		<u>2020</u>	2021	2022	2023	2024	2025	2026	<u>2027</u>	2028	2029	2030	<u>2031</u>	2032	<u>2033</u>	2034	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
	COAL - WINYAH NO. 1, 2, 3, & 4																				
1.	BEGINNING OF PERIOD	51,071	46,056	32,651	32,990	29,033	23,662	17,570	0	0	0	0	0	0	0	0	0	0	0	0	0
2.	RECEIPTS - NORMAL	6,775	8,509	18,602	10,576	7,600	6,978	2,830	0	0	0	0	0	0	0	0	0	0	0	0	0
3.	CONSUMPTION	11,790	21,914	18,263	14,533	12,971	13,070	20,400	0	0	0	0	0	0	0	0	0	0	0	0	0
4.	END OF PERIOD	46,056	32,651	32,990	29,033	23,662	17,570	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.	FUEL COST - CENTS/KWH	4.15	3.92	3.80	3.82	3.85	3.95	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	COAL - CROSS 1, 2, 3, & 4																				
6.	BEGINNING OF PERIOD	86,195	48,042	41,532	40,442	40,028	40,591	42,465	43,467	44,990	46,406	47,829	49,686	49,665	49,551	49,690	50,202	50,830	52,571	54,690	57,087
7.	RECEIPTS - NORMAL	242,568	281,479	304,277	313,495	291,588	292,403	332,523	264,593	284,089	315,857	317,325	321,343	338,119	337,951	329,323	358,115	334,887	333,422	351,411	345,820
8.	CONSUMPTION	280,721	287,989	305,367	313,909	291,025	290,529	331,521	263,070	282,673	314,434	315,468	321,364	338,233	337,812	328,811	357,487	333,146	331,303	349,014	343,362
9.	END OF PERIOD	48,042	41,532	40,442	40,028	40,591	42,465	43,467	44,990	46,406	47,829	49,686	49,665	49,551	49,690	50,202	50,830	52,571	54,690	57,087	59,545
10.	FUEL COST - CENTS/KWH	3.08	3.05	2.93	2.99	3.03	3.15	3.19	3.29	3.36	3.44	3.55	3.65	3.73	3.81	3.90	3.97	4.12	4.27	4.40	4.53
11.	TOTAL COAL INVENTORY - END OF PERIOD	94,098	74,183	73,432	69,061	64,253	60,035	43,467	44,990	46,406	47,829	49,686	49,665	49,551	49,690	50,202	50,830	52,571	54,690	57,087	59,545
12.	TOTAL COAL - CENTS/KWH	3.11	3.10	2.97	3.02	3.05	3.18	3.22	3.29	3.36	3.44	3.55	3.65	3.73	3.81	3.90	3.97	4.12	4.27	4.40	4.53
	OIL - COMBUSTION TURBINES																				
13.	BEGINNING OF PERIOD	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516
14.	RECEIPTS - NORMAL	57	116	95	110	80	118	67	90	81	33	97	45	43	47	57	107	40	29	46	50
15.	CONSUMPTION	57	116	95	110	80	118	67	90	81	33	97	45	43	47	57	107	40	29	46	50
16.	END OF PERIOD	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516
17.	FUEL COST - CENTS/KWH	26.39	26.67	26.99	29.26	29.85	29.57	30.88	32.97	36.16	37.50	37.60	39.47	41.35	40.17	41.01	35.43	25.97	27.62	25.70	27.17
18.	TOTAL OIL/DIESEL INVENTORY - END OF PERIOD	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516	2,516
19.	TOTAL OIL/DIESEL - CENTS/KWH	26.39	26.67	26.99	29.26	29.85	29.57	30.88	32.97	36.16	37.50	37.60	39.47	41.35	40.17	41.01	35.43	25.97	27.62	25.70	27.17

SANTEE COOPER SCHEDULE 10
ELECTRIC SYSTEM PAGE 2 OF 3

FUEL SCHEDULE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	2021	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
	GAS - COMBINED CYCLES																				
20.	BEGINNING OF PERIOD - BACK UP OIL SUPPLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21.	RECEIPTS - BACK UP OIL SUPPLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22.	RECEIPTS - NORMAL	92,236	88,924	88,517	75,486	74,475	86,852	87,503	208,496	227,599	219,016	237,602	238,088	239,819	252,200	257,808	247,933	274,211	280,093	280,808	296,782
23.	CONSUMPTION	92,236	88,924	88,517	75,486	74,475	86,852	87,503	208,496	227,599	219,016	237,602	238,088	239,819	252,200	257,808	247,933	274,211	280,093	280,808	296,782
24.	END OF PERIOD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25.	FUEL COST - CENTS/KWH	2.42	2.30	2.25	2.00	2.05	2.13	2.19	2.58	2.78	2.89	2.93	3.04	3.15	3.25	3.35	3.47	3.50	3.58	3.68	3.75
	GAS - COMBUSTION TURBINES																				
26.	BEGINNING OF PERIOD - BACK UP OIL SUPPLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27.	RECEIPTS - BACK UP OIL SUPPLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28.	RECEIPTS - NORMAL	70,599	68,024	52,572	48,539	31,106	10,435	20,722	6,930	1,857	4,768	3,102	3,381	2,965	1,522	1,471	1,580	1,909	935	1,782	1,728
29.	CONSUMPTION	70,599	68,024	52,572	48,539	31,106	10,435	20,722	6,930	1,857	4,768	3,102	3,381	2,965	1,522	1,471	1,580	1,909	935	1,782	1,728
30.	END OF PERIOD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31.	FUEL COST - CENTS/KWH	2.73	2.72	2.74	2.79	2.80	2.98	3.07	3.23	3.63	3.61	3.85	3.92	4.14	4.27	4.50	4.57	4.72	4.87	4.88	5.15
	GAS - LANDFILL																				
32.	BEGINNING OF PERIOD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33.	RECEIPTS - NORMAL	873	868	868	868	871	868	868	862	864	854	851	851	860	849	848	848	848	850	849	849
34.	CONSUMPTION	873	868	868	868	871	868	868	862	864	854	851	851	860	849	848	848	848	850	849	849
35.	END OF PERIOD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36.	FUEL COST - CENTS/KWH	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.14	1.14	1.14	1.14	1.14	1.15	1.14	1.14	1.15	1.15	1.15	1.15	1.15
37.	TOTAL GAS INVENTORY - END OF PERIOD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38.	TOTAL GAS - CENTS/KWH	2.53	2.45	2.40	2.23	2.21	2.18	2.29	2.59	2.77	2.89	2.92	3.03	3.14	3.24	3.33	3.45	3.48	3.56	3.66	3.73
	TOTAL FOSSIL FUEL																				
39.	BEGINNING OF PERIOD	139,782	96,614	76,699	75,948	71,577	66,769	62,551	45,983	47,506	48,922	50,345	52,202	52,181	52,067	52,206	52,718	53,346	55,087	57,206	59,603
40.	RECEIPTS (1)	413,108	447,920	464,931	449,074	405,720	397,654	444,513	480,971	514,490	540,528	558,977	563,708	581,806	592,569	589,507	608,583	611,895	615,329	634,896	645,229
41.	CONSUMPTION	456,276	467,835	465,682	453,445	410,528	401,872	461,081	479,448	513,074	539,105	557,120	563,729	581,920	592,430	588,995	607,955	610,154	613,210	632,499	642,771
42.	END OF PERIOD	96,614	76,699	75,948	71,577	66,769	62,551	45,983	47,506	48,922	50,345	52,202	52,181	52,067	52,206	52,718	53,346	55,087	57,206	59,603	62,061
43.	FUEL COST - CENTS/KWH	2.87	2.84	2.77	2.75	2.78	2.86	2.94	2.93	3.07	3.19	3.25	3.36	3.46	3.54	3.63	3.74	3.80	3.91	4.04	4.12

1,523

1,416

1,423

1,857

(21)

(114)

139

512

628

1,741

2,119

2,397

2,458

(1) RECEIPTS INCLUDE FUEL AND GAS TRANSPORTATION FEE.

(43,168)

(19,915)

(751)

(4,371)

(4,808)

(4,218) (16,568)

DIFFERENCE IN CASH BASIS

11/20/19

SANTEE COOPER SCHEDULE 10
ELECTRIC SYSTEM PAGE 3 OF 3

FUEL SCHEDULE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	2023	2024	2025	2026	2027	2028	2029	<u>2030</u>	<u>2031</u>	2032	2033	2034	<u>2035</u>	2036	2037	2038	<u>2039</u>
	NUCLEAR FUEL																				
	SUMMER NUCLEAR PLANT	05.770	00 770	00.540	77 700	70 707	00.074	05.044	40.005	00.404	00.070	00.005	04.070	00 705	00.005	10.101	00.405	45.000	55.400	47.075	50.440
45.	BEGINNING OF PERIOD	85,776	86,776	82,548	77,700	79,727	80,971	65,644	49,865	36,401	39,278	23,305	31,876	38,785	33,935	43,101	36,125	45,669	55,409	47,975	58,143
46.	RELOAD - CASH	20,435	12,641	11,428	17,207	16,837	2,642	1,132	3,812	22,602	1,147	26,083	26,643	13,474	27,801	14,059	29,010	29,633	14,986	30,921	15,637
47.	CONSUMPTION (1)	19,435	16,869	16,276	15,180	15,593	17,969	16,911	17,276	19,725	17,120	17,512	19,734	18,324	18,635	21,035	19,466	19,893	22,420	20,753	21,134
48.	DISPOSAL COST/DECON & DECOM FUND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49.	END OF PERIOD	86,776	82,548	77,700	79,727	80,971	65,644	49,865	36,401	39,278	23,305	31,876	38,785	33,935	43,101	36,125	45,669	55,409	47,975	58,143	52,646
50.	FUEL COST - CENTS/KWH	0.78	0.68	0.58	0.60	0.62	0.64	0.66	0.68	0.70	0.67	0.68	0.70	0.71	0.73	0.75	0.76	0.78	0.80	0.81	0.83
51.	CONSUMPTION - FOSSIL & NUCLEAR NET GENERATION -	475,711	484,704	481,958	468,625	426,121	419,841	477,992	496,724	532,799	556,225	574,632	583,463	600,244	611,065	610,030	627,421	630,047	635,630	653,252	663,905
52.	FOSSIL & NUCLEAR (GWH)	18,365	18,956	19,642	19,001	17,306	16,877	18,248	18,923	19,558	19,479	19,716	19,630	19,399	19,287	19,067	18,807	18,620	18,491	18,233	18,150
53.	FUEL COST - CENTS/KWH	2.59	2.56	2.45	2.47	2.46	2.49	2.62	2.62	2.72	2.86	2.91	2.97	3.09	3.17	3.20	3.34	3.38	3.44	3.58	3.66

(1) CONSUMPTION INCLUDES FUEL BURNED, DISPOSAL COST, AND DECONTAMINATION & DECOMMISSIONING COST.

SCHEDULE 11

**ELECTRIC SYSTEM** 

TAX SCHEDULE
FOR THE CALENDAR YEARS 2020 - 2039
(DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1.	KWH SALES TAX	1,740	1,744	1,730	1,738	1,736	1,770	1,806	1,825	1,861	1,893	1,920	1,952	2,001	2,029	2,068	2,115	2,147	2,187	2,255	2,292
2.	GENERATION TAX	2,610	2,616	2,596	2,606	2,604	2,654	2,710	2,737	2,791	2,839	2,879	2,929	3,001	3,044	3,102	3,172	3,220	3,281	3,383	3,438
3.	ADDITIONAL SUMS IN LIEU OF TAXES	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>	<u>33</u>						
4.	TOTAL PAID FROM SPECIAL RESERVE	4,383	4,393	4,359	4,377	4,373	4,457	4,549	4,595	4,685	4,765	4,832	4,914	5,035	5,106	5,203	5,320	5,400	5,501	5,671	5,763
5.	SUMS IN LIEU OF TAXES	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
6.	LAND RENTAL TAX	<u>159</u>	<u>174</u>	<u>180</u>	<u>183</u>	<u>191</u>	199	<u>211</u>	206	209	<u>212</u>	<u>213</u>	<u>216</u>	209	<u>168</u>	169	<u>170</u>	<u>184</u>	<u>172</u>	<u>173</u>	<u>174</u>
7.	TOTAL PAID FROM REVENUES	<u>212</u>	<u>227</u>	<u>233</u>	<u>236</u>	<u>244</u>	252	<u>264</u>	259	262	<u>265</u>	<u>266</u>	<u>269</u>	262	<u>221</u>	222	<u>223</u>	<u>237</u>	<u>225</u>	<u>226</u>	<u>227</u>
8.	TOTAL SUMS IN LIEU OF TAXES FRANCHISE TAX PAYMENT TO STATE	4,595	4,620	4,592	4,613	4,617	4,709	4,813	4,854	4,947	5,030	5,098	5,183	5,297	5,327	5,425	5,543	5,637	5,726	5,897	5,990
9.		5,824	5,833	5,856	5,929	6,023	6,150	6,302	6,408	6,542	6,711	6,820	6,951	7,124	7,248	7,386	7,559	7,654	7,789	7,973	8,099
10.		<u>17,403</u>	<u>17,438</u>	<u>17,304</u>	<u>17,375</u>	<u>17,358</u>	<u>17,695</u>	<u>18,064</u>	<u>18,248</u>	<u>18,609</u>	<u>18,927</u>	<u>19,195</u>	<u>19,524</u>	<u>20,009</u>	<u>20,294</u>	<u>20,679</u>	<u>21,149</u>	<u>21,468</u>	<u>21,872</u>	<u>22,553</u>	<u>22,918</u>
11.	TOTAL SUMS IN LIEU OF TAXES, FRANCHISE TAXES & PAYMENT TO STATE	27.822	27.891	27.752	27.917	27.998	28.554	<u> 29.179</u>	<u>29.510</u>	30.098	30.668	<u>31.113</u>	<u>31.658</u>	<u>32.430</u>	<u>32.869</u>	<u>33.490</u>	<u>34.251</u>	<u>34.759</u>	<u>35.387</u>	<u>36.423</u>	<u>37.007</u>

SCHEDULE 12

SCHEDULE 13

DEPRECIATION SCHEDULE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	2032	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	
1	. BASE DEPRECIATION	227,284	232,700	237,800	242,834	243,805	244,829	247,654	271,780	272,626	273,462	274,218	274,941	275,678	276,425	277,416	277,416	277,416	277,416	277,416	277,416	
2	P. DEPRECIATION - TRANSMISSION, DISTRIBUTION & GENERAL PLANT	<u>0</u>	<u>0</u>	<u>0</u>	<u>4,773</u>	<u>8,846</u>	12,902	<u>16,858</u>	20,632	<u>24,571</u>	<u>28,385</u>	32,118	<u>35,885</u>	39,414	43,112	46,865	<u>50,569</u>	<u>54,620</u>	<u>58,607</u>	62,354	<u>66,419</u>	
3	3. TOTAL DEPRECIATION	227.284	232,700	237.800	247.607	252.651	257.731	264.512	292,412	297.197	301.847	306.336	310.826	315.092	319.537	324.281	327.985	332.036	336.023	339.770	343.835	

SANTEE COOPER ELECTRIC SYSTEM

ALLOWANCE FOR DEPRECIATION FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	2030	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1.	BEGINNING BALANCE	4,066,859	4,257,490	4,452,426	4,651,317	4,846,917	5,058,216	5,273,000	5,493,277	5,740,126	5,990,393	6,243,902	6,500,449	6,759,993	7,022,264	7,287,396	7,555,639	7,825,906	8,098,492	8,373,281	8,649,980
2.	DEPRECIATION EXPENSE	227,284	232,700	237,800	247,607	252,651	257,731	264,512	292,412	297,197	301,847	306,336	310,826	315,092	319,537	324,281	327,985	332,036	336,023	339,770	343,835
3.	REGULATORY ASSET DEPRECIATION ENTRY (1)	394	394	394	(11,525)	344	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.	NET SALVAGE AND COST OF REMOVAL	599	617	635	654	674	694	715	736	758	781	804	829	853	879	905	933	961	989	1,019	1,050
5.	RETIREMENTS	(37,646)	(38,775)	(39,938)	(41,136)	(42,370)	(43,641)	(44,950)	(46,299)	(47,688)	(49,119)	(50,593)	(52,111)	(53,674)	(55,284)	(56,943)	(58,651)	(60,411)	(62,223)	(64,090)	(66,013)
6.	ALLOWANCE FOR DEPRECIATION	<u>4,257,490</u>	4,452,426	<u>4,651,317</u>	<u>4,846,917</u>	<u>5,058,216</u>	<u>5,273,000</u>	5,493,277	<u>5,740,126</u>	5,990,393	6,243,902	6,500,449	6,759,993	7,022,264	7,287,396	<u>7,555,639</u>	<u>7,825,906</u>	8,098,492	<u>8,373,281</u>	<u>8,649,980</u>	<u>8,928,852</u>

(1) REGULATORY ASSET DEPRECIATION ENTRY INCLUDES VC1 NUCLEAR ARO AND ASH POND ARO DEPRECIATION AND ACCRETION CHARGES.

2020 REFORM PLAN 11/20/19

SANTEE COOPER SCHEDULE 14 **ELECTRIC SYSTEM** 

AMORTIZATION SCHEDULE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1. 2. 3.	EXISTING DEBT EXPENSE (GAIN)LOSS ON REACQUIRED DEBT FUTURE DEBT EXPENSE	(24,535) 11,937 <u>0</u>	(24,485) 10,851 <u>117</u>	(24,412) 9,043 <u>269</u>	(35,059) 8,333 <u>232</u>	(45,403) 7,767 <u>495</u>	(54,045) 7,278 <u>460</u>	(61,312) 6,824 <u>695</u>	(62,147) 6,363 <u>687</u>	(61,850) 6,147 <u>777</u>	(63,048) 5,605 <u>776</u>	(60,990) 5,290 <u>822</u>	(63,229) 4,998 <u>821</u>	(62,047) 4,532 <u>827</u>	(59,167) 4,168 <u>821</u>	(69,178) 3,768 <u>875</u>	(74,539) 3,379 <u>864</u>	(76,090) 2,930 <u>934</u>	(77,767) 2,344 <u>926</u>	(74,398) 1,833 <u>981</u>	(76,890) 1,479 <u>976</u>
4.	TOTAL DEBT EXPENSE	(12.598)	(13.517)	(15.100)	(26.494)	(37.141)	(46.307)	(53.793)	(55.097)	(54.926)	(56.667)	(54.878)	(57.410)	(56.688)	(54.178)	(64.535)	(70.296)	(72.226)	(74.497)	(71.584)	(74.435)
										ELECT TO BE RECO OR THE CALE		<b>TEM</b> M FUTURE R <i>i</i> RS 2020 - 2039									SCHEDULE 15
		2020	<u>2021</u>	2022	<u>2023</u>	<u>2024</u>	<u>2025</u>	2026	2027	2028	2029	<u>2030</u>	<u>2031</u>	2032	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1.	COSTS TO BE RECOVERED	(952)	4,506	(2,058)	(67,704)	1,976	1,527	4,461	4,461	4,461	2,420	(102)	(2,279)	(1,864)	(2,235)	(5,752)	(18,975)	(3,024)	(3,192)	(3,368)	(3,556)
2.	ADJUSTMENTS: ACCUMULATED DEPRECIATION ON FUTURE DEBT ISSUES	0	0	0	3,043	2,730	2,730	4,634	15,668	20,364	20,364	20,364	20,364	20,364	20,364	20,364	20,364	20,364	20,364	20,364	20,364
3.	PRINCIPAL PAYMENTS ON FUTURE DEBT	<u>0</u>	(1,875)	(34,704)	12,976	(22,946)	(21,578)	(20,622)	(70,813)	(74,259)	(47,051)	(125,330)	(97,405)	(100,302)	<u>(58,319)</u>	(61,092)	(50,323)	(47,732)	(90,835)	(93,436)	<u>(111,104)</u>
4.	COSTS TO BE RECOVERED FROM FUTURE RATES	<u>(952)</u>	<u>2,631</u>	(36,762)	<u>(51,685)</u>	<u>(18,240)</u>	(17,321)	<u>(11,527)</u>	<u>(50,684)</u>	<u>(49,434)</u>	(24,267)	(105,068)	<u>(79,320)</u>	<u>(81,802)</u>	<u>(40,190)</u>	<u>(46,480)</u>	<u>(48,934)</u>	(30,392)	<u>(73,663)</u>	<u>(76,440)</u>	<u>(94,296)</u>

SANTEE COOPER SCHEDULE 16 **ELECTRIC SYSTEM** 

> INTEREST, MISCELLANEOUS, OTHER INCOME AND RECEIPTS FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	2023	2024	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	2029	<u>2030</u>	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	2036	<u>2037</u>	<u>2038</u>	<u>2039</u>	
1.	BASE	7,225	7,131	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	
2.	MISCELLANEOUS INCOME (EXPENSE)	(3,909)	(3,788)	(3,738)	(3,822)	(3,905)	(3,989)	(4,073)	(4,156)	(4,238)	(4,320)	(4,400)	(4,479)	(4,556)	(4,631)	(4,704)	(4,803)	(4,904)	(5,007)	(5,112)	(5,219)	
3.	INTEREST INCOME ON FUTURE DEBT SERVICE	<u>183</u>	<u>314</u>	<u>1,260</u>	1,427	<u>2,450</u>	<u>2,274</u>	2,032	1,295	<u>1,505</u>	932	994	883	<u>838</u>	<u>710</u>	<u>832</u>	<u>484</u>	<u>344</u>	<u>387</u>	<u>581</u>	<u>276</u>	
4.	SUBTOTAL INTEREST AND MISCELLANEOUS	3,499	3,657	4,752	4,835	5,775	5,515	5,189	4,369	4,497	3,842	3,824	3,634	3,512	3,309	3,358	2,911	2,670	2,610	2,699	2,287	
5.	SUBSIDY ON BUILD AMERICA BONDS	7,652	7,652	7,652	7,652	7,652	7,652	7,652	7,652	7,652	7,652	7,660	7,677	7,693	7,709	<u>7,725</u>	7,742	<u>7,758</u>	<u>8,132</u>	<u>8,132</u>	<u>8,132</u>	
6.	TOTAL INTEREST, MISC AND SUBSIDY	11,151	11,309	12,404	12,487	13,427	13,167	12,841	12,021	12,149	11,494	11,484	11,311	11,205	11,018	11,083	10,653	10,428	10,742	10,831	10,419	
7.	LEASE PAYMENTS, PARENTAL GUARANTYS, SALVAGE (1)	81,495	489,963	22,256	19,153	16,691	19,021	22,165	32,814	34,085	29,522	29,489	38,123	10,269	10,326	10,376	8,882	8,944	8,882	8,882	8,882	
8.	PREMIUM ON GREEN POWER SALES	719	719	719	719	719	719	719	720	720	720	720	720	720	720	720	720	720	720	720	720	
9.	LOSS ON DISPOSITION OF PROPERTY (2)	(179,389)	(404,535)	(33,838)	(31,278)	(55,996)	(53,818)	(88,857)	(94,590)	(83,042)	(79,835)	(73,592)	(67,482)	(87,996)	(73,688)	(92,498)	(498,098)	(149,201)	(166,336)	(240,485)	(175,453)	
10.	TOTAL INTEREST. MISC AND OTHER INCOME	(86.023)	97.456	1.541	1.081	(25.159)	(20.911)	(53.132)	(49.034)	(36.088)	(38.099)	(31.898)	(17.328)	(65.803)	(51.624)	(70.319)	(477.843)	(129.109)	(145.992)	(220.052)	(155.432)	

(1) INCLUDES RECOGNITION OF TOSHIBA PARENTAL GUARANTEE FUNDS, PROJECTED GAIN/(LOSS) SALE OF LEASE PROPERTY, AND SALVAGE VALUE OF PEE DEE IN 2021. (2) INCLUDES AMORTIZATION OF NUCLEAR UNITS 2 & 3 REGULATORY ASSET AND PEE DEE.

> SANTEE COOPER **ELECTRIC SYSTEM**

SCHEDULE 17

OTHER OPERATING REVENUES FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	<u>2023</u>	2024	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	2029	2030	<u>2031</u>	2032	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	
1. 2.	RENTAL INCOME: RECREATIONAL LOTS POLE ATTACHMENTS	1,594 987	1,736 1,406	1,804 1,837	1,828 2,281	1,908 2,738	1,993 2,887	2,108 3,053	2,056 3,240	2,089 3,449	2,122 3,682	2,131 3,944	2,155 4,238	2,088 4,566	1,685 4,934	1,694 5,346	1,703 5,808	1,837 6,325	1,719 6,904	1,728 7,552	1,742 8,278	
3.	WHEELING (1)	3,973	2,829	4,257	4,593	4,434	4,456	4,556	4,987	4,999	5,057	5,845	4,829	6,547	6,547	6,547	6,547	6,547	6,547	6,547	6,547	
4.	CUSTOMER DISCOUNTS FORFEITED	2,161	2,269	2,383	2,502	2,627	2,758	2,896	3,041	3,193	3,353	3,520	3,696	3,881	4,075	4,279	4,493	4,718	4,954	5,201	5,461	
5.	SALE OF WATER OR WATER POWER	61	68	71	75	78	82	86	90	94	99	103	108	114	119	126	132	139	146	154	162	
6.	MISCELLANEOUS	<u>8,133</u>	8,089	7,994	<u>7,861</u>	7,853	7,857	7,898	<u>7,878</u>	<u>7,879</u>	7,938	<u>8,316</u>	<u>8,372</u>	8,434	<u>8,507</u>	8,582	8,660	<u>8,740</u>	8,823	8,907	<u>8,995</u>	
7.	TOTAL	<u>16,909</u>	<u>16,397</u>	<u>18,346</u>	<u>19,140</u>	<u>19,638</u>	20,033	<u>20,597</u>	21,292	21,703	22,251	23,859	23,398	<u>25,630</u>	<u>25,867</u>	<u>26,574</u>	<u>27,343</u>	<u>28,306</u>	29,093	30,089	<u>31,185</u>	

(1) REVENUE FROM WHEELING INCLUDES SEPA AND TEA.

# **SECTION II**

# SANTEE COOPER ELECTRIC SYSTEM ADDITIONAL SCHEDULES IN RESPONSE TO ACT 95

SANTEE COOPER 2020 REFORM PLAN SCHEDULE A ELECTRIC SYSTEM

FINANCIAL METRICS: FUNCTIONALIZED FUTURE DEBT-TO-CAPITALIZATION (DOLLARS IN THOUSANDS)

									(DULLAR:	S IN THOU	SANDS)											
	<u>Total</u>	<u>Average</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
GENERATION CAPITAL NEEDS  1. LOAD AND RESOURCES PLAN  2. ENVIRONMENTAL UPGRADES (INCLUDING FERC CAPITAL  3. OTHER CAPITAL IMPROVEMENTS  4. TOTAL	660,426 421,545 1,295,837 2,377,808	33,021 21,077 <u>64,792</u> 118,890	0 53,605 <u>82,149</u> 135,754	16,660 50,301 <u>110,830</u> 177,791	43,958 54,354 <u>81,787</u> 180,098	73,428 51,838 <u>77,345</u> 202,612	132,368 79,783 <u>82,130</u> 294,281	151,272 21,806 <u>68,476</u> 241,554	154,528 10,052 <u>58,238</u> 222,819	29,376 9,850 <u>72,689</u> 111,915	58,836 15,758 <u>50,471</u> 125,065	0 14,842 <u>64,678</u> 79,520	0 1,506 <u>49,268</u> 50,774	0 5,638 <u>49,377</u> 55,015	0 10,731 <u>59,868</u> 70,599	0 11,074 <u>49,229</u> 60,303	0 10,893 <u>49,173</u> 60,066	0 5,662 <u>66,295</u> 71,956	0 5,682 <u>49,692</u> 55,374	0 5,702 <u>53,286</u> 58,989	0 1,223 <u>70,074</u> 71,298	0 1,245 <u>50,779</u> 52,024
GENERATION SOURCE OF FUNDS  5. CAPITAL CONTRIBUTION (INTERNAL/CIF FUNDS)  6. DEBT FUNDED (EXTERNAL FUNDS)  7. TOTAL	1,258,325 <u>1,119,483</u> 2,377,808	62,916 <u>55,974</u> 118,890	82,149 <u>53,605</u> 135,754	73,343 <u>104,448</u> 177,791	81,782 <u>98,316</u> 180,098	77,344 <u>125,268</u> 202,612	82,121 <u>212,160</u> 294,281	68,478 <u>173,076</u> 241,554	58,239 <u>164,580</u> 222,819	72,687 <u>39,228</u> 111,915	50,461 <u>74,604</u> 125,065	64,678 <u>14,842</u> 79,520	49,268 <u>1,506</u> 50,774	49,377 <u>5,638</u> 55,015	59,868 <u>10,731</u> 70,599	49,229 11,074 60,303	49,173 10,893 60,066	66,295 <u>5,662</u> 71,956	49,692 <u>5,682</u> 55,374	53,286 <u>5,702</u> 58,989	70,074 <u>1,223</u> 71,298	50,779 <u>1,245</u> 52,024
8. CUMULATIVE DEPRECIATION			2,382	7,979	15,947	31,192	49,790	71,398	97,520	149,875	204,540	261,917	321,479	383,196	447,386	513,750	582,532	653,237	725,383	799,074	874,797	951,992
9. DEBT FUNDED PORTION 10. OUTSTANDING DEBT FUNDED PORTION 11. DEBT TO CAPITALIZATION (1)	<u>47%</u>	<u>47%</u>	39% 39% 40%	59% 50% 52%	55% 50% 50%	62% 52% 50%	72% 56% 55%	72% 57% 54%	74% 58% 54%	35% 53% 48%	60% 51% 45%	<u>19%</u> <u>47%</u> <u>41%</u>	3% 40% 34%	<u>10%</u> <u>35%</u> <u>29%</u>	15% 29% 24%	18% 27% 22%	18% 24% 21%	8% 22% 19%	10% 19% 18%	10% 15% 14%	2% 11% 11%	2% 8% 7%
TRANSMISSION CAPITAL NEEDS  12. LOAD AND RESOURCES PLAN  13. OTHER CAPITAL IMPROVEMENTS  14. TOTAL	82,896 <u>896,280</u> 979,176	4,145 <u>44,814</u> 48,959	8,586 <u>39,863</u> 48,449	466 <u>38,046</u> 38,512	11,552 <u>32,735</u> 44,287	20,348 27,468 47,816	19,061 <u>33,439</u> 52,500	17,889 <u>36,212</u> 54,101	4,994 <u>45,479</u> 50,473	0 <u>49,216</u> 49,216	0 <u>51,558</u> 51,558	0 <u>47,544</u> 47,544	0 <u>43,565</u> 43,565	0 <u>45,279</u> 45,279	0 <u>45,667</u> 45,667	0 46,786 46,786	0 <u>72,376</u> 72,376	0 <u>52,121</u> 52,121	0 <u>41,557</u> 41,557	0 <u>50,020</u> 50,020	0 <u>47,228</u> 47,228	0 <u>50,121</u> 50,121
TRANSMISSION SOURCE OF FUNDS  15. CAPITAL CONTRIBUTIONS (INTERNAL FUNDS)  16. DEBT FUNDED (EXTERNAL FUNDS)  17. TOTAL	275,940 <u>703,236</u> 979,176	13,797 <u>35,162</u> 48,959	20,195 <u>28,248</u> 48,443	11,202 <u>27,312</u> 38,514	9,119 <u>35,172</u> 44,291	8,580 <u>39,240</u> 47,820	9,055 <u>43,440</u> 52,495	10,424 <u>43,680</u> 54,104	14,183 36,288 50,471	14,368 <u>34,848</u> 49,216	14,406 <u>37,152</u> 51,558	13,560 <u>33,984</u> 47,544	13,217 <u>30,348</u> 43,565	14,091 <u>31,188</u> 45,279	14,095 <u>31,572</u> 45,667	14,854 31,932 46,786	19,888 <u>52,488</u> 72,376	19,553 <u>32,568</u> 52,121	12,721 28,836 41,557	13,744 36,276 50,020	13,172 <u>34,056</u> 47,228	15,513 34,608 50,121
18. CUMULATIVE DEPRECIATION			1,405	3,927	7,733	12,926	19,641	27,926	37,674	48,849	61,519	75,569	90,881	107,507	125,457	144,764	166,170	189,087	213,209	238,782	265,725	294,121
<ol> <li>DEBT FUNDED PORTION</li> <li>OUTSTANDING DEBT FUNDED PORTION</li> <li>DEBT TO CAPITALIZATION (1)</li> </ol>	72%	<u>72%</u>	<u>58%</u> <u>58%</u> <u>60%</u>	71% 64% 67%	79% 59% 47%	82% 58% 41%	83% 64% 49%	81% 67% 55%	72% 67% 57%	71% 66% 55%	72% 65% 54%	71% 62% 51%	70% 61% 49%	69% 58% 46%	69% 57% 44%	68% 55% 43%	73% 55% 43%	62% 54% 43%	69% 54% 44%	73% 53% 44%	72% 52% 42%	69% 48% 37%
OTHER CAPITAL NEEDS  22. CAPITAL IMPROVEMENTS	1,236,261	61,813	77,805	75,900	57,556	54,280	53,042	55,364	58,836	57,133	57,144	60,412	61,848	58,196	61,422	60,906	61,951	62,550	64,110	64,821	65,188	67,800
OTHER CAPITAL PROJECTS SOURCE OF FUNDS  23. CAPITAL CONTRIBUTION (INTERNAL/CIF FUNDS)  24. DEBT FUNDED (EXTERNAL FUNDS)  25. TOTAL	1,190,299 <u>45,962</u> 1,236,261	59,515 2,298 61,813	68,467 <u>9,338</u> 77,805	64,355 <u>11,545</u> 75,900	51,815 <u>5,741</u> 57,556	52,157 2,123 54,280	50,378 2,664 53,042	52,304 3,060 55,364	56,599 2,237 58,836	55,488 <u>1,645</u> 57,133	55,514 1,630 57,144	58,782 1,630 60,412	60,243 1,605 61,848	57,133 <u>1,063</u> 58,196	60,395 <u>1,026</u> 61,422	60,331 <u>575</u> 60,906	61,870 <u>80</u> 61,951	62,550 <u>0</u> 62,550	64,110 <u>0</u> 64,110	64,821 <u>0</u> 64,821	65,188 <u>0</u> 65,188	67,800 <u>0</u> 67,800
26. CUMULATIVE DEPRECIATION			2,097	5,278	9,904	15,673	21,610	28,049	35,292	42,773	51,234	60,255	70,317	81,400	92,952	105,418	118,111	131,074	145,442	160,801	176,506	193,349
<ul> <li>27. DEBT FUNDED PORTION</li> <li>28. OUTSTANDING DEBT FUNDED PORTION</li> <li>29. DEBT TO CAPITALIZATION (1)</li> </ul>	<u>4%</u>	<u>4%</u>	<u>12%</u> <u>12%</u> 12%	15% <u>6%</u> 6%	10% <u>7%</u> 6%	4% 5% 5%	5% 2% 2%	6% 0% 0%	4% 0% 0%	3% 0% 0%	3% 0% 0%	3% 0% 0%	3% 0% 0%	2% 0% 0%	2% 0% 0%	1% <u>0%</u> 0%	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 0% 0%
<ul> <li>30. TOTAL CAPITAL NEEDS</li> <li>31. LOAD AND RESOURCES PLAN</li> <li>32. ENVIRONMENTAL UPGRADES (INCLUDING FERC CAPITAL</li> <li>33. OTHER CAPITAL IMPROVEMENTS</li> <li>34. TOTAL</li> </ul>	743,322 421,545 3,428,378 4,593,245	37,166 21,077 <u>171,419</u> 229,662	8,586 53,605 <u>199,817</u> 262,008	17,127 50,301 <u>224,776</u> 292,204	55,511 54,354 <u>172,078</u> 281,942	93,776 51,838 <u>159,093</u> 304,708	151,429 79,783 <u>168,611</u> 399,823	169,161 21,806 <u>160,052</u> 351,018	159,522 10,052 <u>162,553</u> 332,127	29,376 9,850 <u>179,038</u> 218,264	58,836 15,758 <u>159,173</u> 233,767	0 14,842 <u>172,634</u> 187,476	0 1,506 <u>154,681</u> 156,187	0 5,638 <u>152,852</u> 158,490	0 10,731 <u>166,957</u> 177,688	0 11,074 <u>156,921</u> 167,995	0 10,893 <u>183,500</u> 194,393	0 5,662 <u>180,966</u> 186,628	0 5,682 <u>155,359</u> 161,041	0 5,702 <u>168,127</u> 173,829	0 1,223 <u>182,490</u> 183,713	0 1,245 <u>168,700</u> 169,945
<ul> <li>35. TOTAL SOURCE OF FUNDS</li> <li>36. CAPITAL CONTRIBUTION (INTERNAL/CIF FUNDS)</li> <li>37. DEBT FUNDED (EXTERNAL FUNDS)</li> <li>38. TOTAL</li> </ul>	2,724,564 <u>1,868,681</u> 4,593,245	136,228 <u>93,434</u> 229,662	170,811 <u>91,191</u> 262,008	148,900 <u>143,305</u> 292,204	142,717 <u>139,229</u> 281,942	138,080 <u>166,631</u> 304,708	141,555 258,264 399,823	131,206 219,816 351,018	129,020 203,105 332,127	142,543 <u>75,721</u> 218,264	120,381 113,386 233,767	137,020 50,456 187,476	122,728 33,459 156,187	120,601 <u>37,889</u> 158,490	134,359 <u>43,329</u> 177,688	124,414 <u>43,581</u> 167,995	130,932 <u>63,461</u> 194,393	148,398 38,230 186,628	126,523 <u>34,518</u> 161,041	131,851 41,978 173,829	148,434 <u>35,279</u> 183,713	134,092 <u>35,853</u> 169,945
39. CUMULATIVE DEPRECIATION			5,884	17,184	33,584	59,791	91,042	127,373	170,485	241,497	317,294	397,741	482,677	572,103	665,795	763,932	866,813	973,398	1,084,034	1,198,657	1,317,027	1,439,462
40. DEBT FUNDED PORTION 41. OUTSTANDING DEBT FUNDED PORTION 42. DEBT TO CAPITALIZATION (1)	<u>41%</u>	<u>41%</u>	35% 32% 32%	<u>49%</u> 41% 41%	<u>49%</u> 40% 39%	<u>55%</u> 41% 38%	65% 46% 43%	63% 47% 43%	<u>61%</u> 47% 43%	35% 42% 38%	<u>49%</u> 40% 36%	27% 36% 32%	21% 31% 27%	24% 27% 23%	24% 23% 20%	26% 21% 19%	33% 20% 18%	20% 19% 17%	21% 18% 17%	24% 15% 15%	<u>19%</u> 13% 12%	21% 10% 10%
43. CAPITAL IMPROVEMENT FUND CONTRIBUTIONS 44. TOTAL CIF COLLECTED	3,490,134	174,507	156,712	156,838	156,077	156,671	156,592	159,497	162,150	164,426	167,240	169,789	172,757	175,723	179,919	182,656	186,062	189,673	192,955	196,417	202,215	205,765
45. NOMINAL CIF%		<u>9.00%</u>	<u>9.00%</u>	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%

(1) OUTSTANDING DEBT FUNDED PORTION LESS DEPRECIATION

## FINANCIAL METRICS: FUNCTIONALIZED DEBT SERVICE COVERAGE (1) (DOLLARS IN THOUSANDS)

		<u>Total</u>	<u>Average</u>	<u>2020</u>	<u>2021</u>	2022	2023	2024	2025	2026	2027	2028	2029	2030	<u>2031</u>	2032	2033	<u>2034</u>	2035	2036	2037	2038	2039
	DEDT CEDWICE: CENEDATION																						
1	DEBT SERVICE: GENERATION EXISTING DEBT SERVICE (2)	5.859.700	292,985	371.139	361,113	350,891	325,387	307,362	282,175	281.101	309,306	304,191	277.511	309,505	299,183	292,769	283,166	273,620	247,173	248.805	241,830	247,778	245,695
2	FUTURE DEBT SERVICE	961,347	48,067	3,648	5,887	28,388	47,551	56,061	85,048	88,672	74,598	69,398	75,125	50,104	52,835	48,640	49,461	44,791	45,886	43,957	42,295	27,590	21,412
3.	TOTAL	6,821,047	341,052	374,787	367,000	379,279	372,938	363,423	367,223	369,773	383,904	373,589	352,636	359,609	352,018	341,409	332,627	318,411	293,059	292,762	284,125	275,368	267,107
	DEBT SERVICE: TRANSMISSION																						
4.	EXISTING DEBT SERVICE (2)	868,288	43,414	57,022	58,015	27,502	32,699	54,532	55,744	55,311	47,866	48,180	35,946	44,288	40,411	46,083	45,193	43,194	48,631	52,070	40,930	28,459	6,211
5. 6.	FUTURE DEBT SERVICE TOTAL	<u>597,187</u> 1,465,475	<u>29,859</u> 73,274	<u>0</u> 57,022	<u>1,171</u> 59,186	36,502 64,004	32,568 65,267	<u>11,179</u> 65,711	11,583 67,327	13,522 68,833	<u>26,505</u> 74,371	27,686 75,866	38,146 74,092	34,016 78,304	39,019 79,430	33,848 79,931	35,721 80,914	38,086 81,280	29,560 78,191	27,498 79,568	37,670 78,600	<u>50,151</u> 78,610	72,756 78,967
0.	IOIAL	1,405,475	73,274	31,022	33,100	04,004	03,207	03,711	07,327	00,033	74,571	73,000	14,032	70,504	79,430	79,951	00,314	01,200	70,131	19,500	70,000	70,010	70,907
	DEBT SERVICE: OTHER																						
7.	EXISTING DEBT SERVICE	552,498	27,625	17,403	18,363	19,694	21,014	21,513	22,505	23,497	26,543	27,584	27,077	29,757	30,949	31,793	33,462	33,802	32,153	33,422	33,432	33,959	34,577
8.	FUTURE DEBT SERVICE	<u>189,125</u>	<u>9,456</u>	7,438	<u>8,876</u>	10,724	10,360	10,278	10,195	10,113	10,031	9,950	9,867	9,785	9,703	9,620	8,989	8,921	8,930	8,862	8,870	8,802	8,810
9.	TOTAL	741,623	37,081	24,841	27,238	30,418	31,374	31,791	32,700	33,610	36,575	37,534	36,943	39,542	40,652	41,413	42,451	42,723	41,083	42,284	42,301	42,761	43,387
	AGGREGATE DEBT SERVICE																						
10.	EXISTING DEBT SERVICE (2)	7,280,486	364,024	445,565	437,490	398,087	379,100	383,407	360,425	359,909	383,716	379,955	340,533	383,550	370,543	370,645	361,821	350,616	327,956	334,297	316,192	310,196	286,484
11.	FUTURE DEBT SERVICE	1,747,659	87,383	11,086	15,934	75,614	90,479	77,518	106,826	112,307	111,134	107,034	123,138	93,905	101,557	92,108	94,171	91,798	84,376	80,317	88,835	86,543	102,978
12.	TOTAL	9,028,144	451,407	456,650	453,424	473,701	469,579	460,925	467,251	472,216	494,850	486,989	463,671	477,455	472,100	462,753	455,992	442,414	412,332	414,614	405,027	396,739	389,462
13.	FUNDS AVAILABLE FOR DEBT SERVICE (3)	12,556,912	627,846	612,187	611,185	626,875	623,994	615,450	625,862	640,733	657,997	657,951	640,167	650,751	648,187	644.871	638,771	629,314	609,408	610,280	605,707	607,115	600,107
14.	DEBT SERVICE COVERAGE	1.39	1.39	1.34	1.34	1.32	1.32	1.33	1.33	1.35	1.32	1.35	1.38	1.36	1.37	1.39	1.40	1.42	1.47	1.47	1.49	1.53	1.54
	CUSTOMER IMPACT	Total	Avarasa	2020	2024	2022	2022	2024	2025	2026	2027	2020	2020	2020	2024	2022	2022	2024	2025	2026	2027	2020	2020
	CUSTOMER IMPACT	<u>Total</u>	<u>Average</u>	2020	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	2029	2030	<u>2031</u>	2032	<u>2033</u>	<u>2034</u>	<u>2035</u>	2036	2037	2038	2039
	CUSTOMER IMPACT TOTAL SYSTEM	<u>Total</u>	<u>Average</u>	2020	<u>2021</u>	2022	<u>2023</u>	2024	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	2030	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
15.		9,028,144	451,407	456,650	453,424	473,701	469,579	460,925	467,251	472,216	494,850	486,989	463,671	477,455	472,100	462,753	455,992	442,414	412,332	414,614	405,027	396,739	389,462
16.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES	9,028,144 38,808,291	451,407 1,940,415	456,650 1,740,314	453,424 1,743,776	473,701 1,730,448	469,579 1,737,523	460,925 1,735,820	467,251 1,769,452	472,216 1,806,423	494,850 1,824,806	486,989 1,860,862	463,671 1,892,738	477,455 1,919,496	472,100 1,952,406	462,753 2,000,927	455,992 2,029,402	442,414 2,067,861	412,332 2,114,910	414,614 2,146,835	405,027 2,187,189	396,739 2,255,315	389,462 2,291,788
	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES	9,028,144	451,407	456,650	453,424	473,701	469,579	460,925	467,251	472,216	494,850	486,989	463,671	477,455	472,100	462,753	455,992	442,414	412,332	414,614	405,027	396,739	389,462
16.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES	9,028,144 38,808,291	451,407 1,940,415	456,650 1,740,314	453,424 1,743,776	473,701 1,730,448	469,579 1,737,523	460,925 1,735,820	467,251 1,769,452	472,216 1,806,423	494,850 1,824,806	486,989 1,860,862	463,671 1,892,738	477,455 1,919,496	472,100 1,952,406	462,753 2,000,927	455,992 2,029,402	442,414 2,067,861	412,332 2,114,910	414,614 2,146,835	405,027 2,187,189	396,739 2,255,315	389,462 2,291,788
16.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.	9,028,144 38,808,291	451,407 1,940,415	456,650 1,740,314	453,424 1,743,776	473,701 1,730,448	469,579 1,737,523	460,925 1,735,820	467,251 1,769,452	472,216 1,806,423	494,850 1,824,806	486,989 1,860,862	463,671 1,892,738	477,455 1,919,496	472,100 1,952,406	462,753 2,000,927	455,992 2,029,402	442,414 2,067,861	412,332 2,114,910	414,614 2,146,835	405,027 2,187,189	396,739 2,255,315	389,462 2,291,788
16. 17.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE	9,028,144 38,808,291 23.26%	451,407 1,940,415 23.26% 295,264 1,179,754	456,650 1,740,314 26.24%	453,424 1,743,776 26.00%	473,701 1,730,448 27.37%	469,579 1,737,523 27.03%	460,925 1,735,820 26.55% 303,295 1,039,378	467,251 1,769,452 26.41% 306,940 1,063,781	472,216 1,806,423 26.14%	494,850 1,824,806 27.12%	486,989 1,860,862 26.17% 317,598 1,126,090	463,671 1,892,738 24.50%	477,455 1,919,496 24.87% 314,101 1,176,767	472,100 1,952,406 24.18%	462,753 2,000,927 23.13%	455,992 2,029,402 22.47% 296,000 1,240,234	442,414 2,067,861 21.39% 285,998 1,263,325	412,332 2,114,910 19.50% 265,322 1,290,760	414,614 2,146,835 19.31% 266,325 1,311,796	405,027 2,187,189 18.52% 259,138 1,336,338	396,739 2,255,315 17.59% 258,207 1,391,187	389,462 2,291,788 16.99% 252,126 1,413,351
16. 17.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE	9,028,144 38,808,291 23.26% 5,905,285	451,407 1,940,415 23.26%	456,650 1,740,314 26.24% 304,415	453,424 1,743,776 26.00% 301,464	473,701 1,730,448 27.37% 313,773	469,579 1,737,523 27.03% 309,862	460,925 1,735,820 26.55% 303,295	467,251 1,769,452 26.41% 306,940	472,216 1,806,423 26.14% 309,746	494,850 1,824,806 27.12% 323,785	486,989 1,860,862 26.17% 317,598	463,671 1,892,738 24.50% 306,046	477,455 1,919,496 24.87% 314,101	472,100 1,952,406 24.18% 309,263	462,753 2,000,927 23.13% 301,881	455,992 2,029,402 22.47% 296,000	442,414 2,067,861 21.39% 285,998	412,332 2,114,910 19.50% 265,322	414,614 2,146,835 19.31% 266,325	405,027 2,187,189 18.52% 259,138	396,739 2,255,315 17.59%	389,462 2,291,788 16.99% 252,126
16. 17. 18. 19.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.	9,028,144 38,808,291 23.26% 5,905,285 23,595,082	451,407 1,940,415 23.26% 295,264 1,179,754	456,650 1,740,314 26.24% 304,415 1,042,087	453,424 1,743,776 26.00% 301,464 1,046,998	473,701 1,730,448 27.37% 313,773 1,034,856	469,579 1,737,523 27.03% 309,862 1,034,953	460,925 1,735,820 26.55% 303,295 1,039,378	467,251 1,769,452 26.41% 306,940 1,063,781	472,216 1,806,423 26.14% 309,746 1,089,346	494,850 1,824,806 27.12% 323,785 1,107,625	486,989 1,860,862 26.17% 317,598 1,126,090	463,671 1,892,738 24.50% 306,046 1,164,395	477,455 1,919,496 24.87% 314,101 1,176,767	472,100 1,952,406 24.18% 309,263 1,196,695	462,753 2,000,927 23.13% 301,881 1,225,120	455,992 2,029,402 22.47% 296,000 1,240,234	442,414 2,067,861 21.39% 285,998 1,263,325	412,332 2,114,910 19.50% 265,322 1,290,760	414,614 2,146,835 19.31% 266,325 1,311,796	405,027 2,187,189 18.52% 259,138 1,336,338	396,739 2,255,315 17.59% 258,207 1,391,187	389,462 2,291,788 16.99% 252,126 1,413,351
16. 17. 18. 19.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE	9,028,144 38,808,291 23.26% 5,905,285 23,595,082	451,407 1,940,415 23.26% 295,264 1,179,754	456,650 1,740,314 26.24% 304,415 1,042,087	453,424 1,743,776 26.00% 301,464 1,046,998	473,701 1,730,448 27.37% 313,773 1,034,856	469,579 1,737,523 27.03% 309,862 1,034,953	460,925 1,735,820 26.55% 303,295 1,039,378 29.18%	467,251 1,769,452 26.41% 306,940 1,063,781 28.85%	472,216 1,806,423 26.14% 309,746 1,089,346	494,850 1,824,806 27.12% 323,785 1,107,625	486,989 1,860,862 26.17% 317,598 1,126,090	463,671 1,892,738 24.50% 306,046 1,164,395	477,455 1,919,496 24.87% 314,101 1,176,767	472,100 1,952,406 24.18% 309,263 1,196,695	462,753 2,000,927 23.13% 301,881 1,225,120	455,992 2,029,402 22.47% 296,000 1,240,234	442,414 2,067,861 21.39% 285,998 1,263,325	412,332 2,114,910 19.50% 265,322 1,290,760	414,614 2,146,835 19.31% 266,325 1,311,796	405,027 2,187,189 18.52% 259,138 1,336,338	396,739 2,255,315 17.59% 258,207 1,391,187	389,462 2,291,788 16.99% 252,126 1,413,351
16. 17. 18. 19. 20.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  RESIDENTIAL	9,028,144 38,808,291 23.26% 5,905,285 23,595,082 25.03%	451,407 1,940,415 23.26% 295,264 1,179,754 25.03%	456,650 1,740,314 26.24% 304,415 1,042,087 29.21%	453,424 1,743,776 26.00% 301,464 1,046,998 28.79%	473,701 1,730,448 27.37% 313,773 1,034,856 30.32%	469,579 1,737,523 27.03% 309,862 1,034,953 29.94%	460,925 1,735,820 26.55% 303,295 1,039,378	467,251 1,769,452 26.41% 306,940 1,063,781	472,216 1,806,423 26.14% 309,746 1,089,346 28.43%	494,850 1,824,806 27.12% 323,785 1,107,625 29.23%	486,989 1,860,862 26.17% 317,598 1,126,090 28.20%	463,671 1,892,738 24.50% 306,046 1,164,395 26.28%	477,455 1,919,496 24.87% 314,101 1,176,767 26.69%	472,100 1,952,406 24.18% 309,263 1,196,695 25.84%	462,753 2,000,927 23.13% 301,881 1,225,120 24.64%	455,992 2,029,402 22.47% 296,000 1,240,234 23.87%	442,414 2,067,861 21.39% 285,998 1,263,325 22.64%	412,332 2,114,910 19.50% 265,322 1,290,760 20.56%	414,614 2,146,835 19.31% 266,325 1,311,796 20.30%	405,027 2,187,189 18.52% 259,138 1,336,338 19.39%	396,739 2,255,315 17.59% 258,207 1,391,187 18.56%	389,462 2,291,788 16.99% 252,126 1,413,351 17.84%
16. 17. 18. 19. 20.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  RESIDENTIAL DEBT SERVICE	9,028,144 38,808,291 23.26% 5,905,285 23,595,082 25.03% 1,521,529	451,407 1,940,415 23.26% 295,264 1,179,754 25.03%	456,650 1,740,314 26.24% 304,415 1,042,087 29.21% 71,978	453,424 1,7743,776 26.00% 301,464 1,046,998 28.79%	473,701 1,730,448 27.37% 313,773 1,034,856 30.32% 74,735	469,579 1,737,523 27.03% 309,862 1,034,953 29.94% 74,908	460,925 1,735,820 26.55% 303,295 1,039,378 29.18% 74,186	467,251 1,769,452 26,41% 306,940 1,063,781 28,85% 75,723	472,216 1,806,423 26.14% 309,746 1,089,346 28.43% 76,821	494,850 1,824,806 27.12% 323,785 1,107,625 29.23% 81,245	486,989 1,860,862 26.17% 317,598 1,126,090 28.20% 80,765	463,671 1,892,738 24.50% 306,046 1,164,395 26.28%	477,455 1,919,496 24.87% 314,101 1,176,767 26.69% 81,814	472,100 1,952,406 24.18% 309,263 1,196,695 25.84% 81,540	462,753 2,000,927 23.13% 301,881 1,225,120 24.64% 80,449	455,992 2,029,402 22,47% 296,000 1,240,234 23,87%	442,414 2,067,861 21.39% 285,998 1,263,325 22.64% 78,160	412,332 2,114,910 19.50% 265,322 1,290,760 20.56%	414,614 2,146,835 19.31% 266,325 1,311,796 20.30%	405,027 2,187,189 18.52% 259,138 1,336,338 19.39%	396,739 2,255,315 17.59% 258,207 1,391,187 18.56%	389,462 2,291,788 16.99% 252,126 1,413,351 17.84%
16. 17. 18. 19. 20.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  RESIDENTIAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.	9,028,144 38,808,291 23,26% 5,905,285 23,595,082 25,03% 1,521,529 4,887,933	451,407 1,940,415 23.26% 295,264 1,179,754 25.03% 76,076 244,397	456,650 1,740,314 26,24% 304,415 1,042,087 29,21% 71,978 206,797	453,424 1,743,776 26.00% 301,464 1,046,998 28.79% 70,754 207,878	473,701 1,730,448 27.37% 313,773 1,034,856 30.32% 74,735 209,293	469,579 1,737,523 27.03% 309,862 1,034,953 29,94% 74,908 211,951	460,925 1,735,820 26,55% 303,295 1,039,378 29,18% 74,186 215,441	467,251 1,769,452 26,41% 306,940 1,063,781 28,85% 75,723 220,393	472,216 1,806,423 26.14% 309,746 1,089,346 28.43% 76,821 225,889	494,850 1,824,806 27.12% 323,785 1,107,625 29,23% 81,245 232,217	486,989 1,860,862 26.17% 317,598 1,126,090 28.20% 80,765 237,243	463,671 1,892,738 24,50% 306,046 1,164,395 26,28% 78,774 243,219	477,455 1,919,496 24.87% 314,101 1,176,767 26.69% 81,814 247,279	472,100 1,952,406 24.18% 309,263 1,196,695 25.84% 81,540 251,477	462,753 2,000,927 23,13% 301,881 1,225,120 24,64% 80,449 256,710	455,992 2,029,402 22,47% 296,000 1,240,234 23.87% 79,881 260,377	442,414 2,067,861 21,39% 285,998 1,263,325 22,64% 78,160 265,062	412,332 2,114,910 19.50% 265,322 1,290,760 20.56% 73,566 270,757	414,614 2,146,835 19,31% 266,325 1,311,796 20,30% 74,310 273,993	405,027 2,187,189 18.52% 259,138 1,336,338 19.39% 73,207 278,472	396,739 2,255,315 17.59% 258,207 1,391,187 18.56%	389,462 2,291,788 16.99% 252,126 1,413,351 17.84% 69,102 288,886
16. 17. 18. 19. 20. 21. 22. 23.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  RESIDENTIAL DEBT SERVICE NET REVENUE DEBT SERVICE NET REVENUE DEBT SERVICE NET REVENUE COMMERCIAL	9,028,144 38,808,291 23,26% 5,905,285 23,595,082 25,03% 1,521,529 4,887,933 31,13%	451,407 1,940,415 23.26% 295,264 1,179,754 25.03% 76,076 244,397 31.13%	456,650 1,740,314 26,24% 304,415 1,042,087 29,21% 71,978 206,797 34,81%	453,424 1,743,776 26.00% 301,464 1,046,998 28.79% 70,754 207,878 34.04%	473,701 1,730,448 27,37% 313,773 1,034,856 30,32% 74,735 209,293 35,71%	469,579 1,737,523 27,03% 309,862 1,034,953 29,94% 74,908 211,951 35,34%	460,925 1,735,820 26,55% 303,295 1,039,378 29,18% 74,186 215,441 34,43%	467,251 1,769,452 26,41% 306,940 1,063,781 28,85% 75,723 220,393 34,36%	472,216 1,806,423 26.14% 309,746 1,089,346 28.43% 76,821 225,889 34.01%	494,850 1,824,806 27.12% 323,785 1,107,625 29.23% 81,245 232,217 34.99%	486,989 1,860,862 26.17% 317,598 1,126,090 28.20% 80,765 237,243 34.04%	463,671 1,892,738 24.50% 306,046 1,164,395 26.28% 78,774 243,219 32.39%	477,455 1,919,496 24.87% 314,101 1,176,767 26.69% 81,814 247,279 33.09%	472,100 1,952,406 24.18% 309,263 1,196,695 25.84% 81,540 251,477 32.42%	462,753 2,000,927 23,13% 301,881 1,225,120 24,64% 80,449 256,710 31,34%	455,992 2,029,402 22,47% 296,000 1,240,234 23,87% 79,881 260,377 30,68%	442,414 2,067,861 21,39% 285,998 1,263,325 22,64% 78,160 265,062 29,49%	412,332 2,114,910 19.50% 265,322 1,290,760 20.56% 73,566 270,757 27.17%	414,614 2,146,835 19,31% 266,325 1,311,796 20,30% 74,310 273,993 27,12%	405,027 2,187,189 18.52% 259,138 1,336,338 19.39% 73,207 278,472 26.29%	396,739 2,255,315 17.59% 258,207 1,391,187 18.56% 69,611 284,596 24.46%	389,462 2,291,788 16.99% 252,126 1,413,351 17.84% 69,102 288,886 23.92%
16. 17. 18. 19. 20.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  RESIDENTIAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.	9,028,144 38,808,291 23,26% 5,905,285 23,595,082 25,03% 1,521,529 4,887,933 31,13% 1,113,212	451,407 1,940,415 23.26% 295,264 1,179,754 25.03% 76,076 244,397 31.13%	456,650 1,740,314 26,24% 304,415 1,042,087 29,21% 71,978 206,797 34,81%	453,424 1,743,776 26,00% 301,464 1,046,998 28,79% 70,754 207,878 34,04%	473,701 1,730,448 27.37% 313,773 1,034,856 30.32% 74,735 209,293 35.71%	469,579 1,737,523 27.03% 309,862 1,034,953 29,94% 74,908 211,951 35,34%	460,925 1,735,820 26,55% 303,295 1,039,378 29,18% 74,186 215,441 34,43%	467,251 1,769,452 26,41% 306,940 1,063,781 28,85% 75,723 220,393 34,36%	472,216 1,806,423 26.14% 309,746 1,089,346 28.43% 76,821 225,889 34.01%	494,850 1,824,806 27,12% 323,785 1,107,625 29,23% 81,245 232,217 34,99% 59,140	486,989 1,860,862 26,17% 317,598 1,126,090 28,20% 80,765 237,243 34,04% 58,509	463,671 1,892,738 24,50% 306,046 1,164,395 26,28% 78,774 243,219 32,39%	477,455 1,919,496 24.87% 314,101 1,176,767 26.69% 81,814 247,279 33.09% 59,070	472,100 1,952,406 24.18% 309,263 1,196,695 25.84% 81,540 251,477 32,42%	462,753 2,000,927 23.13% 301,881 1,225,120 24.64% 80,449 256,710 31.34% 58,805	455,992 2,029,402 22,47% 296,000 1,240,234 23.87% 79,881 260,377 30.68%	442,414 2,067,861 21.39% 285,998 1,263,325 22.64% 78,160 265,062 29.49%	412,332 2,114,910 19.50% 265,322 1,290,760 20.56% 73,566 270,757 27.17%	414,614 2,146,835 19,31% 266,325 1,311,796 20,30% 74,310 273,993 27,12%	405,027 2,187,189 18,52% 259,138 1,336,338 19,39% 73,207 278,472 26,29%	396,739 2,255,315 17.59% 258,207 1,391,187 18.56% 69,611 284,596 24.46% 51,382	389,462 2,291,788 16.99% 252,126 1,413,351 17.84% 69,102 288,886 23.92%
16. 17. 18. 19. 20. 21. 22. 23.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  RESIDENTIAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  COMMERCIAL DEBT SERVICE % OF REV.	9,028,144 38,808,291 23,26% 5,905,285 23,595,082 25,03% 1,521,529 4,887,933 31,13%	451,407 1,940,415 23.26% 295,264 1,179,754 25.03% 76,076 244,397 31.13%	456,650 1,740,314 26,24% 304,415 1,042,087 29,21% 71,978 206,797 34,81%	453,424 1,743,776 26.00% 301,464 1,046,998 28.79% 70,754 207,878 34.04%	473,701 1,730,448 27,37% 313,773 1,034,856 30,32% 74,735 209,293 35,71%	469,579 1,737,523 27,03% 309,862 1,034,953 29,94% 74,908 211,951 35,34%	460,925 1,735,820 26,55% 303,295 1,039,378 29,18% 74,186 215,441 34,43%	467,251 1,769,452 26,41% 306,940 1,063,781 28,85% 75,723 220,393 34,36%	472,216 1,806,423 26.14% 309,746 1,089,346 28.43% 76,821 225,889 34.01%	494,850 1,824,806 27.12% 323,785 1,107,625 29.23% 81,245 232,217 34.99%	486,989 1,860,862 26.17% 317,598 1,126,090 28.20% 80,765 237,243 34.04%	463,671 1,892,738 24.50% 306,046 1,164,395 26.28% 78,774 243,219 32.39%	477,455 1,919,496 24.87% 314,101 1,176,767 26.69% 81,814 247,279 33.09%	472,100 1,952,406 24.18% 309,263 1,196,695 25.84% 81,540 251,477 32.42%	462,753 2,000,927 23,13% 301,881 1,225,120 24,64% 80,449 256,710 31,34%	455,992 2,029,402 22,47% 296,000 1,240,234 23,87% 79,881 260,377 30,68%	442,414 2,067,861 21,39% 285,998 1,263,325 22,64% 78,160 265,062 29,49%	412,332 2,114,910 19.50% 265,322 1,290,760 20.56% 73,566 270,757 27.17%	414,614 2,146,835 19,31% 266,325 1,311,796 20,30% 74,310 273,993 27,12%	405,027 2,187,189 18.52% 259,138 1,336,338 19.39% 73,207 278,472 26.29%	396,739 2,255,315 17.59% 258,207 1,391,187 18.56% 69,611 284,596 24.46%	389,462 2,291,788 16.99% 252,126 1,413,351 17.84% 69,102 288,886 23,92%
16. 17. 18. 19. 20. 21. 22. 23.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  RESIDENTIAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  COMMERCIAL DEBT SERVICE % OF REV.	9,028,144 38,808,291 23,26% 5,905,285 23,595,082 25,03% 1,521,529 4,887,933 31,13% 1,113,212 4,327,755	451,407 1,940,415 23.26% 295,264 1,179,754 25.03% 76,076 244,397 31.13% 55,661 216,388	456,650 1,740,314 26,24% 304,415 1,042,087 29,21% 71,978 206,797 34,81% 51,834 184,601	453,424 1,743,776 26.00% 301,464 1,046,998 28.79% 70,754 207,878 34.04% 52,150 184,101	473,701 1,730,448 27.37% 313,773 1,034,856 30.32% 74,735 209,293 35.71% 54,922 184,271	469,579 1,737,523 27.03% 309,862 1,034,953 29,94% 74,908 211,951 35,34% 54,882 186,476	460,925 1,735,820 26.55% 303,295 1,039,378 29.18% 74,186 215,441 34.43% 54,209 189,325	467,251 1,769,452 26,41% 306,940 1,063,781 28,85% 75,723 220,393 34,36% 55,197 192,923	472,216 1,806,423 26.14% 309,746 1,089,346 28.43% 76,821 225,889 34.01% 56,245 198,380	494,850 1,824,806 27.12% 323,785 1,107,625 29.23% 81,245 232,217 34.99% 59,140 202,862	486,989 1,860,862 26.17% 317,598 1,126,090 28.20% 80,765 237,243 34.04% 58,509 206,914	463,671 1,892,738 24.50% 306,046 1,164,395 26.28% 78,774 243,219 32.39% 56,962 212,360	477,455 1,919,496 24.87%  314,101 1,176,767 26.69%  81,814 247,279 33.09%  59,070 215,653	472,100 1,952,406 24.18% 309,263 1,196,695 25.84% 81,540 251,477 32.42% 59,150 220,359	462,753 2,000,927 23.13% 301,881 1,225,120 24.64% 80,449 256,710 31.34% 58,805 226,812	455,992 2,029,402 22,47% 296,000 1,240,234 23.87% 79,881 260,377 30.68% 58,871 231,578	442,414 2,067,861 21,39% 285,998 1,263,325 22,64% 78,160 265,062 29,49% 57,692 236,251	412,332 2,114,910 19.50% 265,322 1,290,760 20.56% 73,566 270,757 27.17%	414,614 2,146,835 19,31% 266,325 1,311,796 20,30% 74,310 273,993 27,12% 54,850 245,431	405,027 2,187,189 18.52% 259,138 1,336,338 19.39% 73,207 278,472 26.29% 54,036 250,103	396,739 2,255,315 17.59% 258,207 1,391,187 18.56% 69,611 284,596 24.46% 51,382 256,459	389,462 2,291,788 16.99% 252,126 1,413,351 17.84% 69,102 288,886 23.92% 51,006 260,699
16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  RESIDENTIAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  COMMERCIAL DEBT SERVICE % OF REV.  INDUSTRIAL FIRM	9,028,144 38,808,291 23,26% 5,905,285 23,595,082 25,03% 1,521,529 4,887,933 31,13% 1,113,212 4,327,755 25,72%	451,407 1,940,415 23.26% 295,264 1,179,754 25.03% 76,076 244,397 31.13% 55,661 216,388 25.72%	456,650 1,740,314 26,24% 304,415 1,042,087 29,21% 71,978 206,797 34,81% 51,834 184,601 28,08%	453,424 1,743,776 26,00% 301,464 1,046,998 28,79% 70,754 207,878 34,04% 52,150 184,101 28,33%	473,701 1,730,448 27.37% 313,773 1,034,856 30.32% 74,735 209,293 35.71% 54,922 184,271 29.81%	469,579 1,737,523 27.03% 309,862 1,034,953 29,94% 74,908 211,951 35,34% 54,882 186,476 29,43%	460,925 1,735,820 26,55% 303,295 1,039,378 29,18% 74,186 215,441 34,43% 54,209 189,325 28,63%	467,251 1,769,452 26,41% 306,940 1,063,781 28,85% 75,723 220,393 34,36% 55,197 192,923 28,61%	472,216 1,806,423 26.14% 309,746 1,089,346 28.43% 76,821 225,889 34.01% 56,245 198,380 28.35%	494,850 1,824,806 27,12% 323,785 1,107,625 29,23% 81,245 232,217 34,99% 59,140 202,862 29,15%	486,989 1,860,862 26,17% 317,598 1,126,090 28,20% 80,765 237,243 34,04% 58,509 206,914 28,28%	463,671 1,892,738 24,50% 306,046 1,164,395 26,28% 78,774 243,219 32,39% 56,962 212,360 26,82%	477,455 1,919,496 24.87% 314,101 1,176,767 26.69% 81,814 247,279 33.09% 59,070 215,653 27.39%	472,100 1,952,406 24.18% 309,263 1,196,695 25.84% 81,540 251,477 32.42% 59,150 220,359 26.84%	462,753 2,000,927 23.13% 301,881 1,225,120 24.64% 80,449 256,710 31.34% 58,805 226,812 25,93%	455,992 2,029,402 22,47% 296,000 1,240,234 23.87% 79,881 260,377 30.68% 58,871 231,578 25,42%	442,414 2,067,861 21,39% 285,998 1,263,325 22,64% 78,160 265,062 29,49% 57,692 236,251 24,42%	412,332 2,114,910 19.50% 265,322 1,290,760 20.56% 73,566 270,757 27.17% 54,301 242,195 22.42%	414,614 2,146,835 19,31% 266,325 1,311,796 20,30% 74,310 273,993 27,12% 54,850 245,431 22,35%	405,027 2,187,189 18,52% 259,138 1,336,338 19,39% 73,207 278,472 26,29% 54,036 250,103 21,61%	396,739 2,255,315 17.59% 258,207 1,391,187 18.56% 69,611 284,596 24,46% 51,382 256,459 20.03%	389,462 2,291,788 16.99% 252,126 1,413,351 17.84% 69,102 288,886 23.92% 51,006 260,699 19.56%
16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  RESIDENTIAL DEBT SERVICE NET REVENUE DEBT SERVICE NET REVENUE DEBT SERVICE NET REVENUE DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  COMMERCIAL DEBT SERVICE NET REVENUE DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  INDUSTRIAL FIRM DEBT SERVICE	9,028,144 38,808,291 23,26% 5,905,285 23,595,082 25,03% 1,521,529 4,887,933 31,13% 1,113,212 4,327,755 25,72% 488,118	451,407 1,940,415 23.26% 295,264 1,179,754 25.03% 76,076 244,397 31.13% 55,661 216,388 25.72%	456,650 1,740,314 26.24% 304,415 1,042,087 29.21% 71,978 206,797 34.81% 51,834 184,601 28.08%	453,424 1,743,776 26.00% 301,464 1,046,998 28.79% 70,754 207,878 34.04% 52,150 184,101 28.33%	473,701 1,730,448 27.37% 313,773 1,034,856 30.32% 74,735 209,293 35.71% 54,922 184,271 29.81%	469,579 1,737,523 27.03% 309,862 1,034,953 29.94% 74,908 211,951 35.34% 54,882 186,476 29,43%	460,925 1,735,820 26.55% 303,295 1,039,378 29.18% 74,186 215,441 34.43% 54,209 189,325 28.63%	467,251 1,769,452 26,41% 306,940 1,063,781 28,85% 75,723 220,393 34,36% 55,197 192,923 28,61%	472,216 1,806,423 26,14% 309,746 1,089,346 28,43% 76,821 225,889 34,01% 56,245 198,380 28,35%	494,850 1,824,806 27.12% 323,785 1,107,625 29.23% 81,245 232,217 34.99% 59,140 202,862 29.15%	486,989 1,860,862 26.17% 317,598 1,126,090 28.20% 80,765 237,243 34.04% 58,509 206,914 28.28% 30,118	463,671 1,892,738 24.50% 306,046 1,164,395 26.28% 78,774 243,219 32.39% 56,962 212,360 26.82%	477,455 1,919,496 24.87%  314,101 1,176,767 26.69%  81,814 247,279 33.09%  59,070 215,653 27.39%	472,100 1,952,406 24.18% 309,263 1,196,695 25.84% 81,540 251,477 32.42% 59,150 220,359 26.84%	462,753 2,000,927 23.13% 301,881 1,225,120 24.64% 80,449 256,710 31.34% 58,805 226,812 25.93%	455,992 2,029,402 22,47% 296,000 1,240,234 23.87% 79,881 260,377 30.68% 58,871 231,578 25,42%	442,414 2,067,861 21.39% 285,998 1,263,325 22.64% 78,160 265,062 29,49% 57,692 236,251 24,42%	412,332 2,114,910 19.50% 265,322 1,290,760 20.56% 73,566 270,757 27.17% 54,301 242,195 22.42%	414,614 2,146,835 19,31% 266,325 1,311,796 20,30% 74,310 273,993 27,12% 54,850 245,431 22,35%	405,027 2,187,189 18.52% 259,138 1,336,338 19.39% 73,207 278,472 26.29% 54,036 250,103 21.61%	396,739 2,255,315 17.59% 258,207 1,391,187 18.56% 69,611 284,596 24.46% 51,382 256,459 20.03%	389,462 2,291,788 16.99% 252,126 1,413,351 17.84% 69,102 288,886 23.92% 51,006 260,699 19.56%
16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26.	TOTAL SYSTEM DEBT SERVICE SYSTEM REVENUES DEBT SERVICE % OF REV.  CENTRAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  RESIDENTIAL DEBT SERVICE NET REVENUE DEBT SERVICE % OF REV.  COMMERCIAL DEBT SERVICE % OF REV.  INDUSTRIAL FIRM	9,028,144 38,808,291 23,26% 5,905,285 23,595,082 25,03% 1,521,529 4,887,933 31,13% 1,113,212 4,327,755 25,72%	451,407 1,940,415 23.26% 295,264 1,179,754 25.03% 76,076 244,397 31.13% 55,661 216,388 25.72%	456,650 1,740,314 26,24% 304,415 1,042,087 29,21% 71,978 206,797 34,81% 51,834 184,601 28,08%	453,424 1,743,776 26,00% 301,464 1,046,998 28,79% 70,754 207,878 34,04% 52,150 184,101 28,33%	473,701 1,730,448 27.37% 313,773 1,034,856 30.32% 74,735 209,293 35.71% 54,922 184,271 29.81%	469,579 1,737,523 27.03% 309,862 1,034,953 29,94% 74,908 211,951 35,34% 54,882 186,476 29,43%	460,925 1,735,820 26,55% 303,295 1,039,378 29,18% 74,186 215,441 34,43% 54,209 189,325 28,63%	467,251 1,769,452 26,41% 306,940 1,063,781 28,85% 75,723 220,393 34,36% 55,197 192,923 28,61%	472,216 1,806,423 26.14% 309,746 1,089,346 28.43% 76,821 225,889 34.01% 56,245 198,380 28.35%	494,850 1,824,806 27,12% 323,785 1,107,625 29,23% 81,245 232,217 34,99% 59,140 202,862 29,15%	486,989 1,860,862 26,17% 317,598 1,126,090 28,20% 80,765 237,243 34,04% 58,509 206,914 28,28%	463,671 1,892,738 24,50% 306,046 1,164,395 26,28% 78,774 243,219 32,39% 56,962 212,360 26,82%	477,455 1,919,496 24.87% 314,101 1,176,767 26.69% 81,814 247,279 33.09% 59,070 215,653 27.39%	472,100 1,952,406 24.18% 309,263 1,196,695 25.84% 81,540 251,477 32.42% 59,150 220,359 26.84%	462,753 2,000,927 23.13% 301,881 1,225,120 24.64% 80,449 256,710 31.34% 58,805 226,812 25,93%	455,992 2,029,402 22,47% 296,000 1,240,234 23.87% 79,881 260,377 30.68% 58,871 231,578 25,42%	442,414 2,067,861 21,39% 285,998 1,263,325 22,64% 78,160 265,062 29,49% 57,692 236,251 24,42%	412,332 2,114,910 19.50% 265,322 1,290,760 20.56% 73,566 270,757 27.17% 54,301 242,195 22.42%	414,614 2,146,835 19,31% 266,325 1,311,796 20,30% 74,310 273,993 27,12% 54,850 245,431 22,35%	405,027 2,187,189 18,52% 259,138 1,336,338 19,39% 73,207 278,472 26,29% 54,036 250,103 21,61%	396,739 2,255,315 17.59% 258,207 1,391,187 18.56% 69,611 284,596 24,46% 51,382 256,459 20.03%	389,462 2,291,788 16.99% 252,126 1,413,351 17.84% 69,102 288,886 23.92% 51,006 260,699 19.56%

<sup>(1)</sup> INCLUDES COMMERCIAL PAPER/DIRECT PURCHASE
(2) FUNCTIONALIZED PORTION OF EXISTING DEBT SERVICE (NET PLANT ALLOCATION)
(3) AFTER PAYMENT TO STATE

2020 REFORM PLAN SCHEDULE C

020 - 2039	
S)	

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	2039
	CASH FLOWS FROM OPERATING ACTIVITIES																				
1.	RECEIPTS FROM CUSTOMERS	1,740,314	1,743,776	1,730,448	1,737,523	1,735,820	1,769,452	1,806,423	1,824,806	1,860,862	1,892,738	1,919,496	1,952,406	2,000,927	2,029,402	2,067,861	2,114,910	2,146,835	2,187,189	2,255,315	2,291,788
2.	PAYMENTS TO NON-FUEL SUPPLIERS	(261,532)	(270,737)	(243,316)	(261,336)	(258,928)	(254,109)	(268,704)	(261,587)	(249,190)	(286,494)	(277,862)	(267,576)	(289,051)	(288,126)	(285,194)	(309,080)	(307,156)	(296,382)	(329,048)	(326,303)
3.	PAYMENTS FOR FUEL	(432,544)	(464,789)	(481,207)	(464,254)	(421,313)	(415,624)	(461,425)	(498,247)	(534,215)	(557,649)	(576,489)	(583,442)	(600,130)	(611,204)	(610,542)	(628,049)	(631,788)	(637,749)	(655,650)	(666,364)
4.	PURCHASED POWER	(196,880)	(180,531)	(161,209)	(183,272)	(227,666)	(244,151)	(199,453)	(184,940)	(176,574)	(174,741)	(175,825)	(190,361)	(214,060)	(232,872)	(261,117)	(296,917)	(320,823)	(345,654)	(373,307)	(401,776)
5.	PAYMENTS TO EMPLOYEES	(179,960)	(186,858)	(191,966)	(196,498)	(201,141)	(205,897)	(210,768)	(215,758)	(220,870)	(226,107)	(231,472)	(236,968)	(242,598)	(248,366)	(254,276)	(260,330)	(266,533)	(272,889)	(279,400)	(286,072)
6.	OTHER RECEIPTS-NET	(1,018)	1,030	21,391	6,321	(2,319)	20,424	21,628	25,406	16,160	23,881	18,515	1,220	(2,950)	(3,209)	(1,161)	(4,804)	(3,430)	(2,749)	(5,476)	(7,752)
7.	NET CASH PROVIDED BY OPERATING ACTIVITIES	668,380	641,891	<u>674,141</u>	638,484	624,453	670,095	<u>687,701</u>	689,680	696,173	671,628	676,363	675,279	652,138	645,625	655,571	615,730	<u>617,105</u>	631,766	612,434	603,521
	CASH FLOWS FROM NON-CAPITAL RELATED FINANCING ACTIVITIES																				
8.	DISTRIBUTION TO STATE	(17,403)	(17,438)	(17,304)	(17,375)	(17,358)	(17,695)	(18,064)	(18,248)	(18,609)	(18,927)	(19,195)	(19,524)	(20,009)	(20,294)	(20,679)	(21,149)	(21,468)	(21,872)	(22,553)	(22,918)
9.	PROCEEDS FROM ISSUANCE OF COMMERCIAL PAPER/DIRECT PURCHASE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.	REPAYMENT OF COMMERCIAL PAPER/DIRECT PURCHASE	(32,354)	(10,000)	(21,458)	(548)	(548)	(548)	(548)	(549)	(549)	(549)	(549)	(549)	(549)	0	0	0	0	0	0	0
11.	DEFEASANCE OF LONG-TERM DEBT	(155,000)	(425,000)	0	0	0	0	(10,000)	(2,000)	(7,500)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(337,450)	(10,000)	(10,000)	(56,645)	(10,000)
12.	PROCEEDS FROM ISSUANCE OF LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13.	REPAYMENT OF LONG-TERM DEBT	(364)	(6,349)	(19,185)	(21,322)	(39,257)	(39,200)	(42,476)	(68,084)	(52,222)	(51,817)	(42,312)	(37,318)	(52,047)	(43,324)	(54,382)	(52,834)	(94,923)	(106,902)	(113,075)	(99,066)
14.	INTEREST PAID ON LONG-TERM DEBT	(183,958)	(163,588)	(158,117)	(158,203)	(149, 267)	(141,493)	(133,021)	(126,573)	(122,479)	(119,543)	(115,926)	(112,948)	(110,088)	(106,500)	(103,179)	(97,153)	(75,503)	(68,790)	(62,423)	(53,496)
15.	INTEREST PAID ON COMMERCIAL PAPER/DIRECT PURCHASE	(3,532)	(2,636)	(2,219)	(1,922)	(1,907)	(1,892)	(1,877)	(1,862)	(1,848)	(1,833)	(1,818)	(1,803)	(1,788)	(1,774)	(1,774)	(1,774)	(1,774)	(1,774)	(1,774)	(1,774)
16.	NUCLEAR SALE PROCEEDS	0	425,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17.	BOND ISSUANCE AND OTHER RELATED COSTS	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
18.	NET CASH USED IN NON-CAPITAL RELATED FINANCING ACTIVITIES	(392,610)	(200,012)	(218,283)	(199,369)	(208,337)	(200,828)	(205,986)	(217,317)	(203,207)	(202,669)	(189,800)	(182,142)	(194,481)	(181,892)	(190,013)	(510,360)	(203,667)	(209,337)	(256,470)	(187,253)
	CASH FLOWS FROM CAPITAL RELATED FINANCING ACTIVITIES																				
19.	PROCEEDS FROM ISSUANCE OF COMMERCIAL PAPER/DIRECT PURCHASE	97,503	149,941	143,848	173,150	257,954	219,268	193,138	79,286	108,219	49,088	33,922	38,376	43,413	45,297	61,369	37,922	35,134	41,418	35,328	0
20.	REPAYMENT OF COMMERCIAL PAPER/DIRECT PURCHASE	(22,354)	(160,158)	(279,776)	(11,610)	(445,576)	(12,528)	(417,427)	(17,900)	(189,652)	(4,655)	(84,317)	(4,073)	(83,678)	(3,572)	(109,056)	(2,981)	(76,037)	(2,981)	(79,727)	(2,981)
21.	DEFEASANCE OF LONG-TERM DEBT	0	(12,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22.	PROCEEDS FROM ISSUANCE OF LONG-TERM DEBT	0	151,135	267,924	0	439,932	0	409,832	0	185,584	0	80,493	0	80,447	0	107,065	0	73,794	0	106,895	0
23.	REPAYMENT OF LONG-TERM DEBT	(94,887)	(134,297)	(147, 145)	(139,561)	(123,590)	(137,421)	(145,620)	(153,012)	(167,186)	(151,567)	(183,727)	(192,956)	(179,857)	(192,752)	(181,515)	(168,506)	(157,005)	(148,981)	(145,475)	(167,454)
24.	INTEREST PAID ON LONG-TERM DEBT	(137,180)	(135,333)	(134,946)	(135,777)	(133,285)	(133,743)	(135,954)	(134,837)	(132,358)	(129, 127)	(124,064)	(117,545)	(109,419)	(102,560)	(92,332)	(83,079)	(76,463)	(69,475)	(64,953)	(59,335)
25.	INTEREST PAID ON COMMERCIAL PAPER/DIRECT PURCHASE	(9,436)	(10,319)	(9,228)	(9,683)	(10,340)	(10,109)	(9,668)	(6,672)	(6,701)	(5,520)	(5,302)	(5,166)	(5,152)	(5,162)	(5,254)	(4,955)	(4,864)	(4,967)	(4,840)	(4,079)
26.	BOND ISSUANCE AND OTHER RELATED COSTS	0	(1,511)	(2,679)	0	(4,399)	0	(4,098)	0	(1,856)	0	(805)	0	(804)	0	(1,071)	0	(738)	0	(1,069)	0
27.	CONSTRUCTION AND BETTERMENTS OF UTILITY PLANT	(261,995)	(292,192)	(281,948)	(304,715)	(399,829)	(351,019)	(332,123)	(218,264)	(233,772)	(187,474)	(156,192)	(158,490)	(177,685)	(168,002)	(194,396)	(186,629)	(161,036)	(173,823)	(183,711)	(169,944)
28.	NET CASH USED IN CAPITAL RELATED FINANCING ACTIVITIES	(428,348)	(444,734)	(443,950)	<u>(428,196)</u>	<u>(419,133)</u>	(425,553)	(441,919)	(451,398)	(437,721)	(429,255)	(439,992)	(439,854)	(432,735)	<u>(426,751)</u>	(415,191)	(408,228)	(367,215)	(358,810)	(337,552)	(403,794)
	CASH FLOWS FROM INVESTING ACTIVITIES																				
29.	INTEREST ON INVESTMENTS	<u>7,408</u>	7,445	8,490	8,657	9,680	9,504	9,262	8,525	8,735	8,162	8,224	<u>8,113</u>	8,068	7,940	8,062	<u>7,714</u>	<u>7,574</u>	7,617	<u>7,811</u>	<u>7,506</u>
30.	NET CASH PROVIDED BY INVESTING ACTIVITIES	<u>7,408</u>	<u>7,445</u>	<u>8,490</u>	8,657	9,680	9,504	9,262	<u>8,525</u>	<u>8,735</u>	<u>8,162</u>	8,224	<u>8,113</u>	8,068	7,940	8,062	<u>7,714</u>	<u>7,574</u>	<u>7,617</u>	<u>7,811</u>	<u>7,506</u>
31.	NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(145,171)	<u>4,590</u>	20,398	<u>19,576</u>	6,664	<u>53,218</u>	<u>49,058</u>	<u>29,489</u>	<u>63,980</u>	<u>47,866</u>	<u>54,795</u>	<u>61,396</u>	<u>32,990</u>	44,923	<u>58,429</u>	(295,143)	<u>53,797</u>	71,236	26,224	<u>19,980</u>
32.	CASH AND CASH EQUIVALENTS - BEGINNING	599.807	454.636	459.226	479,624	499,200	505.863	559.081	608.139	637.628	701,609	749.474	804.269	865.665	898.655	943.578	1,002,007	706.864	760.660	831.896	858.120
32. 33.	CASH AND CASH EQUIVALENTS - BEGINNING  CASH AND CASH EQUIVALENTS - ENDING	599,807 454,636	454,636 459,226	459,226 479,624	*	499,200 505,863	505,863	608,139	637,628	701,609	*	749,474 804,269	804,269 865,665	898,655	,	1,002,007		706,864 760,660	760,660 831,896	858,120	858,120 878,100
33.	CAST AND CAST EQUIVALENTS - ENDING	404,030	409,220	419,024	499,200	505,863	009,081	000,139	031,028	701,009	749,474	004,209	000,000	090,000	943,578	1,002,007	706,864	100,000	031,890	000,120	010,100

# SANTEE COOPER ELECTRIC SYSTEM

# FINANCIAL IMPACT OF NUCLEAR DEBT ON CUSTOMERS FOR THE CALENDAR YEARS 2020-2039 (DOLLARS IN THOUSANDS)

	NUCLEAR DEBT SERVICE	TOTAL	PRESENT VALUE (5%)	AVERAGE	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Average 2040-2056
1.	DEBT SERVICE - EXISTING (1)	7,918,295	2,440,143	,	111,478	143,799	201,982	203,445	204,310	222,717	221,570	215,411	224,983	230,184	205,569	177,415	184,282	190,829	191,233	201,384	226,232	226,191	202,218	201,006	231,297
2.	PRINCIPAL RESTRUCTURE	(229,671)	253,365	(6,207)	0	0	0	1,713	18,853	2,238	25,571	30,322	30,988	19,152	29,737	26,403	38,362	19,676	29,774	17,555	35,487	45,150	68,700	50,199	(42,327)
3.	TOSHIBA FUNDS USED TO AVOID DEBT ISSUANCE	(479,499)	(210,510)		(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(8,333)
4.	FUTURE DEBT REDUCTION PROGRAM SAVINGS	(1,598,980)	(370,790)	(43,216)	(433)	(20,784)	(25,982)	(26,140)	(27,882)	(27,882)	(27,882)	(30,295)	(56,707)	(55,390)	(54,073)	(23,821)	(23,821)	(23,821)	(23,821)	(23,821)	(36,875)	(36,875)	(36,875)	(42,790)	(57,236)
5.	FUTURE DEBT DEFEASANCE SAVINGS	(315,000)	(179,379)	(8,514)	0	(12,000)	(9,000)	(9,000)	(9,000)	(9,000)	(22,000)	(15,000)	(15,000)	(17,500)	(17,500)	(20,000)	(20,000)	(20,000)	(20,000)	(20,000)	(20,000)	(20,000)	(20,000)	(20,000)	0
6.	FUTURE ECONOMIC REFUNDING OF DEBT	(1,574,388)	(242,395)	(42,551)	<u>0</u>	<u>0</u>	<u>5</u>	(582)	(7,854)	(17,667)	(26,192)	(24,342)	(28,143)	(23,680)	(23,766)	(24,756)	(24,596)	(24,809)	(27,615)	(33,161)	(42,509)	(46,907)	(46,677)	(43,984)	(65,127)
7.	TOTAL	3,720,757	1,690,434	100,561	94,153	94,123	150,113	152,543	161,537	153,515	154,175	159,205	139,229	135,874	123,074	118,349	137,334	124,983	132,679	125,065	145,442	150,668	150,474	127,538	58,275
8. 9. 10. 11.	ALLOCATION TO CUSTOMER CLASSES RESIDENTIAL COMMERCIAL INDUSTRIAL CENTRAL	490,216 410,454 138,617 2,681,469	225,550 188,851 63,778 1,212,255	13,249 11,093 3,746 72,472	12,824 10,738 3,626 66,965	12,752 10,677 3,606 67,089	20,339 17,030 5,751 106,992	20,710 17,340 5,856 108,637	21,929 18,361 6,201 115,047	20,902 17,501 5,910 109,201	21,014 17,595 5,942 109,623	21,723 18,188 6,143 113,151	18,966 15,880 5,363 99,021	17,677 14,801 4,998 98,399	16,026 13,418 4,532 89,099	15,416 12,908 4,359 85,666	17,862 14,956 5,051 99,466	16,287 13,637 4,605 90,454	17,274 14,464 4,885 96,057	16,268 13,621 4,600 90,575	18,859 15,791 5,333 105,460	19,525 16,348 5,521 109,273	19,468 16,301 5,505 109,200	16,469 13,789 4,657 92,623	7,525 6,301 2,128 42,322
12. 13. 14. 15.	CUSTOMER BILL IMPACTS RESIDENTIAL COMMERCIAL INDUSTRIAL CENTRAL			5.1% 5.1% 3.8% 5.8%	6.2% 6.2% 3.6% 6.4%	6.1% 6.2% 3.5% 6.4%	9.7% 9.9% 5.7% 10.3%	9.8% 10.0% 5.8% 10.5%	10.2% 10.4% 6.1% 11.1%	9.5% 9.7% 5.8% 10.3%	9.3% 9.5% 5.7% 10.1%	9.4% 9.6% 5.9% 10.2%	8.0% 8.2% 5.0% 8.8%	7.3% 7.4% 5.8% 8.5%	6.5% 6.6% 5.3% 7.6%	6.1% 6.3% 5.0% 7.2%	7.0% 7.0% 5.7% 8.1%	6.3% 6.3% 5.1% 7.3%	6.5% 6.5% 5.4% 7.6%	6.0% 6.0% 5.0% 7.0%	6.9% 6.9% 5.7% 8.0%	7.0% 7.0% 5.9% 8.2%	6.8% 6.8% 5.7% 7.8%	5.7% 5.6% 4.8% 6.6%	2.3% 2.2% 2.0% 2.7%

<sup>(1)</sup> INCLUDES THE BUILD AMERICA BOND SUBSIDY

11/22/19

SANTEE COOPER 2020 REFORM PLAN SCHEDULE E

# **ELECTRIC SYSTEM** PROJECTED SYSTEM REVENUE REQUIREMENTS FOR THE CALENDAR YEARS 2020 - 2039

											FOR THE	CALENDAR	R YEARS 20	20 - 2039							
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	<u>2031</u>	2032	2033	2034	2035	2036	2037	2038	2039
	TOTAL SYSTEM REVENUE REQUIREMENTS																				
1.	OPERATING EXPENSES	1,113,749	1,118,205	1,090,400	1,100,434	1,108,319	1,130,942	1,152,339	1,152,491	1,188,352	1,237,041	1,252,942	1,287,894	1,339,080	1,373,171	1,420,727	1,486,747	1,517,261	1,561,726	1,627,787	1,670,506
2.	DEBT SERVICE	456,650	453,424	473,701	469,579	460,925	467,251	472,216	494,850	486,989	463,671	477,455	472,100	462,753	455,992	442,414	412,332	414,614	405,027	396,739	389,462
3.	PAYMENT TO COUNTIES PAYMENT TO STATE	4,383 17,403	4,393 17.438	4,359 17,304	4,377 17,375	4,373 17,358	4,457 17,695	4,549 18,064	4,595 18,248	4,685 18,609	4,765 18,927	4,832 19,195	4,914 19,524	5,035 20,009	5,106 20,294	5,203 20,679	5,320 21,149	5,400 21,468	5,501 21,872	5,671 22,553	5,763 22,918
5.	CAPITAL IMPROVEMENT FUND	156,712	156,838	156,077	156,671	156,592	159,497	162,150	164,426	167,240	169,789	172,757	175,723	179,919	182,656	186,062	189,673	192,955	196,417	202,215	205,765
6.	WORKING CAPITAL	0	3,208	0	0	<u>0</u>	<u>515</u>	9,223	<u>1,965</u>	<u>5,738</u>	<u>7,298</u>	1,981	2,499	3,970	2,062	<u>2,323</u>	9,284	4,131	<u>5,763</u>	<u>9,303</u>	<u>5,815</u>
7.	SYSTEM REVENUE REQUIREMENTS	1,748,898	1,753,505	1,741,841	1,748,436	1,747,567	1,780,357	1,818,541	1,836,575	1,871,614	1,901,491	1,929,163	1,962,654	2,010,766	2,039,281	2,077,409	2,124,504	2,155,829	2,196,305	2,264,269	2,300,230
	SYSTEM REVENUES	204.000	004.070	000 505	000 407	404.707	440.040	404.000	405.070	444.450	455 500	400.000	474 007	400 500	404.055	504.040	540.050	540,400	500 575	E44.055	540 505
8. 9.	DISTRIBUTION INDUSTRIAL	391,398 234.911	391,979 234,396	393,565 229,277	398,427 229,411	404,767 230,086	413,316 233,283	424,269 236,843	435,079 230,138	444,158 234,885	455,580 213,189	462,933 215,850	471,837 218,593	483,522 222,877	491,955 224,626	501,313 227,171	512,952 232,231	519,423 233,497	528,575 236,677	541,055 241,953	549,585 244.847
10.	WHOLESALE	1,097,096	1,101,004	1,089,260	1,090,545	1,081,329	1,102,820	1,124,714	1,138,296	1,160,116	1,201,718	1,216,854	1,238,578	1,268,898	1,286,955	1,312,803	1,342,384	1,365,609	1,392,845	1,442,218	1,466,171
	OTHER INTEREST AND MISC INCOME	16,909 11,151	16,397 11.309	18,346 12,404	19,140 12,487	19,638 13,427	20,033 13.167	20,597 12,841	21,292 12,021	21,703 12,149	22,251 11,494	23,859 11,484	23,398 11,311	25,630 11,205	25,867 11.018	26,574 11,083	27,343 10,653	28,306 10,428	29,093 10,742	30,089 10,831	31,185 10,419
	TOTAL SYSTEM REVENUES	1,751,465	1,755,085	1,742,852	1,750,010	1,749,247	1,782,619	1,819,265	1,836,827	1,873,011	1,904,232	1,930,980	1,963,716	2,012,132	2,040,420	2,078,945	2,125,563	2,157,263	2,197,931	2,266,146	2,302,207
	PRODUCTION (GENERATION) REVENUE REQUIREMENTS																				
14.	OPERATING EXPENSES	993,072	996,147	965,619	972,639	977,869	998,155	1,017,152	1,014,667	1,047,664	1,093,406	1,106,321	1,138,324	1,186,366	1,217,150	1,261,310	1,323,885	1,350,860	1,391,704	1,453,997	1,492,821
15. 16.	DEBT SERVICE PAYMENT TO COUNTIES	374,787 3,798	367,000 3,787	379,279 3,725	372,938 3,726	363,423 3,711	367,223 3,780	369,773 3,854	383,904 3,871	373,589 3,940	352,636 4,013	359,609 4,052	352,018 4,116	341,409 4,219	332,627 4,272	318,411 4,351	293,059 4,462	292,762 4,523	284,125 4,612	275,368 4,762	267,107 4,835
17.	PAYMENT TO COOKITES  PAYMENT TO STATE	15,079	15,033	14,786	14,792	14,732	15,007	15,305	15,371	15,650	15,939	16,098	16,354	16,766	16,977	17,293	17,738	17,983	18,338	18,938	19,230
18.	CAPITAL IMPROVEMENT FUND	128,618	126,944	124,966	124,427	123,467	125,352	126,973	127,562	128,297	129,130	130,117	131,027	132,740	133,240	133,911	134,807	136,247	137,786	140,353	141,121
19. 20.	WORKING CAPITAL  PRODUCTION REVENUE REQUIREMENTS	1,515,355	<u>2,747</u> 1,511,658	1,488,375	1,488,522	1,483,204	429 <b>1,509,948</b>	<u>7,768</u> <b>1,540,825</b>	<u>1,653</u> <b>1,547,027</b>	<u>4,850</u> <b>1,573,990</b>	6,206 1,601,330	1,683 <b>1,617,879</b>	<u>2,121</u> <b>1,643,959</b>	<u>3,373</u> <b>1,684,873</b>	<u>1,749</u> <b>1,706,014</b>	<u>1,968</u> <b>1,737,245</b>	<u>7,874</u> <b>1,781,824</b>	3,492 1,805,868	<u>4,865</u> <b>1,841,430</b>	<u>7,871</u> <b>1,901,288</b>	<u>4,909</u> <b>1,930,024</b>
	PRODUCTION OPERATING REVENUES																				
21.	DISTRIBUTION	287,608	286,945	286,859	290,112	294,827	301,584	310,434	318,574	326,202	336,145	342,050	349,335	359,366	366,160	374,159	384,515	389,688	397,608	408,864	416,219
22.	INDUSTRIAL	211,287	210,771	205,652	205,787	206,462	209,659	213,208	206,453	211,240	195,231	197,890	200,633	204,916	206,663	209,207	214,281	215,545	218,724	223,999	226,893
23. 24.	WHOLESALE OTHER	980,199 8,974	983,608 9,169	968,412 9,289	967,251 9,367	971,529 9,498	993,967 9,641	1,016,668 9,815	1,029,283 9,825	1,047,859 9,920	1,083,997 10,019	1,094,931 10,424	1,113,001 10,518	1,141,830 10,522	1,157,018 10,192	1,179,871 10,276	1,208,751 10,363	1,228,709 10,577	1,254,074 10,542	1,298,683 10,635	1,319,519 10,737
25.	INTEREST INCOME	9,152	<u>9,154</u>	9,932	9,917	10,587	10,348	10,055	9,326	9,320	8,742	8,650	8,434	8,267	8,037	7,977	7,571	7,363	7,536	<u>7,518</u>	<u>7,146</u>
26.	TOTAL PRODUCTION REVENUES	1,497,220	1,499,647	1,480,144	1,482,435	1,492,902	1,525,199	1,560,182	1,573,460	1,604,541	1,634,133	1,653,945	1,681,920	1,724,902	1,748,071	1,781,490	1,825,481	1,851,882	1,888,484	1,949,699	1,980,513
	TRANSMISSION REVENUE REQUIREMENTS																				
27.	OPERATING EXPENSES	59,868	58,555	60,021	61,475	62,687	63,542	64,421	65,329	66,645	68,047	69,540	71,125	72,806	74,586	76,472	78,449	80,557	82,760	85,102	87,551
28. 29.	DEBT SERVICE PAYMENT TO COUNTIES	57,022 346	59,186 329	64,004 346	65,267 353	65,711 358	67,327 365	68,833 373	74,371 390	75,866 399	74,092 398	78,304 413	79,430 420	79,931 427	80,914 434	81,280 441	78,191 439	79,568 448	78,600 451	78,610 459	78,967 466
30.	PAYMENT TO STATE	1,375	1,307	1,373	1,403	1,421	1,450	1,482	1,548	1,583	1,582	1,640	1,670	1,696	1,726	1,751	1,744	1,780	1,795	1,824	1,853
31.	CAPITAL IMPROVEMENT FUND	19,569	11,806	12,436	12,709	12,875	13,123	13,362	14,008	14,291	14,253	14,825	15,097	15,316	15,593	15,819	15,708	16,057	16,181	16,417	16,698
32. 33.	WORKING CAPITAL TRANSMISSION REVENUE REQUIREMENTS	138,18 <mark>0</mark>	<u>221</u> 131,403	138,180	141,209	143,051	4 <u>1</u> 145,849	6 <u>93</u> 1 <b>49</b> ,165	148 155,794	421 159,205	<u>517</u> <b>158,889</b>	142 164,864	180 <b>167,923</b>	2 <u>85</u> 170,462	150 173,402	170 175,933	679 175,210	309 178,718	4 <u>37</u> 180, <b>225</b>	701 183,113	447 185,982
	TRANSMISSION OPERATING REVENUES																				
34.	DISTRIBUTION	15,674	15,732	15,936	16,130	16,332	16,591	16,907	17,325	17,516	17,717	17,915	18,150	18,399	18,657	18,867	19,069	19,283	19,489	19,705	19,915
35. 36.	INDUSTRIAL WHOLESALE	22,263 100,050	22,264 104,152	22,264 107,437	22,264 109,686	22,264 95,835	22,264 98,644	22,268 101,516	22,291 106,337	22,292 109,544	16,604 114,974	16,605 119,155	16,605 122,763	16,606 124,206	16,606 127,038	16,607 129,989	16,607 130,640	16,607 133,876	16,608 135,698	16,608 140,410	16,609 143,495
	OTHER	3,973	2,829	4,257	4,593	4,434	4,456	4,556	4,987	4,999	5,057	5,845	4,829	6,547	6,547	6,547	6,547	6,547	6,547	6,547	6,547
	INTEREST INCOME	<u>1,392</u>	1,476	<u>1,676</u>	1,736	<u>1,914</u> <b>140,779</b>	1,897	<u>1,872</u>	1,807	1,893	1,837	1,883	1,903	1,93 <u>5</u>	1,955	<u>2,036</u>	<u>2,020</u>	2,001	2,085	<u>2,146</u>	<u>2,113</u>
39.	TOTAL REVENUES	143,353	146,452	151,569	154,408	140,779	143,852	147,118	152,746	156,243	156,189	161,403	164,250	167,693	170,803	174,046	174,884	178,314	180,427	185,416	188,678
	OTHER REVENUE REQUIREMENTS																				
	OPERATING EXPENSES	60,809	63,503	64,760	66,320	67,763	69,244	70,766	72,495	74,043	75,588	77,081	78,445	79,908	81,436	82,945	84,412	85,845	87,261	88,689	90,134
	DEBT SERVICE PAYMENT TO COUNTIES	24,841 239	27,238 277	30,418 289	31,374 297	31,791 304	32,700 312	33,610 322	36,575 335	37,534 346	36,943 354	39,542 367	40,652 377	41,413 389	42,451 400	42,723 411	41,083 419	42,284 429	42,301 437	42,761 450	43,387 462
43.	PAYMENT TO STATE	949	1,098	1,145	1,180	1,205	1,238	1,277	1,329	1,376	1,406	1,457	1,500	1,547	1,591	1,635	1,667	1,705	1,739	1,792	1,835
	CAPITAL IMPROVEMENT FUND WORKING CAPITAL	8,525	18,088 <u>240</u>	18,675	19,535	20,250	21,022	21,815 <u>761</u>	22,856 <u>164</u>	24,652 <u>468</u>	26,406 <u>575</u>	27,815 <u>157</u>	29,599 <u>198</u>	31,863 <u>312</u>	33,823 <u>163</u>	36,332	39,158 <u>731</u>	40,651 <u>329</u>	42,450 <u>461</u>	45,445 <u>731</u>	47,946
	OTHER REVENUE REQUIREMENTS	95,36 <mark>3</mark>	110,444	115,28 <mark>6</mark>	118,70 <del>5</del>	121,31 <u>2</u>	124,561	128,551	133,754	138,419	141,272	146,420	150,773	155,432	159,864	164,231	167, <del>470</del>	171,243	174,650	179,868	184,224
	OTHER OPERATING REVENUES																				
	DISTRIBUTION	88,115	89,303	90,770	92,185	93,608	95,141	96,928	99,180	100,440	101,718	102,969	104,352	105,757	107,138	108,288	109,368	110,453	111,478	112,486	113,451
	INDUSTRIAL WHOLESALE	1,361 16,847	1,361 13,244	1,361 13,412	1,361 13,608	1,360 13,965	1,360 10,209	1,367 6,530	1,394 2,677	1,354 2,713	1,354 2,746	1,355 2,768	1,355 2,813	1,356 2,861	1,356 2,899	1,357 2,943	1,343 2,992	1,344 3,024	1,345 3,072	1,345 3,125	1,345 3,157
	OTHER	3,962	4,399	4,800	5,180	5,706	5,936	6,226	6,480	6,784	7,175	7,590	8,051	8,561	9,128	9,751	10,433	11,182	12,004	12,907	13,901
	INTEREST INCOME	607	679	797	834 113 168	926 115 566	922	914 112 158	889 111 707	936 113 421	916 115 122	951 116 963	974 118 <b>7</b> 04	1,003	1,026	1,070	1,061	1,063	1,122	1,167	1,161 134 420
51.	TOTAL REVENUES	110,892	108,986	111,139	113,168	115,566	113,568	112,158	111,797	113,421	115,122	116,862	118,794	120,804	122,833	124,714	126,522	128,411	130,386	132,415	134,420

# ELECTRIC SYSTEM ELECTRIC OPERATING REVENUES PER KILOWATT HOUR BY CLASS

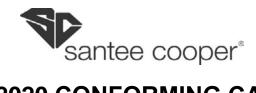
FOR THE CALENDAR YEARS 2020 - 2039 ¢/kWh

		2020	<u>2021</u>	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	2038	<u>2039</u>
	DISTRIBUTION SERVICE																				
1.	RESIDENTIAL	11.44	11.43	11.35	11.35	11.39	11.45	11.56	11.71	11.82	11.97	12.03	12.11	12.24	12.29	12.38	12.52	12.55	12.63	12.77	12.83
2.	COMMERCIAL	8.87	8.83	8.74	8.73	8.75	8.80	8.94	9.04	9.12	9.28	9.33	9.42	9.58	9.66	9.76	9.92	9.96	10.05	10.22	10.30
	INDUSTRIAL																				
3.	ALL INDUSTRIAL	4.71	4.68	4.57	4.58	4.59	4.65	4.73	4.59	4.69	4.75	4.81	4.87	4.96	5.00	5.06	5.17	5.20	5.27	5.39	5.45
4.	FIRM	5.70	5.67	5.57	5.57	5.58	5.63	5.72	5.79	5.88	6.15	6.21	6.27	6.39	6.44	6.53	6.66	6.69	6.78	6.92	6.99
5.	NON-FIRM (1)	4.14	4.10	3.99	4.00	4.01	4.08	4.15	3.89	3.99	4.12	4.18	4.24	4.32	4.35	4.40	4.50	4.53	4.59	4.70	4.76
	WHOLESALE:																				
6.	CENTRAL	7.14	7.09	6.95	6.91	6.87	6.99	7.10	7.16	7.20	7.39	7.42	7.48	7.58	7.62	7.70	7.79	7.82	7.91	8.16	8.21

(1) INCLUDES REVENUES FROM INTERRUPTIBLE AND ECONOMY POWER.



# 8.4.2 2020 DOA Conforming Assumptions Case Electric Operations Financial Forecast



# 2020 CONFORMING CASE FINANCIAL FORECAST CALENDAR YEAR 2020-2039

**ELECTRIC SYSTEM ONLY** 

**DEVELOPED IN RESPONSE TO ACT 95** 

**DATE: NOVEMBER 2019** 

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# **SECTION I**

# SANTEE COOPER ELECTRIC SYSTEM FORECAST

# SANTEE COOPER ELECTRIC SYSTEM SUMMARY REPORTS

# SANTEE COOPER ELECTRIC SYSTEM

# **GENERATING FACILITY INFORMATION**

		<u>FACILITY</u>	IN-SERVICE <u>DATE</u>	PEAK CAPABII WINTER	LITY (MW) (1) SUMMER	ENERGY SOURCE
		EXISTING:				
	1.	JEFFERIES HYDROELECTRIC GENERATING				
	1.	STATION	1942	140	140	HYDRO
		STATION	1342	140	140	IIIDIO
	2.	WILSON DAM GENERATING STATION	1950	2	2	HYDRO
	3.	MYRTLE BEACH COMBUSTION TURBINES				
		NOS. 1 AND 2	1962	20	16	OIL
		NOS. 3 AND 4	1972	40	38	OIL
		NO. 5	1976	25	21	OIL
	4	HILTON HEAD COMBUSTION TURBINES				
	4.		1072	20	16	Oll
		NO. 1	1973	20	16	OIL
		NO. 2	1974	20	16	OIL
		NO. 3	1979	60	52	OIL
	5.	WINYAH GENERATING STATION				
		NO. 1	1975	280	275	COAL
		NO. 2	1977	290	285	COAL
		NO. 3	1980	290	285	COAL
		NO. 4	1981	290	285	COAL
	6.	SUMMER NUCLEAR STATION	1983	322	322	NUCLEAR
1	7.	CROSS GENERATING STATION				
		NO. 1	1995	585	580	COAL
		NO. 2	1983	570	565	COAL
		NO. 3	2007	610	610	COAL
		NO. 4	2008	615	615	COAL
		140. 4	2000	010	010	COAL
	8.	LANDFILL GAS				
		HORRY	2001	3	3	METHANE GAS
		LEE	2005	11	11	METHANE GAS
		RICHLAND	2006	8	8	METHANE GAS
		ANDERSON	2008	3	3	METHANE GAS
		GEORGETOWN	2010	1	1	METHANE GAS
		BERKELEY	2011	3	3	METHANE GAS
	9.	J.S. RAINEY GENERATING STATION				
	Э.	COMBINED CYCLE NO. 1	2002	520	460	CAS
				180		GAS
		COMBUSTION TURBINE NO. 2A	2002		146	GAS
		COMBUSTION TURBINE NO. 2B	2002	180	146	GAS
		COMBUSTION TURBINE NO. 3, 4, & 5	2004	<u>270</u>	<u>225</u>	GAS

<u>5,358</u>

<u>5,129</u>

TOTAL EXISTING CAPABILITY

10.

<sup>(1)</sup> EXISTING GENERATING UNIT NET RATINGS.

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# SANTEE COOPER ELECTRIC SYSTEM ESTIMATED FINANCING REQUIREMENTS (DOLLARS IN MILLIONS)

EXHIBIT II PAGE 1 OF 2

	<u>DATE</u>	DESCRIPTION	PURPOSE	AMOUNT ISSUED (1)	DEBT <u>RETIRED</u>	NEW MONEY ISSUED-NET
1.	2020	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS PEE DEE PROJECT ECONOMIC DEVELOPMENT LOAN 2015BC REFUNDING TRANSITION RULE VOLVO PROJECT TRUNKED RADIO UPGRADE FUEL INVENTORY/LEVELIZATION ENVIRONMENTAL PROJECTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS FERC CAPITAL	0.0 0.0 9.9 0.0 0.7 0.0 52.1 21.9 8.6 4.2	3.7 10.5 10.0 5.8 2.5 0.0 16.1 0.0 0.0 0.0	(3.7) (10.5) (0.1) (5.8) (2.5) 0.7 (16.1) 52.1 21.9 8.6 4.2
2.	2021	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS FERC CAPITAL FUEL INVENTORY/LEVELIZATION CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS	46.5 12.9 0.1 49.4 19.5 26.6 3.1 2.7 0.0 67.4 82.2	2.3 12.4 0.0 82.2 0.0 63.6 0.0 0.0 10.0 0.0	44.2 0.4 0.1 (32.9) 19.5 (37.0) 3.1 2.7 (10.0) 67.4 82.2
3.	2022	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE WORKING CAPITAL ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS FERC CAPITAL CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CTS TRANSMISSION SPECIAL PROJECTS FUTURE NATURAL GAS CTS TRANSMISSION SPECIAL PROJECTS FERC CAPITAL	0.0 6.9 0.0 0.0 50.3 13.1 36.2 23.2 31.8 3.9 23.2 135.3 55.7 61.5	2.3 11.5 1.1 20.9 135.3 0.0 55.7 23.2 61.5 10.8 0.0 0.0	(2.3) (4.6) (1.1) (20.9) (85.0) 13.1 (19.5) 0.0 (29.6) (6.9) 23.2 135.3 55.7 61.5
4.	2023	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS FERC CAPITAL	0.0 0.0 3.1 0.0 52.1 22.7 53.9 19.3 37.9 2.1	3.6 0.5 8.6 1.1 0.0 0.0 0.0 0.0 0.0	(3.6) (0.5) (5.5) (1.1) 52.1 22.7 53.9 19.3 37.9 2.1
5.	2024	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL GAS CCU 2027 FUTURE NATURAL GAS CTS TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL	0.0 0.0 3.5 0.0 72.3 106.4 7.0 24.5 50.1 24.8 2.6 43.8 124.4 142.2 60.9 88.0 24.8 4.7	2.3 0.5 7.1 1.1 124.4 142.2 60.9 43.8 88.0 24.8 4.7 0.0 0.0 0.0 0.0 0.0	(2.3) (0.5) (3.5) (1.1) (52.1) (35.8) (53.9) (19.3) (37.9) 0.0 (2.1) 43.8 124.4 142.2 60.9 88.0 24.8 4.7
6.	2025	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS 2003-A CASH DEFEASANCE PEE DEE PROJECT ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL	0.0 0.0 0.0 3.8 0.0 19.6 151.5 20.0 26.2 39.7 1.8 1.2	2.3 0.5 0.0 9.5 1.1 0.0 0.0 0.0 0.0 0.0	(2.3) (0.5) 0.0 (5.7) (1.1) 19.6 151.5 20.0 26.2 39.7 1.8 1.2
7.	2026	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL	0.0 0.0 2.8 0.0 8.8 126.8 39.8 31.6 15.5 20.2 1.2 57.8 28.4 278.3 59.8 55.2 22.0	3.6 0.5 8.7 1.1 28.4 278.3 59.8 57.8 55.2 22.0 2.5 0.0 0.0 0.0 0.0	(3.6) (0.5) (5.9) (1.1) (19.6) (151.5) (20.0) (26.2) (39.7) (1.8) (1.2) 57.8 28.4 278.3 59.8 55.2 22.0 2.5
8.	2027	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL	0.0 0.0 2.1 0.0 9.2 28.5 59.4 35.0 0.2 3.4	3.6 0.5 14.9 1.1 0.0 0.0 0.0 0.0 0.0 0.0	(3.6) (0.5) (12.8) (1.1) 9.2 28.5 59.4 35.0 0.2 3.4 1.1

### **SANTEE COOPER** 2020 CONFORMING CASE EXHIBIT II **ELECTRIC SYSTEM** 11/22/19 PAGE 2 OF 2

ESTIMATED FINANCING REQUIREMENTS (DOLLARS IN MILLIONS)

			(DOLLARS IN MILLIONS)		
9. 2028	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS FUTURE NATURAL GAS CCU 2027 FUTURE NATURAL GAS CTS TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL GAS CTS TRANSMISSION SPECIAL PROJECTS BATTERY STORAGE FERC CAPITAL	0.0 0.0 1.7 0.0 14.6 17.1 6.0 36.9 3.8 36.9 1.1 71.9 23.8 45.6 65.4 4.0	3.6 0.5 2.9 1.1 23.8 45.6 65.4 71.9 4.0 42.4 0.0 0.0 0.0 0.0 0.0 0.0	(3.6) (0.5) (1.2) (1.1) (9.2) (28.5) (59.4) (35.0) (0.2) (5.5) 1.1 71.9 23.8 45.6 65.4 4.0 40.2 2.2
10. 2029	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS FERC CAPITAL	0.0 0.0 1.7 0.0 12.6 33.7 17.0	3.6 0.5 1.7 1.1 0.0 0.0 0.0 0.0	(3.6) (0.5) 0.0 (1.1) 12.6 33.7 17.0
11. 2030	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE ENVIRONMENTAL PROJECTS CAPITAL TRANSMISSION TRANSMISSION SPECIAL PROJECTS FERC CAPITAL CAPITAL TRANSMISSION ENVIRONMENTAL PROJECTS TRANSMISSION SPECIAL PROJECTS TRANSMISSION SPECIAL PROJECTS FERC CAPITAL	0.0 0.0 1.6 0.0 0.3 30.4 20.4 1.5 64.1 13.0 37.5 2.6	2.3 0.5 1.6 1.1 13.0 64.1 37.5 2.6 0.0 0.0 0.0	(2.3) (0.5) 0.0 (1.1) (12.6) (33.7) (17.0) (1.1) 64.1 13.0 37.5 2.6
12. 2031	COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 1.1 0.0 31.2 6.1	2.3 0.5 1.1 1.1 0.0 0.0	(2.3) (0.5) 0.0 (1.1) 31.2 6.1
13. 2032	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS 2003-A CASH DEFESANCE ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 1.1 0.0 31.6 10.8 62.8 16.8	2.3 0.5 1.1 1.1 62.8 16.8 0.0	(2.3) (0.5) 0.0 (1.1) (31.2) (6.1) 62.8 16.8
14. 2033	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.6 0.0 33.6 11.1	2.3 0.6 1.1 0.0 0.0	(2.3) 0.0 (1.1) 33.6 11.1
15. 2034	COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS ECONOMIC DEVELOPMENT LOAN TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.1 0.0 50.8 10.5 84.5 21.5	2.3 0.1 1.1 84.5 21.5 0.0 0.0	(2.3) 0.0 (1.1) (33.6) (11.1) 84.5 21.5
16. 2035	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 32.3 5.7	2.3 1.1 0.0 0.0	(2.3) (1.1) 32.3 5.7
17. 2036	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 29.5 5.7 61.7 11.3	2.3 1.1 61.7 11.3 0.0 0.0	(2.3) (1.1) (32.3) (5.7) 61.7 11.3
18. 2037	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 36.1 5.3	2.3 1.1 0.0 0.0	(2.3) (1.1) 36.1 5.3
19. 2038	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE REVENUE OBLIGATION BOND REVENUE OBLIGATION BOND	GENERAL IMPROVEMENTS TRUNKED RADIO UPGRADE CAPITAL TRANSMISSION FERC CAPITAL CAPITAL TRANSMISSION FERC CAPITAL	0.0 0.0 34.1 1.2 98.1 7.7	2.3 1.1 70.2 6.6 0.0 0.0	(2.3) (1.1) (36.1) (5.3) 98.1 7.7
20. 2039 TOTAL	COMMERCIAL PAPER/DIRECT PURCHASE COMMERCIAL PAPER/DIRECT PURCHASE	GENERAL IMPROVEMENTS TRUNKED RADIO UPGRADE	0.0 0.0 <u>4,296.1</u>	2.3 1.1 <u>2,368.1</u>	(2.3) (1.1) <u><b>1,928.0</b></u>

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2020 CONFORMING CASE

# SANTEE COOPER ELECTRIC SYSTEM PROJECTED POWER SUPPLY RESOURCES AND LOADS FOR THE CALENDAR YEARS 2020 - 2039 (MW)

FUR	IHE	CAL	ENL
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		202 Winter	20 Summer	202 Winter	Summer	202 Winter		20 Winter		202 Winter	4 Summer	202 Winter	5 Summer	202 Winter	6 Summer	2027 Winter	7 Summer	2028 Winter	Summer	2029 Winter	Summer	2030 Winter	Summer	2031 Winter	Summer	2032 Winter	Summer	2033 Winter	Summer	2034 Winter S	Summer	2035 Winter	Summer	2036 Winter	Summer	2037 Winter	Summer	2038 Winter		<b>2039</b> Winter S	
	'ER SUPPLY RESOURCES: ERATING CAPABILITY																																								
1. EXIST	TING	5,373	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	5,358	5,129	- ,	5,129
	JRE CC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	549	511	549	511	549	511	549	511	549	511	549	511	549	511	549	511	549	511	549	511	549	511	549	511	549	511
	JRE CTS	0	0	0	0	0	0 19	100 20	76	100	76 19	100	76	100	76	200	152	200	152	200	152	200	152	200	152	200	152	200	152	200	152	200	152	200	152	200	152	200	152	200	152
	S: OTHER RETIREMENTS S: WINYAH 1 & 2	20	19	20	19	20	19	20	19	20	19	20	19	20	19 0	20 570	19 560	20 570	19 560	20 570	19 560	20 570	19 560	20 570	19 560	20 570	19 560	20 570	19 560	20 570	19 560	20 570	19 560	20 570	19 560	20 570	19 560	20 570	19 560	20 570	19 560
	S: WINYAH 1 & 2	0	0	0	0	0	0	<u>580</u>	<u>570</u>	<u>580</u>	<u>570</u>	<u>580</u>	<u>570</u>	<u>580</u>	<u>570</u>	580	570	580	570	580	570	580	570	580	570	580	570	580	570	580	570	580	570	580	570	580	570	580	570	580	<u>570</u>
	AL GENERATING	<u>u</u>	<u>u</u>	<u>u</u>	<u>u</u>	<u>u</u>	<u>u</u>	300	370	300	370	300	370	300	310	300	510	300	370	300	310	300	510	300	310	300	570	300	370	300	510	300	370	300	510	300	510	300	570	300	310
		5,353	5,110	5,338	5,110	5,338	5,110	4,858	4,616	4,858	4,616	4,858	4,616	4,858	4,616	4,937	4,643	4,937	4,643	4,937	4,643	4,937	4,643	4,937	4,643	4,937	4,643	4,937	4,643	4,937	4,643	4,937	4,643	4,937	4,643	4,937	4,643	4,937	4,643	4,937	4,643
8. SEPA	A ALLOCATION	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305
	STEPHEN HYDRO PLANT	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
	CT LOAD CONTROL/DEMAND RESPONSE FERY STORAGE		10	15	15	25	25	50	50	445	445	400	400	245	0.45	240	310	255	255	200	200	205	205	270	370	275	275	200	200	205	205	200	200	205	205	400	400	400	400	400	400
	TRACT PURCHASES	10 227	227	227	227	25 227	25 227	252	227	115 227	115 227	180 227	180 227	189	245 189	310 189	189	355 189	355 189	360 <u>36</u>	360 36	365 36	365 36	370 36	36	3/5	375 36	380 76	380 76	385 131	385 131	390 186	390 186	395 246	395 246	400 301	400 301	400 361	400 361	400 426	400 426
		221	221	221	221	221	221	202	221	221	221	221	221	103	103	100	100	100	100	30	<u>30</u>	<u>30</u>	30	30	<u>50</u>	30	30	10	10	131	101	100	100	240	240	<u>301</u>	301	301	<u>301</u>	420	420
	AL POWER SUPPLY	F 070	F 700	F 000	5 744	F 070	5 754	5.540	F 000	5 500	5.047	5.054	5 440	5 004	5 400		5 504	F 070	F F70	F 700	F 400	F 707	F 400	F 700	F 400	F 707	5 440	F 700	F 400	5.040	F F 40	F 000	F 000	F 007	F 070	0.007	F 700	0.007	F 700	0.450	- 0-0
RE	SOURCES	<u>5,979</u>	<u>5,736</u>	<u>5,969</u>	5,741	5,979	5,751	<u>5,549</u>	5,282	5,589	5,347	5,654	<u>5,412</u>	5,681	5,439	<u>5,825</u>	<u>5,531</u>	5,870	5,576	5,722	5,428	5,727	5,433	5,732	5,438	5,737	<u>5,443</u>	5,782	5,488	5,842	5,548	5,902	5,608	5,967	5,673	6,027	5,733	6,087	5,793	6,152	<u>3,858</u>
13. TERR	RITORIAL PEAK DEMAND																																								
	LOSSES (1)	5,100	4,619	5,161	4,647	5,197	4,681	5,231	4,712	5,273	4,745	5,313	4,787	5,355	4,825	5,398	4,865	5,447	4,904	5,288	4,748	5,325	4,784	5,366	4,826		4,867		4,916	5,503	4,961	5,551	5,007	5,605	5,052	5,652	5,104	5,703			5,202
	SYSTEM SALES	203	281	184	289	190	296	196	303	152	260	159	235	141	241	125	232	130	239	136	245	141	251	146	257	152	263	157	270	162	276	168	276	173	282	179	288	184	295		301
	-FIRM SALES (2)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)	(401)	(404)
	JRE DEMAND-SIDE ANAGEMENT PROGRAMS	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)	(14)	(15)
17. TOTA	AL	4,891	4,485	4,933	4,520	4,975	4,561	5,015	4,599	5,014	4,590	5,060	4,606	5,084	4,650	5,111	4,681	5,165	4,726	5,012	4,577	5,054	4,619	5,100	4,668	5,153	4,715	5,201	4,770	5,253	4,821	5,307	4,874	5,366	4,925	5,419	4,983	5,475	5,039	5,532	5,094
18. LOAD	NOT REQUIRING RESERVES	(595)	(595)	<u>(595)</u>	(595)	<u>(595)</u>	(595)	(595)	(595)	(544)	(544)	(543)	(543)	(543)	(543)	(543)	(543)	(543)	(543)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)	(389)
19. TOTA	AL LOAD REQUIRING RESERVES	4,296	3,890	4,339	3,925	4,380	3,966	4,420	4,003	4,470	4,046	4,517	4,063	4,541	4,107	4,568	4,138	4,622	4,183	4,623	4,188	4,665	4,230	4,711	4,279	4,764	4,326	4,812	4,381	4,864	4,432	4,918	4,485	4,977	4,536	5,030	4,594	5,086	4,650	5,143	4,705
20. <b>POW</b> I	ER SUPPLY RESERVES	1,089	1,251	1,036	1,221	1,003	1,190	533	684	574	<u>757</u>	593	806	596	789	713	850	704	850	709	<u>851</u>	672	814	631	770	583	728	580	718	588	727	595	734	601	748	608	<u>750</u>	612	<u>754</u>	620	<u>764</u>
								_	_	_		_	_		_		_	_	_	_	_			_		_	_	_	_		_	_			_				_		
21. <b>PERC</b>	CENT RESERVE																																								
MA	ARGIN	25%	32%	24%	31%	23%	30%	12%	17%	13%	19%	13%	20%	13%	19%	16%	21%	15%	20%	15%	20%	14%	19%	13%	18%	12%	17%	12%	16%	12%	16%	12%	16%	12%	16%	12%	<u>16%</u>	12%	<u>16%</u>	<u>12%</u>	<u>16%</u>
22 EVA	ESS CAPACITY ABOVE																																								
	ANNING RESERVES (3)	<u>573</u>	668	<u>515</u>	<u>631</u>	476	594	2	83	38	<u>150</u>	<u>50</u>	196	<u>51</u>	173	165	228	149	222	<u>153</u>	222	112	179	<u>65</u>	128	10	79	2	60	4	61	4	60	3	67	3	60	1	<u>56</u>	2	<u>57</u>
	(0)	510	300	510	301	77.0	304	=	-	<u></u>	.00	<u> </u>	.50	<u> </u>	0	. 30		. 10				<u>z</u>		30	<u> </u>	<u></u>	<u> </u>	=			<u>v :</u>	-			<u> </u>	×	<u> 50</u>		<u></u>	=	<u>v.</u>

DEMAND PROJECTIONS ARE BASED ON LF 1902 INCLUDING CSP.
 INCLUDES INTERRUPTIBLE AND ECONOMY POWER SALES.
 PLANNING RESERVES REPRESENT: 2020-2039: WINTER 12%, SUMMER 15%.

SANTEE COOPER 2020 CONFORMING CASE EXHIBIT IV

# **ELECTRIC SYSTEM** GENERATION SOURCES

FOR THE CALENDAR YEARS 2020 - 2039 (GWH)

			<u>2020</u>	<u>2021</u>	2022	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	2029	<u>2030</u>	<u>2031</u>	2032	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
	1.	HYDRO	410	399	399	399	395	391	392	396	398	398	397	398	399	399	400	398	399	399	398	399
	2.	SOLAR	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7
	3.	WINYAH NO. 1	155	144	49	100	110	132	339	0	0	0	0	0	0	0	0	0	0	0	0	0
	4.	WINYAH NO. 2	729	697	629	704	611	748	975	0	0	0	0	0	0	0	0	0	0	0	0	0
	5.	WINYAH NO. 3	40	19	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6.	WINYAH NO. 4	57	38	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7.	CROSS 1	3,591	3,170	3,271	3,227	3,035	2,874	3,387	2,248	2,227	2,683	2,350	2,364	2,633	2,380	2,398	2,378	2,135	2,177	2,164	2,208
	8.	CROSS 2	0	114	150	248	165	100	135	389	388	415	572	477	663	592	581	603	461	488	504	459
	9.	CROSS 3	3,894	4,902	4,060	4,784	4,288	4,543	4,339	3,907	3,486	4,048	3,524	3,770	3,545	3,909	3,289	3,806	3,385	3,427	3,372	3,685
	10.	CROSS 4	4,287	4,204	4,971	4,475	4,722	4,392	4,799	3,985	4,276	3,966	4,203	3,803	4,255	3,799	4,029	3,901	4,041	3,714	3,985	3,538
1	11.	SUMMER NUCLEAR	2,486	2,494	2,820	2,516	2,524	2,821	2,556	2,556	2,828	2,555	2,557	2,820	2,564	2,552	2,820	2,555	2,564	2,820	2,556	2,548
	12.	MYRTLE BEACH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	13.	HILTON HEAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	14.	RAINEY COMBUSTION TURBINES 2A, 2B, 3, 4, & 5	1,009	1,046	1,071	714	330	7	87	72	73	6	11	8	13	9	14	13	16	12	8	15
	15.	COMBUSTION TURBINESFUTURE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	16.	RAINEY COMBINED CYCLES	3,809	3,843	3,902	3,758	3,617	4,039	3,973	3,766	3,926	3,190	3,793	3,792	3,502	3,701	3,612	3,075	3,679	3,613	3,373	3,654
	17.	COMBINED CYCLEFUTURE	0	0	0	0	0	0	0	3,638	3,535	3,595	3,612	3,399	3,304	3,258	3,178	3,273	3,170	3,034	3,239	3,158
	18.	LANDFILL GAS	76	76	76	76	76	76	76	75	75	74	74	74	74	73	73	73	73	73	73	73
	19.	SEPA PURCHASES	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172
	20.	RENEWABLE RESOURCE PURCHASES	705	945	1,298	2,118	3,297	3,174	2,651	3,228	3,460	3,610	3,770	3,753	3,748	3,719	3,702	3,685	3,680	3,651	3,635	3,618
	20.	PURCHASED POWER AGREEMENTS 2031	0	0	0	0	0	0	0	0	0	0	0	307	791	1,226	1,708	2,190	2,673	3,154	3,330	3,470
	21.	OTHER PURCHASES	3,070	2,429	1,920	<u>1,768</u>	<u>1,724</u>	<u>1,660</u>	<u>1,369</u>	1,020	<u>951</u>	<u>891</u>	<u>783</u>	<u>872</u>	622	667	<u>704</u>	<u>765</u>	<u>720</u>	<u>620</u>	<u>546</u>	<u>576</u>
	22.	TOTAL GENERATION SOURCES	24,498	24,700	24,893	<u>25,067</u>	<u>25,074</u>	<u>25,137</u>	25,258	<u>25,460</u>	<u>25,803</u>	<u>25,611</u>	<u>25,826</u>	<u>26,017</u>	26,293	<u>26,464</u>	<u>26,687</u>	<u>26,894</u>	<u>27,175</u>	<u>27,361</u>	<u>27,362</u>	<u>27,580</u>

SANTEE COOPER
11/22/19

SANTEE COOPER
ELECTRIC SYSTEM

ELECTRIC SALES

FOR THE CALENDAR YEARS 2020 - 2039 (GWH)

			<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1	. DISTRIBUTION SERVICE:	RESIDENTIAL COMMERCIAL	1,808 2,018	1,819 2,018	1,845 2,039	1,867 2,066	1,892 2,093	1,925 2,121	1,954 2,148	1,982 2,173	2,007 2,197	2,032 2,219	2,055 2,240	2,077 2,269	2,097 2,298	2,119 2,328	2,141 2,350	2,163 2,373	2,184 2,395	2,205 2,418	2,229 2,440	2,251 2,462
3	. INDUSTRIAL (1)		4,890	4,912	4,912	4,912	4,912	4,912	4,912	4,912	4,912	4,492	4,492	4,492	4,492	4,492	4,492	4,492	4,492	4,492	4,492	4,492
4 5	. WHOLESALE:	MUNICIPAL CENTRAL OFF-SYSTEM (2)	174 14,597 <u>732</u>	173 14,761 <u>739</u>	173 14,888 <u>756</u>	173 14,982 <u>776</u>	172 15,134 <u>579</u>	172 15,222 <u>491</u>	172 15,340 <u>436</u>	171 15,468 <u>456</u>	171 15,642 <u>575</u>	171 15,748 <u>652</u>	171 15,863 <u>701</u>	170 15,994 <u>712</u>	170 16,169 <u>761</u>	170 16,269 <u>781</u>	170 16,415 <u>815</u>	170 16,568 <u>818</u>	170 16,770 <u>848</u>	169 16,892 <u>868</u>	169 17,052 <u>655</u>	169 17,213 <u>669</u>
7	TOTAL ELECTRIC SALES		24.219	24.422	24.613	24.776	24.782	24.843	24.962	25.162	25.504	25.314	25.522	25.714	25.987	26.159	26.383	26.584	26.859	27.044	27.037	27.256

<sup>(1)</sup> INCLUDES NON-FIRM SALES FOR INTERRUPTIBLE AND ECONOMY POWER AND EXCLUDES CUSTOMER SUPPLIED POWER

<sup>(2)</sup> INCLUDES SALES TO SCE&G FOR NAVY, PMPA, AMEA, CITY OF SENECA, TOWN OF WAYNESVILLE, AND MARKET SALES.

## **ELECTRIC SYSTEM**

ELECTRIC OPERATING REVENUES FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

	2020	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	<u>2026</u>	2027	2028	2029	2030	<u>2031</u>	2032	2033	2034	2035	<u>2036</u>	2037	2038	2039
1. DISTRIBUTION SERVICE	396,266	397,026	398,133	408,218	416,801	427,916	439,198	448,281	456,316	467,694	476,130	485,675	499,091	508,825	519,344	531,222	540,776	551,090	562,947	571,887
2. INDUSTRIAL (1)	240,244	240,181	235,165	240,622	243,872	249,072	253,751	250,852	254,038	230,492	234,081	237,035	243,216	245,682	249,335	254,409	258,117	261,999	266,561	269,669
3. WHOLESALE: MUNIC 4. CENTF 5. OFF-S	,	10,333 1,069,562 44,169	10,131 1,046,642 44,845	10,316 1,078,662 47,633	10,410 1,092,743 34,843	10,572 1,123,319 32,809	10,726 1,155,187 30,020	10,844 1,180,602 28,699	10,938 1,200,304 34,719	11,144 1,238,381 39,811	11,253 1,254,932 43,713	11,369 1,277,880 44,815	11,614 1,308,336 48,356	11,722 1,329,615 50,358	11,891 1,357,211 53,159	12,112 1,381,315 54,918	12,248 1,414,673 58,278	12,410 1,444,789 60,433	12,614 1,500,052 49,826	12,723 1,522,460 54,057
6. OTHER	16,909	16,397	18,346	19,140	19,638	20,033	20,597	21,292	21,703	22,251	23,859	23,398	25,630	25,867	26,574	27,343	28,306	29,093	30,089	<u>31,185</u>
7. SUBTOTAL	1,774,683	1,777,668	1,753,262	1,804,591	1,818,307	1,863,721	1,909,479	1,940,570	1,978,018	2,009,773	2,043,968	2,080,172	2,136,243	2,172,069	2,217,514	2,261,319	2,312,398	2,359,814	2,422,089	2,461,981
8. PROJECTED RATE ADJUSTME	ENTS (3) <u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>500</u>	<u>3,878</u>	<u>8,165</u>	8,286	<u>8,410</u>	<u>8,535</u>	8,662	<u>8,791</u>	8,922	9,055	9,190	9,327	<u>9,466</u>	9,607	9,750
9. TOTAL OPERATING REVENUE	<u>1,774,683</u>	1,777,668	1,753,262	<u>1,804,591</u>	<u>1,818,307</u>	<u>1,864,221</u>	<u>1,913,357</u>	1,948,735	1,986,304	<u>2,018,183</u>	2,052,503	2,088,834	<u>2,145,035</u>	<u>2,180,991</u>	2,226,569	2,270,509	2,321,725	2,369,280	2,431,696	2,471,731

<sup>(1)</sup> INCLUDES REVENUES FROM INTERRUPTIBLE AND ECONOMY POWER.

<sup>(2)</sup> INCLUDES SALES TO SCE&G FOR NAVY, PMPA, AMEA, CITY OF SENECA, TOWN OF WAYNESVILLE, AND MARKET SALES.

<sup>(3)</sup> ADJUSTMENTS ARE CUMULATIVE

#### SANTEE COOPER ELECTRIC SYSTEM

#### CASH RECEIPTS & DISBURSEMENTS STATEMENT

#### REVENUE & OPERATING FUNDS FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>20</u>	2021	2022	2023	<u>2024</u>	<u>2025</u>	2026	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	2033	2034	<u>2035</u>	<u>2036</u>	2037	2038	2039
1. 2. 3.	RECEIPTS: OPERATING REVENUES FRANCHISE TAXES INTEREST AND MISCELLANEOUS INCOME (1)	1,774,68 5,89 <u>11,15</u>	5,908	1,753,262 5,924 12,409	1,804,591 6,074 <u>12,434</u>	1,818,307 6,202 <u>13,712</u>	1,864,221 6,367 <u>13,480</u>	1,913,357 6,535 13,304	1,948,735 6,670 <u>12,582</u>	1,986,304 6,790 <u>12,317</u>	2,018,183 6,959 <u>11,732</u>	2,052,503 7,085 <u>11,744</u>	2,088,834 7,227 <u>11,383</u>	2,145,035 7,426 <u>11,361</u>	2,180,991 7,571 <u>11,115</u>	2,226,569 7,728 11,229	2,270,509 7,905 10,746	2,321,725 8,047 10,431	2,369,280 8,200 10,745	2,431,696 8,377 10,834	2,471,731 8,510 10,422
4.	TOTAL RECEIPTS	1,791,73	1,794,898	<u>1,771,595</u>	1,823,099	1,838,221	1,884,068	<u>1,933,196</u>	1,967,987	2,005,411	2,036,874	2,071,332	2,107,444	2,163,822	2,199,677	2,245,526	2,289,160	2,340,203	2,388,225	2,450,907	2,490,663
5. 6.	DISBURSEMENTS: OPERATION & MAINTENANCE EXPENSES SUMS IN LIEU AND FRANCHISE TAXES	1,144,53 10,57	,,-	1,111,742 10,573	1,168,913 10,855	1,178,414 11,024	1,213,086 11,312	1,239,205 11,615	1,249,002 11,834	1,286,789 12,050	1,323,524 12,302	1,352,263 12,516	1,392,874 12,751	1,439,270 13,084	1,477,340 13,278	1,528,649 13,550	1,594,190 13,838	1,652,690 14,122	1,698,057 14,381	1,747,833 14,716	1,801,638 14,950
7. 8.	REVENUE OBLIGATION LONG-TERM DEBT - PRINCI - INTERE	, -	,	149,850 307,094	131,163 308,425	152,027 297,029	159,538 291,273	176,492 287,758	212,224 282,757	210,768 277,283	207,176 272,365	220,495 263,779	223,060 254,845	235,592 243,279	246,535 231,151	251,471 215,074	234,788 198,301	253,053 168,775	267,131 154,331	284,628 142,324	282,611 125,835
9. 10.	COMMERCIAL PAPER/DIRECT PURCHASE - PRINCII	,		3,980 10,794	5,215 11,325	3,980 12,207	3,980 12,439	5,215 12,232	5,215 9,578	5,215 9,373	5,215 7,811	3,980 7,583	3,980 7,030	3,980 6,993	3,431 6,991	3,431 7,089	3,431 6,800	3,431 6,700	3,431 6,812	3,431 6,676	3,431 5,924
11.	INTEREST ON CUSTOMER DEPOSITS	49	523	550	578	608	639	671	705	741	779	819	861	905	951	999	1,050	1,104	1,160	1,219	1,281
12. 13.	CONTRIBUTIONS TO CAPITAL IMPROVEMENT FUND PAYMENT TO STATE	151,14 <u>17,72</u>		149,432 <u>17,533</u>	153,797 <u>18,046</u>	155,071 <u>18,183</u>	158,954 <u>18,642</u>	163,116 19,134	166,062 <u>19,487</u>	169,232 19,863	171,892 20,182	174,810 <u>20,525</u>	177,866 20,888	182,640 <u>21,450</u>	185,674 <u>21,810</u>	189,556 <u>22,266</u>	193,249 <u>22,705</u>	197,574 <u>23,217</u>	201,611 23,693	206,924 24,317	210,292 <u>24,717</u>
14.	SUBTOTAL	1,774,46	1,782,251	1,761,548	1,808,317	1,828,543	1,869,863	1,915,438	1,956,864	1,991,314	2,021,246	2,056,770	2,094,155	2,147,193	2,187,161	2,232,085	2,268,352	2,320,666	2,370,607	2,432,068	2,470,679
15. 16.	DIFFERENCE IN FOSSIL FUEL INVENTORY ADJUSTMENT TO O&M (CASH BASIS)	(50,89 <u>54</u>	, , ,	(304) (11,718)	(7,628) <u>9,533</u>	(3,810) <u>5,781</u>	(4,660) (6,691)	(18,682) 4,843	(459) <u>6,777</u>	910 (8,657)	(485) <u>6,792</u>	308 <u>7,115</u>	(603) (9,257)	(48) <u>7,135</u>	(310) <u>7,479</u>	(177) (9,888)	(1,041) <u>7,224</u>	852 <u>7,535</u>	656 (10,946)	(649) <u>7,447</u>	(1,037) <u>7,778</u>
17.	TOTAL DISBURSEMENTS	<u>1,724,11</u>	<u>1,782,620</u>	<u>1,749,526</u>	<u>1,810,222</u>	<u>1,830,514</u>	1,858,512	<u>1,901,599</u>	1,963,182	1,983,567	2,027,553	<u>2,064,193</u>	2,084,295	<u>2,154,280</u>	2,194,330	2,222,020	<u>2,274,535</u>	<u>2,329,053</u>	<u>2,360,317</u>	<u>2,438,866</u>	<u>2,477,420</u>
18. 19. 20. 21. 22. 23.	NET REMAINING BEGINNING BALANCE MISCELLANEOUS (REIMBURSEMENT) / FUNDING PRIOR YEAR CENTRAL ADJUST-TO-ACTUAL TRANSFER (TO)/FROM NUCLEAR FUND TRANSFER (TO)/FROM OTHER FUNDS	67,61 86,55 (19,46 (4,96 (1,52	2 128,218 4) (12,126) 6) 0	22,069 127,238 (22,238) 0 0	12,877 127,069 (1,436) 0 0 (8,089)	7,707 130,421 (1,657) 0 (952) (2,536)	25,556 132,984 (2,034) 0 0 (20,302)	31,597 136,204 (1,937) 0 0 (29,752)	4,805 136,112 (1,850) 0 0	21,844 139,067 11,216 0 0 (20,219)	9,321 151,908 13,738 0 0 (23,338)	7,139 151,629 13,981 0 0 (17,497)	23,149 155,252 8,630 0 0 (28,439)	9,542 158,592 (356) 0 0 (7,625)	5,347 160,153 372 0 0 (1,240)	23,506 164,632 1,119 0 0 (20,035)	14,625 169,222 (115) 0 0 (13,216)	11,150 170,516 (85) 0 0 (4,644)	27,908 176,937 (78) 0 0 (23,467)	12,041 181,300 (98) 0 0 (7,670)	13,243 185,573 (113) 0 0 (9,829)
24.	ENDING BALANCE	128,21	<u>127,238</u>	127,069	130,421	132,984	<u>136,204</u>	<u>136,112</u>	<u>139,067</u>	<u>151,908</u>	<u>151,629</u>	<u>155,252</u>	158,592	<u>160,153</u>	<u>164,632</u>	169,222	<u>170,516</u>	<u>176,937</u>	<u>181,300</u>	<u>185,573</u>	<u>188,874</u>

(1) INCLUDES REVENUES FROM LEASED LOT SALES AND CAMP HALL

11/22/19

EYHIRIT VIII

### SANTEE COOPER

#### **ELECTRIC SYSTEM**

#### DEBT SERVICE AND GENERAL CONSTRUCTION COVERAGE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		2020	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	2029	2030	<u>2031</u>	<u>2032</u>	<u>2033</u>	2034	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1. 2.	OPERATING REVENUES INTEREST INCOME	1,774,683 <u>7,408</u>	1,777,668 <u>7,458</u>	1,753,262 <u>8,495</u>	1,804,591 <u>8,604</u>	1,818,307 <u>9,965</u>	1,864,221 <u>9,817</u>	1,913,357 <u>9,725</u>	1,948,735 <u>9,086</u>	1,986,304 <u>8,903</u>	2,018,183 <u>8,400</u>	2,052,503 <u>8,484</u>	2,088,834 <u>8,185</u>	2,145,035 <u>8,224</u>	2,180,991 <u>8,037</u>	2,226,569 <u>8,208</u>	2,270,509 <u>7,807</u>	2,321,725 <u>7,577</u>	2,369,280 <u>7,620</u>	2,431,696 <u>7,814</u>	2,471,731 <u>7,509</u>
3.	TOTAL LESS:	1,782,091	1,785,126	1,761,757	1,813,195	1,828,272	1,874,038	1,923,082	1,957,821	1,995,207	2,026,583	2,060,987	2,097,019	2,153,259	2,189,028	2,234,777	2,278,316	2,329,302	2,376,900	2,439,510	2,479,240
4. 5.	OPERATION & MAINTENANCE EXPENSES SUMS IN LIEU OF TAXES	1,144,534 <u>4,677</u>	1,153,021 <u>4,705</u>	1,111,742 <u>4,649</u>	1,168,913 <u>4,781</u>	1,178,414 <u>4,822</u>	1,213,086 <u>4,945</u>	1,239,205 <u>5,080</u>	1,249,002 <u>5,164</u>	1,286,789 <u>5,260</u>	1,323,524 <u>5,343</u>	1,352,263 <u>5,431</u>	1,392,874 <u>5,524</u>	1,439,270 <u>5,658</u>	1,477,340 <u>5,707</u>	1,528,649 <u>5,822</u>	1,594,190 <u>5,933</u>	1,652,690 <u>6,075</u>	1,698,057 <u>6,181</u>	1,747,833 <u>6,339</u>	1,801,638 <u>6,440</u>
6.	NET REVENUE PRIOR TO DISTRIBUTION TO STATE	632,880	627,400	645,366	639,501	645,036	656,007	678,797	703,655	703,158	697,716	703,293	698,621	708,331	705,981	700,306	678,193	670,537	672,662	685,338	671,162
7.	PAYMENT TO STATE	17,726	<u>17,777</u>	17,533	18,046	<u>18,183</u>	18,642	<u>19,134</u>	19,487	19,863	20,182	20,525	20,888	21,450	21,810	22,266	22,705	23,217	23,693	<u>24,317</u>	24,717
8.	NET REVENUE AFTER DISTRIBUTION TO STATE	615,154	609,623	627,833	<u>621,455</u>	626,853	637,365	659,663	684,168	683,295	677,534	682,768	677,733	686,881	<u>684,171</u>	678,040	655,488	647,320	648,969	661,021	646,445
9. 10. 11.	LESS DEBT SERVICE: REVENUE OBLIGATION LONG-TERM DEBT INTEREST ON CUSTOMER DEPOSITS COMMERCIAL PAPER/DIRECT PURCHASE	416,387 498 <u>33,600</u>	434,945 523 <u>13,957</u>	456,942 550 <u>14,774</u>	439,587 578 <u>16,539</u>	449,057 608 <u>16,187</u>	450,813 639 <u>16,419</u>	464,250 671 <u>17,447</u>	494,980 705 <u>14,793</u>	488,053 741 <u>14,588</u>	479,540 779 <u>13,026</u>	484,272 819 <u>11,563</u>	477,907 861 <u>11,010</u>	478,868 905 <u>10,972</u>	477,691 951 <u>10,422</u>	466,549 999 <u>10,519</u>	433,088 1,050 10,231	421,825 1,104 10,130	421,459 1,160 <u>10,243</u>	426,951 1,219 <u>10,106</u>	408,444 1,281 <u>9,355</u>
12.	TOTAL SUBORDINATED DEBT	<u>450,485</u>	449,425	472,266	<u>456,704</u>	465,852	<u>467,871</u>	482,368	510,478	503,382	493,345	496,654	489,778	490,745	489,064	478,067	444,369	433,059	432,862	438,276	419,080
13. 14. 15.	CONSTRUCTION LESS: CONTRIBUTION TO CAPITAL IMPROVEMENT FUND	164,669 151,145 13,524	160,198 151,414 8,784	155,567 149,432 6,135	164,751 153,797 10,954	161,001 155,071 5,930	169,494 158,954 10,540	177,295 163,116 14,179	173,690 166,062 7,628	179,913 169,232 10,681	184,189 171,892 12,297	186,114 174,810 11,304	187,955 177,866 10,089	196,136 182,640 13,496	195,107 185,674 9,433	199,973 189,556 10,417	211,119 193,249 17,870	214,261 197,574 16,687	216,107 201,611 14,496	222,745 206,924 15,821	227,365 210,292 17,073
	DEBT SERVICE COVERAGE																				
	EXCLUDING COMMERCIAL PAPER/DIRECT PURCHASE:																				
16. 17.	PRIOR TO DISTRIBUTIONS TO STATE AFTER DISTRIBUTIONS TO STATE	<u>1.51</u> <u>1.47</u>	<u>1.44</u> <u>1.39</u>	<u>1.41</u> <u>1.37</u>	<u>1.45</u> <u>1.41</u>	<u>1.43</u> <u>1.39</u>	<u>1.45</u> <u>1.41</u>	<u>1.46</u> <u>1.41</u>	<u>1.41</u> <u>1.38</u>	<u>1.43</u> <u>1.39</u>	<u>1.45</u> <u>1.41</u>	<u>1.44</u> <u>1.40</u>	<u>1.45</u> <u>1.41</u>	<u>1.47</u> <u>1.43</u>	<u>1.47</u> <u>1.42</u>	<u>1.49</u> <u>1.45</u>	<u>1.56</u> <u>1.50</u>	<u>1.58</u> <u>1.53</u>	<u>1.59</u> <u>1.53</u>	<u>1.60</u> <u>1.54</u>	<u>1.63</u> <u>1.57</u>
	INCLUDING COMMERCIAL PAPER/DIRECT PURCHASE:																				
18. 19.	PRIOR TO DISTRIBUTIONS TO STATE AFTER DISTRIBUTIONS TO STATE	<u>1.40</u> <u>1.36</u>	<u>1.39</u> <u>1.35</u>	<u>1.36</u> <u>1.32</u>	<u>1.40</u> <u>1.36</u>	<u>1.38</u> <u>1.34</u>	<u>1.40</u> <u>1.36</u>	<u>1.40</u> <u>1.36</u>	<u>1.37</u> <u>1.34</u>	<u>1.39</u> <u>1.35</u>	<u>1.41</u> <u>1.37</u>	<u>1.41</u> <u>1.37</u>	<u>1.42</u> <u>1.38</u>	<u>1.44</u> <u>1.39</u>	<u>1.44</u> <u>1.39</u>	<u>1.46</u> <u>1.41</u>	<u>1.52</u> <u>1.47</u>	<u>1.54</u> <u>1.49</u>	<u>1.55</u> <u>1.49</u>	<u>1.56</u> <u>1.50</u>	<u>1.60</u> <u>1.54</u>
	DEBT/CAPITAL RATIO:																				
20. 21.	EXCLUDING COMMERCIAL PAPER/DIRECT PURCHASE INCLUDING COMMERCIAL PAPER/DIRECT PURCHASE	<u>0.75</u> <u>0.76</u>	<u>0.73</u> <u>0.74</u>	<u>0.72</u> <u>0.73</u>	<u>0.71</u> <u>0.72</u>	<u>0.70</u> <u>0.71</u>	<u>0.68</u> <u>0.70</u>	<u>0.67</u> <u>0.68</u>	<u>0.66</u> <u>0.67</u>	<u>0.65</u> <u>0.65</u>	<u>0.63</u> <u>0.64</u>	<u>0.62</u> <u>0.62</u>	<u>0.60</u> <u>0.61</u>	<u>0.59</u> 0.59	<u>0.56</u> <u>0.57</u>	<u>0.53</u> <u>0.54</u>	<u>0.52</u> <u>0.52</u>	<u>0.49</u> 0.50	<u>0.46</u> <u>0.47</u>	<u>0.44</u> <u>0.45</u>	<u>0.41</u> <u>0.42</u>

EXHIBIT IX

# SANTEE COOPER ELECTRIC SYSTEM

EARNINGS STATEMENT FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1.	TOTAL OPERATING REVENUES	1,774,683	1,777,668	1,753,262	<u>1,804,591</u>	<u>1,818,307</u>	<u>1,864,221</u>	<u>1,913,357</u>	1,948,735	1,986,304	2,018,183	2,052,503	2,088,834	<u>2,145,035</u>	2,180,991	2,226,569	2,270,509	<u>2,321,725</u>	2,369,280	2,431,696	<u>2,471,731</u>
	OPERATING EXPENSES:																				
2.	PRODUCTION: FUEL BURNED	539,931	551,091	536,660	560,661	542,161	565,536	618,301	634,720	650,399	671,567	697,472	698,814	736,005	741,804	739,920	755,310	766,462	768,719	789,846	808,920
3.	PURCHASED POWER	157,650	141,952	129,846	149,346	178,878	177,365	142,988	146,796	152,179	155,784	156,526	174,264	184,112	210,644	243,667	282,566	318,631	349,011	366,343	390,591
4.	OTHER	<u>259,784</u>	<u>267,552</u>	<u>248,979</u>	<u>257,780</u>	<u>251,852</u>	<u>260,556</u>	<u>264,034</u>	<u>248,483</u>	260,426	<u>267,477</u>	<u>264,573</u>	<u>281,098</u>	<u>275,205</u>	<u>275,476</u>	<u>290,045</u>	<u>295,658</u>	<u>301,096</u>	<u>307,905</u>	<u>313,038</u>	<u>317,219</u>
5.	TOTAL PRODUCTION	957,365	960,595	915,485	967,787	972,891	1,003,457	1,025,323	1,029,999	1,063,004	1,094,828	1,118,571	1,154,176	1,195,322	1,227,924	1,273,632	1,333,534	1,386,189	1,425,635	1,469,227	1,516,730
6.	TRANSMISSION	36,993	34,457	35,191	36,201	36,980	37,402	37,825	38,077	38,933	39,868	40,886	41,990	43,183	44,469	45,851	47,333	48,919	50,613	52,419	54,342
7.	DISTRIBUTION	17,431	17,656	18,363	18,748	19,029	19,313	19,601	19,893	20,188	20,486	20,789	21,095	21,404	21,718	22,035	22,355	22,680	23,008	23,340	23,676
8.	CUSTOMER ACCOUNTING	15,007	15,397	15,402	15,726	16,056	16,393	16,737	17,089	17,448	17,814	18,188	18,570	18,960	19,358	19,765	20,180	20,604	21,036	21,478	21,929
9.	SALES EXPENSE	10,122	11,118	11,184	11,680	12,167	12,681	13,206	13,769	14,296	14,804	15,242	15,533	15,907	16,330	16,712	17,049	17,317	17,566	17,792	18,029
10.	ADMINISTRATIVE & GENERAL	<u>107,617</u>	<u>113,797</u>	<u>116,118</u>	<u>118,771</u>	<u>121,291</u>	123,840	126,512	<u>130,176</u>	132,921	<u>135,724</u>	<u>138,587</u>	<u>141,510</u>	144,494	147,542	<u>150,654</u>	<u>153,739</u>	<u>156,981</u>	<u>160,198</u>	<u>163,576</u>	<u>166,932</u>
11.	TOTAL OPERATION & MAINTENANCE EXPENSES	1,144,535	1,153,020	1,111,743	1,168,913	1,178,414	1,213,086	1,239,204	1,249,003	1,286,790	1,323,524	1,352,263	1,392,874	1,439,270	1,477,341	1,528,649	1,594,190	1,652,690	1,698,056	1,747,832	1,801,638
12.	SUMS IN LIEU OF TAXES	4,677	4,705	4,649	4,781	4,822	4,945	5,080	5,164	5,260	5,343	5,431	5,524	5,658	5,707	5,822	5,933	6,075	6,181	6,339	6,440
13.	DEPRECIATION	190,984	195,700	200,300	213,372	218,304	223,420	230,077	257,741	261,967	266,316	270,795	275,044	278,825	282,759	286,987	290,180	293,673	297,110	300,295	303,660
14.	AMORTIZATION OF DEFERRED DEBITS (1)	<u>21</u>	<u>20</u>	<u>19</u>	<u>18</u>	<u>18</u>	<u>16</u>	<u>12</u>	<u>11</u>	<u>11</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
15.	TOTAL OPERATING EXPENSES	1,340,217	1,353,445	1,316,711	1,387,084	1,401,558	1,441,467	1,474,373	1,511,919	1,554,028	1,595,186	1,628,492	1,673,445	1,723,756	1,765,810	1,821,461	1,890,306	1,952,441	2,001,350	2,054,469	2,111,741
16.	OPERATING INCOME	434,466	424,223	436,551	417,507	416,749	422,754	438,984	436,816	432,276	422,997	424,011	415,389	421,279	<u>415,181</u>	405,108	380,203	369,284	367,930	377,227	359,990
17.	INTEREST, MISCELLANEOUS & OTHER INCOME (2)(3)	(85,596)	86,966	6,227	<u>1,463</u>	(21,040)	(30,022)	(54,840)	(47,925)	(29,506)	(45,264)	(24,284)	(16,964)	(55,513)	(65,311)	(75,505)	(494,682)	(125,780)	(145,766)	(190,402)	(158,757)
	INTEREST CHARGES:																				
18.	INTEREST ON LONG-TERM DEBT	321,137	309,299	307,094	308,425	297,029	291,273	287,758	282,757	277,283	272,365	263,779	254,845	243,279	231,151	215,074	198,301	168,775	154,331	142,324	125,835
19.	INTEREST ON COMMERCIAL PAPER/DIRECT PURCHASE	11,096	11,633	10,794	11,325	12,207	12,439	12,232	9,578	9,373	7,811	7,583	7,030	6,993	6,991	7,089	6,800	6,700	6,812	6,676	5,924
20.	INTEREST ON CUSTOMER DEPOSITS	498	523	550	578	608	639	671	705	741	779	819	861	905	951	999	1,050	1,104	1,160	1,219	1,281
21.	AMORTIZATION OF DEBT EXPENSE (NET)	(12,598)	<u>(13,517)</u>	(14,938)	(27,293)	<u>(49,513)</u>	<u>(58,996)</u>	(66,447)	(70,324)	(70,828)	(73,240)	(55,739)	(56,625)	<u>(58,317)</u>	<u>(58,019)</u>	<u>(61,748)</u>	<u>(67,172)</u>	<u>(69,356)</u>	<u>(72,127)</u>	<u>(68,934)</u>	<u>(70,768)</u>
22.	TOTAL INTEREST CHARGES	<u>320,133</u>	307,938	303,500	<u>293,035</u>	<u>260,331</u>	<u>245,355</u>	234,214	222,716	216,569	207,715	216,442	206,111	192,860	<u>181,074</u>	<u>161,414</u>	138,979	107,223	<u>90,176</u>	<u>81,285</u>	<u>62,272</u>
23.	LESS: COSTS TO BE RECOVERED FROM FUTURE REVENUES	<u>952</u>	(2,181)	<u>25,770</u>	<u>24,914</u>	<u>21,178</u>	<u>18,667</u>	20,470	<u>68,233</u>	<u>56,091</u>	30,740	109,914	<u>84,014</u>	<u>96,406</u>	50,217	<u>70,014</u>	63,075	<u>47,182</u>	<u>95,198</u>	<u>122,712</u>	<u>114,976</u>

97,942 <u>130,110</u>

139,278

73,371 108,300

<u>76,500</u> <u>118,579</u>

<u>98,175</u> (316,533)

89,099

36,790

(17,172)

<u>23,985</u>

24. REINVESTED EARNINGS

<u>27,785</u>

<u>205,432</u> <u>113,508</u>

<u>101,021</u> <u>114,200</u> <u>128,710</u> <u>129,460</u>

<sup>(1)</sup> INCLUDES AMORTIZATION OF REBATES FOR DSM PROGRAMS.

<sup>(2)</sup> INCLUDES RECOGNITION OF TOSHIBA PARENTAL GUARANTY INCOME, AND LOSS ON DISPOSITION OF PROPERTY FOR NUCLEAR UNITS 2 & 3 AND PEE DEE. SEE SCHEDULE 16.

<sup>(3)</sup> INCLUDES REVENUES FROM LEASED LOT SALES AND CAMP HALL

11/22/19

SANTEE COOPER 2020 CONFORMING CASE EXHIBIT X

#### **ELECTRIC SYSTEM** STATEMENT OF FINANCIAL CONDITION FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN MILLIONS)

		<u>2019</u>	<u>2020</u>	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	2039
1	ELECTRIC PLANT IN SERVICE &																					
	CONSTRUCTION WORK IN PROGRESS	8,769.3	8,919.6	9,128.0	9,346.4	9,577.9	9,892.2	10,219.9	10,553.6	10,776.9	10,958.4	11,099.2	11,225.1	11,330.4	11,453.4	11,565.5	11,702.9	11,830.9	11,931.5	12,039.4	12,151.5	12,259.3
2.	LONG LIVED ASSETS - ARO	265.1	265.1	265.1	265.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1	251.1
3.	ACCUMULATED DEPRECIATION	(3,805.3)	(3,959.7)	(4,117.2)	(4,278.2)	(4,451.1)	(4,627.7)	(4,808.2)	(4,994.0)	(5,206.2)	(5,421.3)	(5,639.2)	(5,860.2)	(6,084.0)	(6,310.0)	(6,538.4)	(6,769.3)	(7,001.8)	(7,236.0)	(7,471.9)	(7,709.1)	(7,947.8)
4.	ACCUMULATED DEPRECIATION OF LLA - ARO	(261.5)	(261.5)	(261.9)	(262.3)	(250.8)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)	(251.1)
5.	NUCLEAR FUEL - NET	85.8	86.8	82.5	77.7	79.7	81.0	65.6	49.9	36.4	39.3	23.3	` <u>31.9</u> ´	38.8	33.9	43.1	36.1	45.7	<u>55.4</u>	48.0	<u>58.1</u>	52.6
	TOTAL NET UTILITY PLANT	5,053.4	5,050.3	5,096.5	5,148.7	5,206.8	5,345.5	5,477.3	5,609.5	5,607.1	5,576.4	5,483.3	5,396.8	5,285.2	5,177.3	5,070.2	4,969.7	4,874.8	4,750.9	4,615.5	4,500.5	4,364.1
6.	TOTAL NET OTILITY PLANT	5,055.4	5,050.5	5,090.5	5,140.7	5,200.8	5,545.5	5,477.5	5,009.5	5,007.1	5,570.4	5,465.5	5,390.6	5,265.2	5,177.5	5,070.2	4,909.7	4,074.0	4,730.9	4,013.3	4,300.3	4,304.1
7.	OPERATING FUNDS	86.6	128.2	127.2	127.1	130.4	133.0	136.2	136.1	139.1	151.9	151.6	155.3	158.6	160.2	164.6	169.2	170.5	176.9	181.3	185.6	188.9
8.	CONSTRUCTION FUNDS	198.3	28.7	23.9	38.4	65.7	79.0	106.2	121.9	129.0	150.6	163.3	193.9	229.1	255.0	295.4	329.5	181.5	230.7	281.0	307.0	321.0
9.	NUCLEAR FUEL FUND	20.6	17.6	7.5	17.3	15.4	8.3	21.5	37.3	50.7	53.8	63.8	68.3	61.7	59.9	57.9	58.0	56.0	55.5	55.7	53.4	51.3
10.	REGULATORY ASSET (1)	4,678.5	4,452.2	4,297.6	4,259.8	4,223.3	4,165.6	4,102.7	4,011.6	3,927.2	3,853.3	3,757.1	3,670.0	3,580.7	3,488.2	3,398.2	3,306.3	2,800.8	2,665.3	2,509.5	2,308.9	2,140.5
11.	OTHER RESERVE FUNDS (2)	294.3	296.9	300.0	302.6	313.2	317.4	339.0	369.9	370.9	392.3	416.7	435.3	464.8	473.4	475.6	496.7	353.4	359.0	383.4	392.1	397.9
12.	FOSSIL FUEL INVENTORY	147.8	88.9	84.4	84.1	76.5	72.7	68.0	49.3	48.9	49.8	49.3	49.6	49.0	48.9	48.6	48.5	47.4	48.3	48.9	48.3	47.2
13.	DEFERRED DEBIT (NET)	213.0	194.0	175.0	157.0	140.0	123.0	107.0	96.0	85.0	74.0	71.0	68.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
14.																						
	FROM FUTURE REVENUES	229.8	228.8	231.0	205.2	180.3	159.1	140.4	119.9	51.7	(4.4)	(35.1)	(145.0)	(229.0)	(325.4)	(375.6)	(445.6)	(508.7)	(555.9)	(651.1)	(773.8)	(888.8)
15.	BONDS FUND-CURRENT PORTION	56.4	160.6	154.7	153.5	154.2	148.5	145.6	143.9	141.4	138.6	136.2	131.9	127.4	121.6	115.5	107.6	99.1	84.4	77.2	71.2	62.9
16.	OTHER NET ASSETS/ LIABILITIES	(258.7)	<u>(196.7)</u>	<u>(97.1)</u>	<u>(64.3)</u>	(3.2)	<u>104.7</u>	<u>136.1</u>	<u>156.9</u>	<u>181.2</u>	<u>192.4</u>	<u>219.0</u>	<u>217.1</u>	<u>210.0</u>	225.7	<u>227.6</u>	<u>227.9</u>	<u>231.2</u>	<u>239.9</u>	<u>238.8</u>	<u>241.0</u>	<u>265.6</u>
17.	TOTAL ASSETS	10,720.0	10,449.5	10,400.8	10,429.4	10,502.6	10,656.9	10,780.1	10,852.2	10,732.2	10,628.8	10,476.3	<u>10,241.1</u>	10,002.4	9,749.9	<u>9,543.1</u>	9,332.8	<u>8,371.0</u>	<u>8,120.0</u>	<u>7,805.2</u>	7,399.2	<u>7,015.6</u>
18.	OUTSTANDING REV OBLG LONG-TERM DEBT	6,553.1	6,318.6	6.106.3	6,182.0	5,866.4	5,931.0	5.630.5	5.721.5	5.491.8	5.462.1	5,234.9	5.090.4	4,814.4	4,599.6	4,226.9	3.929.2	3,297.5	3.030.8	2.741.1	2.458.6	2,153.5
19.	UNAMORTIZED DEBT DISC. & PREMIUM	236.2	222.3	263.1	300.7	447.4	665.1	737.7	893.8	815.0	790.5	709.5	668.8	635.5	607.9	647.5	710.8	685.4	676.2	600.0	563.1	489.1
20.	OUTSTANDING COMMERCIAL PAPER/DIRECT PURCHASE	306.2	<u>345.5</u>	<u>345.5</u>	188.0	<u>365.2</u>	<u>156.7</u>	407.1	<u>135.9</u>	<u>254.7</u>	111.4	<u>170.6</u>	102.2	135.5	94.2	135.5	<u>87.4</u>	121.9	80. <u>5</u>	<u>118.5</u>	<u>73.7</u>	70.2
		· <u></u>																				
21.	TOTAL DEBT LIABILITIES	<u>7,095.5</u>	<u>6,886.4</u>	<u>6,714.9</u>	<u>6,670.7</u>	<u>6,679.0</u>	<u>6,752.8</u>	<u>6,775.3</u>	<u>6,751.2</u>	<u>6,561.5</u>	<u>6,364.0</u>	<u>6,115.0</u>	<u>5,861.4</u>	<u>5,585.4</u>	<u>5,301.7</u>	5,009.9	<u>4,727.3</u>	<u>4,104.8</u>	<u>3,787.6</u>	<u>3,459.6</u>	<u>3,095.3</u>	<u>2,712.8</u>
22.	ARO- LIABILITY	696.6	681.1	666.1	657.0	652.4	650.6	655.1	659.3	673.5	681.1	677.1	661.4	644.8	636.0	639.5	651.4	667.0	683.3	699.7	716.0	732.3
23.	OPEB- LIABILITY (3)	172.8	186.7	182.0	177.0	172.5	167.8	162.9	157.9	152.6	147.2	141.7	135.9	129.9	123.7	117.3	110.6	103.8	96.7	89.3	81.7	73.8
24.	PENSION- LIABILITY	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7
25.	DEFERRED CREDIT (4)	363.9	294.0	248.7	239.6	230.7	221.8	212.7	199.4	181.6	163.4	150.4	137.4	109.9	101.0	92.1	83.3	74.4	65.5	56.6	47.7	38.9
26.	CAPITAL CONTRIBUTIONS	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4
27.	ACCUMULATED REINVESTED EARNINGS	2,031.1	2,041.2	2,228.9	2,324.9	2,407.9	2,503.9	2,614.0	2,724.3	2,802.8	2,913.0	3,032.1	3,084.9	3,172.3	3,227.4	3,324.2	3,400.1	3,060.9	3,126.8	3,139.9	3,098.4	3,097.7
20	TOTAL LIADILITIES *																					
28.		10 720 0	10 440 F	10 400 8	10 420 4	10 502 6	10 SES C	10 700 4	10.052.2	10 722 2	10 620 6	10 476 2	10 241 4	10 002 4	0.740.0	0.542.4	0 222 6	0 271 0	9 120 0	7 905 2	7 200 2	7.015.6
	EQUITY	<u>10,720.0</u>	<u>10,449.5</u>	<u>10,400.8</u>	<u>10,429.4</u>	<u>10,502.6</u>	<u>10,656.9</u>	<u>10,780.1</u>	<u>10,852.2</u>	<u>10,732.2</u>	<u>10,628.8</u>	<u>10,476.3</u>	<u>10,241.1</u>	<u>10,002.4</u>	<u>9,749.9</u>	<u>9,543.1</u>	<u>9,332.8</u>	<u>8,371.0</u>	<u>8,120.0</u>	<u>7,805.2</u>	<u>7,399.2</u>	<u>7,015.6</u>

<sup>(1)</sup> INCLUDES UNAMORTIZED LOSS ON DISPOSITION OF PROPERTY FOR NUCLEAR UNITS 2 & 3 AND PEE DEE; INCLUDES NUCLEAR AND ASH POND ASSET RETIREMENT OBLIGATIONS.

<sup>(2)</sup> INCLUDES SUMMER NUCLEAR PLANT DECOMMISSIONING FUND AND OTHER RESTRICTED FUNDS.

<sup>(3)</sup> INCLUDES PROJECTED GASB 75 POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS.

<sup>(4)</sup> REFLECTS BALANCE OF UNRECOGNIZED INCOME ASSOCIATED WITH TOSHIBA PARENTAL GUARANTY FUNDS.

SANTEE COOPER **ELECTRIC SYSTEM** 11/22/19

FOR

CONSTRUCTION SCHEDULE	
R THE CALENDAR YEARS 2020 - 2039	
(DOLLARS IN THOUSANDS)	

EXHIBIT XI

PAGE 1 OF 2

		<u>2020</u>	<u>2021</u>	2022	2023	2024	<u>2025</u>	2026	2027	2028	2029	2030	<u>2031</u>	2032	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
	TRANSMISSION:																				
1.	CONSTRUCTION	35,867	35,948	31,421	25,266	32,401	33,993	41,670	46,523	49,435	45,261	40,357	41,660	42,046	42,461	69,921	49,158	38,338	48,265	45,373	46,260
2.	CAPITAL EQUIPMENT	<u>3,996</u>	<u>2,098</u>	<u>1,314</u>	<u>2,202</u>	<u>1,038</u>	<u>2,219</u>	<u>3,809</u>	<u>2,693</u>	<u>2,123</u>	<u>2,283</u>	<u>3,208</u>	<u>3,619</u>	<u>3,621</u>	<u>4,325</u>	<u>2,455</u>	<u>2,963</u>	<u>3,219</u>	<u>1,755</u>	<u>1,855</u>	<u>3,861</u>
3.	TOTAL TRANSMISSION	39,863	38,046	<u>32,735</u>	27,468	33,439	<u>36,212</u>	<u>45,479</u>	<u>49,216</u>	<u>51,558</u>	47,544	<u>43,565</u>	<u>45,279</u>	<u>45,667</u>	<u>46,786</u>	<u>72,376</u>	<u>52,121</u>	<u>41,557</u>	50,020	<u>47,228</u>	<u>50,121</u>
	DISTRIBUTION:																				
4.	CONSTRUCTION	60,917	58,424	42,327	43,424	43,893	45,281	45,615	46,279	46,722	49,198	49,054	49,822	50,898	53,286	52,914	54,450	55,169	57,524	57,863	59,012
5.	CAPITAL EQUIPMENT	<u>1,605</u>	<u>948</u>	<u>1,221</u>	<u>919</u>	<u>926</u>	<u>881</u>	<u>858</u>	<u>1,028</u>	<u>1,052</u>	<u>1,075</u>	<u>1,050</u>	<u>1,076</u>	<u>1,153</u>	<u>1,133</u>	<u>1,211</u>	<u>1,191</u>	<u>1,221</u>	<u>1,252</u>	<u>1,284</u>	<u>1,366</u>
6.	TOTAL DISTRIBUTION	62,522	59,372	43,548	44,343	<u>44,819</u>	<u>46,162</u>	46,473	47,307	<u>47,774</u>	50,273	50,104	50,898	<u>52,051</u>	54,419	<u>54,125</u>	<u>55,641</u>	56,390	<u>58,776</u>	<u>59,147</u>	60,378
	GENERATION:																				
7.	CONSTRUCTION	78,815	106,692	74,503	70,117	79,586	65,992	54,489	68,070	50,803	63,759	47,024	47,028	57,454	46,774	46,664	63,782	47,019	46,932	59,880	51,819
8.	CAPITAL EQUIPMENT	<u>3,334</u>	<u>4,138</u>	2,639	<u>2,468</u>	<u>2,544</u>	<u>2,484</u>	<u>2,540</u>	<u>2,141</u>	<u>2,208</u>	<u>2,221</u>	<u>2,245</u>	<u>2,349</u>	<u>2,415</u>	<u>2,455</u>	<u>2,510</u>	<u>2,513</u>	<u>2,674</u>	<u>2,692</u>	<u>2,687</u>	<u>2,808</u>
9.	TOTAL GENERATION	82,149	110,830	77,142	72,585	82,130	<u>68,476</u>	57,030	70,211	<u>53,011</u>	65,980	49,268	49,377	<u>59,868</u>	49,229	49,173	66,295	49,692	49,624	62,567	54,627
	CUSTOMER SERVICES:																				
10.	CONSTRUCTION	997	1,168	943	1,035	75	87	887	888	88	88	968	969	89	89	1,058	1,058	90	91	1,156	1,156
11.	CAPITAL EQUIPMENT	<u>86</u>	<u>28</u>	<u>86</u>	<u>28</u>	<u>28</u>	<u>28</u>	<u>29</u>	<u>29</u>	<u>30</u>	<u>30</u>	<u>31</u>	<u>31</u>	<u>32</u>	<u>32</u>	<u>33</u>	<u>34</u>	<u>34</u>	<u>35</u>	<u>36</u>	<u>37</u>
12.	TOTAL CUSTOMER SERVICES	1,084	<u>1,195</u>	1,029	<u>1,063</u>	<u>103</u>	<u>115</u>	<u>916</u>	917	<u>117</u>	<u>118</u>	999	1,000	<u>121</u>	<u>122</u>	1,091	1,092	<u>125</u>	<u>126</u>	<u>1,192</u>	<u>1,193</u>
	CORPORATE SERVICES:																				
13.	CONSTRUCTION	14,396	15,748	11,985	6,321	5,876	6,164	8,454	4,611	4,803	6,828	7,609	4,062	7,113	3,637	2,973	2,393	2,465	2,449	2,866	2,372
14.	CAPITAL EQUIPMENT	<u>(197)</u>	<u>(415)</u>	994	2,552	2,244	2,924	<u>2,993</u>	4,298	4,449	3,193	3,136	2,237	2,137	2,728	3,762	3,424	<u>5,129</u>	3,470	<u>1,983</u>	<u>3,856</u>
15.	TOTAL CORPORATE SERVICES	14,199	<u>15,333</u>	12,979	<u>8,873</u>	<u>8,120</u>	9,088	11,447	8,909	9,252	10,021	10,745	6,299	9,250	<u>6,365</u>	<u>6,735</u>	<u>5,817</u>	<u>7,594</u>	<u>5,919</u>	<u>4,849</u>	6,228
16.	CONSTRUCTION REQUIREMENTS (1) SUBTOTAL	<u>199,817</u>	<u>224,776</u>	<u>167,434</u>	<u>154,332</u>	<u>168,611</u>	<u>160,052</u>	<u>161,344</u>	<u>176,560</u>	<u>161,713</u>	<u>173,936</u>	<u>154,681</u>	<u>152,852</u>	<u>166,957</u>	<u>156,921</u>	<u>183,500</u>	<u>180,966</u>	<u>155,359</u>	<u>164,465</u>	<u>174,983</u>	<u>172,547</u>

(1) ACCRUAL BASIS.

SANTEE COOPER EXHIBIT XI ELECTRIC SYSTEM PAGE 2 OF 2

CONSTRUCTION SCHEDULE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	2023	2024	<u>2025</u>	<u>2026</u>	2027	2028	2029	2030	<u>2031</u>	2032	<u>2033</u>	2034	<u>2035</u>	<u>2036</u>	<u>2037</u>	2038	<u>2039</u>
17.	CAPITAL AND GENERAL IMPROVEMENT CONSTRUCTION COST	199,817	224,776	167,434	154,332	168,611	160,052	161,344	176,560	161,713	173,936	154,681	152,852	166,957	156,921	183,500	180,966	155,359	164,465	174,983	172,547
18.	COMBUSTION TURBINES-FUTURE CONSTRUCTION COST	0	16,660	34,150	58,224	5,964	18,346	37,606	64,226	6,579	0	0	0	0	0	0	0	0	0	0	0
19.	ENVIRONMENTAL COMPLIANCE PROJECTS CONSTRUCTION COST	49,351	47,982	50,300	49,800	77,028	20,558	8,790	8,747	14,670	13,738	370	0	0	0	0	0	0	0	0	0
20.	FERC CAPITAL CONSTRUCTION COST	4,254	2,319	4,054	2,038	2,755	1,248	1,262	1,103	1,088	1,104	1,136	5,638	10,731	11,074	10,893	5,662	5,682	5,702	1,223	1,245
21.	BATTERY STORAGE CONSTRUCTION COST	0	0	0	0	24,800	0	22,000	0	40,200	0	0	0	0	0	0	0	0	0	0	0
22.	COMBINED CYCLE-FUTURE CONSTRUCTION COST	0	0	11,791	15,474	102,158	152,964	135,689	29,373	18,637	0	0	0	0	0	0	0	0	0	0	0
23.	TRANSMISSION SPECIAL PROJECTS CONSTRUCTION COST	<u>8,586</u>	<u>466</u>	31,397	36,672	50,883	41,775	16,944	<u>0</u>	2,649	16,534	22,291	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
24.	TOTAL CONSTRUCTION REQUIREMENTS (1)	262,008	292,204	<u>299,125</u>	<u>316,540</u>	432,199	<u>394,943</u>	<u>383,635</u>	280,008	<u>245,536</u>	205,312	178,478	<u>158,490</u>	<u>177,688</u>	<u>167,995</u>	<u>194,393</u>	186,628	<u>161,041</u>	<u>170,167</u>	<u>176,206</u>	<u>173,792</u>

(1) ACCRUAL BASIS.

SANTEE COOPER 2020 CONFORMING CASE EXHIBIT XII PAGE 1 OF 3 11/22/19

# ELECTRIC SYSTEM CASH RECEIPTS & DISBURSEMENTS STATEMENT CONSTRUCTION AND MISCELLANEOUS FUNDS FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

	<u>2020</u>	<u>2021</u>	2022	2023	2024	<u>2025</u>	2026	2027	2028	2029	2030	<u>2031</u>	2032	2033	2034	<u>2035</u>	2036	2037	2038	2039
CAPITAL & GENERAL IMPROVEMENT FUNDS  1. BEGINNING BALANCE  2. PROCEEDS FROM LONG-TERM DEBT - NET  3. PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE  4. TRANSFER (TO)/FROM OTHER FUNDS  5. TRANSFER (TO)/FROM DEBT REDUCTION FUND  6. TRANSFER (TO)/FROM REVENUE FUND: CIF REQUIREMENT  7. SUBTOTAL	198,331 0 0 0 (155,000) <u>151,145</u> 194,476	23,671 0 46,500 0 (27,000) 151,414 194,585	8,198 0 0 0 0 149,432 157,630	19,555 0 0 0 0 153,797 173,352	40,029 0 0 0 0 155,071 195,100	53,534 0 0 0 0 0 158,954 212,488	81,285 0 0 0 (10,000) 163,116 234,401	106,592 0 0 0 (17,500) 166,062 255,154	115,089 0 0 0 (20,000) 169,232 264,321	141,395 0 0 0 (20,000) 171,892 293,287	154,969 0 0 (20,000) 174,810 309,779	187,052 0 0 0 (22,500) 177,866 342,418	221,819 0 0 0 (22,500) 182,640 381,959	247,601 0 0 0 (22,500) 185,674 410,775	286,356 0 0 0 (22,500) 189,556 453,412	322,480 0 0 0 (192,500) 193,249 323,229	174,832 0 0 0 (22,500) 197,574 349,906	223,382 0 0 0 (22,500) 201,611 402,493	274,308 0 0 0 (69,145) 206,924 412,087	271,163 0 0 0 (22,500) 210,292 458,955
CONSTRUCTION EXPENDITURES (1)     REPAY COMMERCIAL PAPER/DIRECT PURCHASE	170,805 <u>0</u>	186,387 <u>0</u>	138,075 <u>0</u>	133,323 <u>0</u>	141,566 <u>0</u>	131,203 <u>0</u>	127,809 <u>0</u>	140,065 <u>0</u>	122,926 <u>0</u>	138,318 <u>0</u>	122,727 <u>0</u>	120,599 <u>0</u>	134,358 <u>0</u>	124,419 <u>0</u>	130,932 <u>0</u>	148,397 <u>0</u>	126,524 <u>0</u>	128,185 <u>0</u>	140,924 <u>0</u>	137,935 <u>0</u>
10. ENDING BALANCE	<u>23,671</u>	<u>8,198</u>	19,555	40,029	<u>53,534</u>	<u>81,285</u>	106,592	115,089	141,395	154,969	187,052	221,819	247,601	286,356	322,480	<u>174,832</u>	223,382	274,308	<u>271,163</u>	321,020
TAX-EXEMPT CAPITAL TRANSMISSION  11. BEGINNING BALANCE  12. PROCEEDS FROM LONG-TERM DEBT - NET  13. PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE  14. TRANSFER (TO)/FROM OTHER FUNDS  15. TRANSFER (TO)/FROM CIGI FUND  16. TRANSFER (TO)/FROM REVENUE FUND  17. SUBTOTAL	0 0 21,905 0 0 0 21,905	2,237 67,388 26,575 0 0 0 96,200	5,756 23,222 23,222 0 0 0 0 0 52,200	5,362 0 19,346 0 0 0 0 24,708	5,820 43,847 24,501 0 0 0 74,168	5,937 0 26,247 0 0 0 0 32,184	6,396 57,839 31,592 0 0 0 95,827	6,692 0 35,040 0 0 0 41,732	6,884 71,928 36,888 0 0 0 0	6,620 0 33,681 0 0 0 40,301	6,317 64,099 30,418 0 0 0 0 100,834	6,387 0 31,220 0 0 0 0 37,607	6,419 62,822 31,602 0 0 0 0	6,449 0 33,645 0 0 0 40,094	8,162 84,473 50,828 0 0 0 143,463	6,502 0 32,257 0 0 0 38,759	6,191 61,713 29,456 0 0 0 97,360	6,811 0 36,091 0 0 0 42,902	6,626 98,129 34,102 0 0 0 0 138,857	34,608 0 0 0 0 0 0 2 34,608
<ul><li>18. CONSTRUCTION EXPENDITURES (1)</li><li>19. REPAY COMMERCIAL PAPER/DIRECT PURCHASE</li></ul>	19,668 <u>0</u>	26,844 <u>63,600</u>	23,616 23,222	18,888 <u>0</u>	24,384 43,847	25,788 <u>0</u>	31,296 <u>57,839</u>	34,848 <u>0</u>	37,152 <u>71,928</u>	33,984 <u>0</u>	30,348 <u>64,099</u>	31,188 <u>0</u>	31,572 <u>62,822</u>	31,932 <u>0</u>	52,488 <u>84,473</u>	32,568 <u>0</u>	28,836 <u>61,713</u>	36,276 <u>0</u>	34,056 <u>70,193</u>	34,608 <u>0</u>
20. ENDING BALANCE	2,237	<u>5,756</u>	<u>5,362</u>	5,820	5,937	<u>6,396</u>	6,692	<u>6,884</u>	6,620	<u>6,317</u>	6,387	6,419	6,449	<u>8,162</u>	6,502	<u>6,191</u>	<u>6,811</u>	<u>6,626</u>	34,608	<u>0</u>
TRANSMISSION SPECIAL PROJECTS  21. BEGINNING BALANCE  22. PROCEEDS FROM LONG-TERM DEBT - NET  23. PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE  24. TRANSFER (TO)/FROM OTHER FUNDS  25. TRANSFER (TO)/FROM CIGI FUND  26. TRANSFER (TO)/FROM REVENUE FUND  27. SUBTOTAL	0 0 8,580 0 0 0 0	0 0 3,084 0 0 0 0 3,084	2,616 61,460 31,832 0 0 0 95,908	3,056 0 37,856 0 0 0 40,912	4,240 87,978 50,121 0 0 0 142,339	3,482 0 39,703 0 0 0 43,185	1,413 55,236 15,532 0 0 0 72,181	2 0 221 0 0 0 0 223	223 4,030 3,809 0 0 0 0 8,062	1,380 0 17,016 0 0 0 18,396	1,860 37,452 20,438 0 0 0 59,750	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0
28. CONSTRUCTION EXPENDITURES (1) 29. REPAY COMMERCIAL PAPER/DIRECT PURCHASE	8,580 <u>0</u>	468 <u>0</u>	31,392 61,460	36,672 <u>0</u>	50,880 87,977	41,772 <u>0</u>	16,944 55,235	0 <u>0</u>	2,652 4,030	16,536 <u>0</u>	22,296 37,454	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>
30. ENDING BALANCE	<u>o</u>	<u>2,616</u>	<u>3,056</u>	<u>4,240</u>	<u>3,482</u>	<u>1,413</u>	<u>2</u>	<u>223</u>	<u>1,380</u>	<u>1,860</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>0</u>
FERC CAPITAL 31. BEGINNING BALANCE 32. PROCEEDS FROM LONG-TERM DEBT - NET 33. PROCEEDS FROM COMMERCIAL PAPER FINANCING 34. TRANSFER (TO)/FROM OTHER FUNDS 35. TRANSFER (TO)/FROM CIGI FUND 36. TRANSFER (TO)/FROM REVENUE FUND 37. SUBTOTAL	0 0 4,248 0 0 0 0 4,248	0 0 2,654 0 0 0 2,654	338 10,790 3,888 0 0 0	170 0 2,100 0 0 0 2,270	230 4,734 2,634 0 0 0 7,598	104 0 1,249 0 0 0 0 1,353	105 2,496 1,247 0 0 0 3,848	92 0 1,103 0 0 0 1,195	91 2,196 1,093 0 0 0 3,380	92 0 1,107 0 0 0 1,199	95 2,622 1,515 0 0 0 4,232	470 0 6,064 0 0 0 0 6,534	894 16,821 10,757 0 0 0 28,472	923 0 11,061 0 0 0	908 21,521 10,460 0 0 0 32,889	472 0 5,665 0 0 0 6,137	473 11,343 5,678 0 0 0 17,494	475 0 5,327 0 0 0 0 5,802	102 7,697 1,226 0 0 0 9,025	1,248 0 0 0 0 0 0 0 1,248
CONSTRUCTION EXPENDITURES (1)     REPAY COMMERCIAL PAPER/DIRECT PURCHASE	4,248 <u>0</u>	2,316 <u>0</u>	4,056 10,790	2,040 <u>0</u>	2,760 4,734	1,248 <u>0</u>	1,260 2,496	1,104 <u>0</u>	1,092 2,196	1,104 <u>0</u>	1,140 2,622	5,640 <u>0</u>	10,728 16,821	11,076 <u>0</u>	10,896 21,521	5,664 <u>0</u>	5,676 <u>11,343</u>	5,700 <u>0</u>	1,224 <u>6,553</u>	1,248 <u>0</u>
40. ENDING BALANCE	<u>0</u>	338	<u>170</u>	<u>230</u>	<u>104</u>	<u>105</u>	92	<u>91</u>	<u>92</u>	<u>95</u>	<u>470</u>	<u>894</u>	923	908	472	<u>473</u>	<u>475</u>	<u>102</u>	1,248	<u>0</u>
MISC CAPITAL IMPROVEMENTS PAID THROUGH DEBT (CAMP HALL SUBSTATION, INFRAST 41. BEGINNING BALANCE 42. PROCEEDS FROM LONG-TERM DEBT - NET 43. PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE 44. TRANSFER (TO)/FROM OTHER FUNDS 45. TRANSFER (TO)/FROM CIGI FUND 46. TRANSFER (TO)/FROM REVENUE FUND 47. SUBTOTAL	0 0 10,624 0 0 0 0	TRUNKED RAD 0 0 12,906 0 0 0 12,906	0 0 6,958 0 0 0 0 6,958	0 0 3,118 0 0 0 0 3,118	0 0 3,524 0 0 0 0	0 0 3,836 0 0 0 0 3,836	0 0 2,836 0 0 0 2,836	0 0 2,070 0 0 0 0 2,070	0 0 1,707 0 0 0 0	0 0 1,674 0 0 0 0	0 0 1,648 0 0 0 0	0 0 1,092 0 0 0 0	0 0 1,054 0 0 0 0	0 0 591 0 0 0	0 0 81 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
48. CONSTRUCTION EXPENDITURES (1) 49. INTEREST ON COMMERCIAL PAPER/REVOLVING CREDIT NOT PAID FROM REVENUE 50. REPAY COMMERCIAL PAPER/DIRECT PURCHASE	9,338 1,286 <u>0</u>	11,545 1,361 <u>0</u>	5,741 1,217 <u>0</u>	2,123 995 <u>0</u>	2,664 860 <u>0</u>	3,060 776 <u>0</u>	2,237 599 <u>0</u>	1,645 425 <u>0</u>	1,630 77 <u>0</u>	1,630 44 <u>0</u>	1,605 43 <u>0</u>	1,063 29 <u>0</u>	1,026 28 <u>0</u>	575 16 <u>0</u>	80 1 <u>0</u>	0 0 <u>0</u>	0 0 <u>0</u>	0 0 <u>0</u>	0 0 <u>0</u>	0 0 <u>0</u>
51. ENDING BALANCE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

(1) CASH BASIS.

EXHIBIT XII PAGE 2 OF 3

#### SANTEE COOPER ELECTRIC SYSTEM

#### CASH RECEIPTS & DISBURSEMENTS STATEMENT CONSTRUCTION AND MISCELLANEOUS FUNDS FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		2020	<u>2021</u>	2022	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	2029	2030	<u>2031</u>	2032	2033	2034	<u>2035</u>	2036	<u>2037</u>	<u>2038</u>	<u>2039</u>
52. 53. 54. 55. 56. 57.	PROCEEDS FROM LONG-TERM DEBT - NET PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE TRANSFER (TO)/FROM OTHER FUNDS TRANSFER (TO)/FROM CIGI FUND TRANSFER (TO)/FROM REVENUE FUND	5 0 52,146 0 0 0 0 52,151	2,795 82,236 49,373 0 0 0	4,192 135,309 50,262 0 0 0 189,763	4,150 0 52,069 0 0 0 56,219	6,419 124,391 72,322 0 0 0 0 203,132	1,713 0 19,576 0 0 0 21,289	733 28,368 8,792 0 0 0 2 37,893	729 0 9,242 0 0 0 0 9,971	1,223 23,840 14,598 0 0 0 39,661	1,145 0 12,626 0 0 0 13,771	31 12,967 341 0 0 0 13,339	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0						
59. 60.		49,356 <u>0</u>	47,976 82,236	50,304 135,309	49,800 <u>0</u>	77,028 124,391	20,556 <u>0</u>	8,796 28,368	8,748 <u>0</u>	14,676 23,840	13,740 <u>0</u>	372 12,967	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>						
61.	ENDING BALANCE	<u>2,795</u>	<u>4,192</u>	<u>4,150</u>	<u>6,419</u>	<u>1,713</u>	<u>733</u>	<u>729</u>	<u>1,223</u>	<u>1,145</u>	<u>31</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
62. 63. 64. 65. 66. 67.	PROCEEDS FROM LONG-TERM DEBT - NET PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE TRANSFER (TO)/FROM OTHER FUNDS TRANSFER (TO)/FROM CIGI FUND TRANSFER (TO)/FROM REVENUE FUND	0 0 0 0 0 0	0 0 0 0 0 0	0 0 13,085 0 0 0	1,289 0 22,692 0 0 0 23,981	8,513 142,167 106,390 0 0 0 257,070	12,747 0 151,524 0 0 0 0	11,307 278,350 126,825 0 0 0 416,482	2,449 0 28,481 0 0 0 30,930	1,554 45,563 17,083 0 0 0 64,200	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
69. 70.	• • • • • • • • • • • • • • • • • • • •	0 <u>0</u>	0 <u>0</u>	11,796 <u>0</u>	15,468 <u>0</u>	102,156 142,167	152,964 <u>0</u>	135,684 278,349	29,376 <u>0</u>	18,636 <u>45,564</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>
71.	ENDING BALANCE	<u>0</u>	<u>0</u>	<u>1,289</u>	<u>8,513</u>	12,747	<u>11,307</u>	<u>2,449</u>	<u>1,554</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
72. 73. 74. 75. 76. 77.	PROCEEDS FROM LONG-TERM DEBT - NET PROCEEDS FROM COMMERCIAL PAPER FINANCING TRANSFER (TO)/FROM OTHER FUNDS TRANSFER (TO)/FROM CIGI FUND TRANSFER (TO)/FROM REVENUE FUND	0 0 0 0 0 0	0 0 19,502 0 0 0	2,846 55,660 36,158 0 0 0 94,664	4,852 0 53,869 0 0 0 58,721	497 60,865 6,996 0 0 0 68,358	1,529 0 19,953 0 0 0 21,482	3,134 59,779 39,826 0 0 0 102,739	5,352 0 59,420 0 0 0 0 64,772	548 65,448 6,028 0 0 0 72,024	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
79. 80.	CONSTRUCTION EXPENDITURES (1) REPAY COMMERCIAL PAPER/DIRECT PURCHASE	0 <u>0</u>	16,656 <u>0</u>	34,152 55,660	58,224 <u>0</u>	5,964 <u>60,865</u>	18,348 <u>0</u>	37,608 59,779	64,224 <u>0</u>	6,576 <u>65,448</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>
81.	ENDING BALANCE	<u>0</u>	<u>2,846</u>	<u>4,852</u>	<u>497</u>	<u>1,529</u>	<u>3,134</u>	<u>5,352</u>	<u>548</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>0</u>						
82. 83. 84. 85. 86. 87.	TRANSFER (TO)/FROM REVENUE FUND	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 24,804 24,804 0 0 0 0 49,608	0 0 1,833 0 0 0 0	1,833 21,996 20,163 0 0 0 43,992	0 0 3,350 0 0 0 0 3,350	3,350 40,200 36,850 0 0 0 0 80,400	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0
89. 90.	• •	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	24,804 24,804	0 <u>0</u>	21,996 21,996	0 <u>0</u>	40,200 40,200	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>
91.	ENDING BALANCE	<u>o</u>	<u>o</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>1.833</u>	<u>0</u>	<u>3,350</u>	<u>0</u>	<u>o</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>o</u>

(1) CASH BASIS.

SANTEE COOPER EXHIBIT XII
ELECTRIC SYSTEM PAGE 3 OF 3

# CASH RECEIPTS & DISBURSEMENTS STATEMENT CONSTRUCTION AND MISCELLANEOUS FUNDS FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	2023	<u>2024</u>	2025	<u>2026</u>	<u>2027</u>	2028	2029	2030	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	2039	
92. 93.	TOTAL CONSTRUCTION FUND: (1) BEGINNING BALANCE PROCEEDS FROM LONG-TERM DEBT - NET	198,336 0	28,703 149,624	23,946 286,441	38,434 0	65,748 488,786	79,046 0	106,206 504,064	121,908 0	128,962 253,205	150,632 0	163,272 117,140	193,909 0	229,132 79,643	254,973 0	295,426 105,994	329,454 0	181,496 73,056	230,668	281,036 105,826	307,019 0	
94. 95. 96. 97. 98. 99.	PROCEEDS FROM COMMERCIAL PAPER/DIRECT PURCHASE TRANSFERS (TO)/FROM OTHER FUNDS TRANSFERS (TO)/FROM CIGI FUND TRANSFER (TO)/FROM DEBT REDUCTION FUND TRANSFER (TO)/FROM REVENUE FUND: CIF REQUIREMENT SUBTOTAL	97,503 0 0 (155,000) 151,145 291,984	160,594 0 0 (27,000) 151,414 463,335	165,405 0 0 0 149,432 625,224	191,050 0 0 0 153,797 383,281	291,292 0 0 0 155,071 1,000,897	263,921 0 0 0 158,954 501,921	246,813 0 0 (10,000) 163,116 1,010,199	138,927 0 0 (17,500) 166,062 409,397	118,056 0 0 (20,000) 169,232 649,455	66,104 0 0 (20,000) 171,892 368,628	54,360 0 0 (20,000) 174,810 489,582	38,376 0 0 (22,500) <u>177,866</u> 387,651	43,413 0 0 (22,500) 182,640 512,328	45,297 0 0 (22,500) 185,674 463,444	61,369 0 0 (22,500) 189,556 629,845	37,922 0 0 (192,500) 193,249 368,125	35,134 0 0 (22,500) 197,574 464,760	41,418 0 0 (22,500) 201,611 451,197	35,328 0 0 (69,145) 206,924 559,969	0 0 0 (22,500) <u>210,292</u> 494,811	
100. 101. 102.	CONSTRUCTION EXPENDITURES (2) INTEREST ON COMMERCIAL PAPER/REVOLVING CREDIT NOT PAID FROM REVENUE REPAY COMMERCIAL PAPER/DIRECT PURCHASE	261,995 1,286 <u>0</u>	292,192 1,361 145,836 23,945	299,132 1,217 286,441 38,434	316,538 995 <u>0</u>	432,205 860 488,785 79,046	394,939 776 <u>0</u>	383,630 599 504,062 121,908	280,010 425 <u>0</u>	245,540 77 253,206 150,632	205,312 44 <u>0</u> 163,272	178,488 43 117,142 193,909	158,490 29 <u>0</u>	177,685 28 79,643	168,002 16 <u>0</u> 295,427	194,396 1 105,994 329,454	186,629 0 0 181,496	161,036 0 73,056	170,161 0 0 281,036	176,204 0 76,746	173,791 0 0 321,020	
1. 2. 3. 4. 5.	MISCELLANEOUS NUCLEAR PROCEEDS BEGINNING BALANCE PROCEEDS FROM NUCLEAR SALES USED TO DEFEASE DEBT USED TO AVOID FUTURE DEBT USED TO PAYDOWN EXISTING DEBT	0 0 0 0 0	0 150,000 (10,000) 0 (140,000)	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	
6	FNDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

(1) SEE INDIVIDUAL FUND SHEETS FOR DETAILS RELATED TO TRANSFERS BETWEEN FUNDS. (2) CASH BASIS.

# SANTEE COOPER ELECTRIC SYSTEM DETAIL REPORTS

11/22/19

SANTEE COOPER **ELECTRIC SYSTEM** CASH FLOW STATEMENT FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN THOUSANDS)

SCHEDULE 1

PAGE 1 OF 2

		2020	<u>2021</u>	2022	2023	2024	2025	2026	2027	2028	2029	2030	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	2037	2038	2039
	REVENUES:																				
1.	OPERATING REVENUES	1,774,683	1,777,668	1,753,262	1,804,591		1,863,721		, ,	1,978,018	2,009,773	2,043,968	2,080,172	2,136,243	2,172,069	2,217,514	2,261,319	2,312,398	2,359,814	2,422,089	2,461,981
2.	FRANCHISE TAXES	5,896	5,908	5,924	6,074	6,202	6,367	6,535	6,670	6,790	6,959	7,085	7,227	7,426	7,571	7,728	7,905	8,047	8,200	8,377	8,510
3.	PROJECTED RATE ADJUSTMENTS (1)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>500</u>	<u>3,878</u>	<u>8,165</u>	<u>8,286</u>	<u>8,410</u>	<u>8,535</u>	<u>8,662</u>	<u>8,791</u>	<u>8,922</u>	<u>9,055</u>	<u>9,190</u>	<u>9,327</u>	<u>9,466</u>	<u>9,607</u>	<u>9,750</u>
4.	TOTAL REVENUES	<u>1,780,579</u>	<u>1,783,576</u>	<u>1,759,186</u>	<u>1,810,665</u>	<u>1,824,509</u>	<u>1,870,588</u>	<u>1,919,892</u>	<u>1,955,405</u>	<u>1,993,094</u>	<u>2,025,142</u>	2,059,588	2,096,061	<u>2,152,460</u>	<u>2,188,562</u>	2,234,297	<u>2,278,414</u>	<u>2,329,772</u>	<u>2,377,480</u>	2,440,073	<u>2,480,241</u>
	OPERATING EXPENSES:																				
5.	PRODUCTION: MISCELLANEOUS	16,033	11,673	9,639	9,833	10,482	10,804	10,260	13,636	14,418	14,467	10,208	10,839	9,749	10,576	11,677	10,886	12,506	13,253	12,875	13,392
6.	HYDRO	11,888	12,139	12,130	12,394	12,654	12,920	13,191	13,468	13,751	14,040	14,335	14,636	14,943	15,257	15,577	15,904	16,238	16,579	16,927	17,283
7.	SOLAR	109	109	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.	JEFFERIES 3&4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.	GRAINGER 1&2	22	23	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.	WINYAH NO. 1, 2, 3, & 4	48,597	52,333	47,737	36,616	37,078	37,486	39,434	6,835	6,978	7,125	7,274	7,427	7,583	7,742	7,905	8,071	8,240	8,413	8,590	8,771
11.	CROSS 1, 2, 3, & 4	94,313	100,244	91,860	105,329	98,348	106,800	103,121	99,995	109,239	105,351	111,881	124,755	111,476	112,477	122,320	115,238	124,547	126,870	121,547	125,224
12.	EXISTING COMBUSTION TURBINES	5,711	6,352	4,603	5,965	6,039	6,138	6,275	6,409	7,849	7,342	6,818	6,963	7,111	7,261	7,416	7,573	7,735	7,899	8,065	9,988
13.	COMBUSTION TURBINESFUTURE	0	0	0	974	995	1,014	1,035	1,054	1,076	1,097	1,119	1,142	1,164	1,188	1,211	1,236	1,262	1,286	1,311	1,338
14.	EXISTING COMBINED CYCLES	7,521	11,671	7,979	12,418	11,907	8,912	11,135	11,723	9,431	17,577	9,765	9,969	15,261	10,344	10,513	19,946	10,999	11,191	17,278	11,692
15.	COMBINED CYCLEFUTURE	0	0	0	0	0	0	0	13,135	13,111	13,543	13,864	13,507	13,486	13,613	13,632	14,212	14,158	13,983	14,967	14,983
16.	LANDFILL GAS	3,122	3,192	3,178	3,244	3,312	3,382	3,453	3,525	3,599	3,675	3,752	3,831	3,912	3,994	4,078	4,163	4,251	4,340	4,431	4,524
17.	SUMMER NUCLEAR STATION	72,468	69,816	71,720	71,007	71,037	73,100	76,130	78,703	80,974	83,260	85,557	88,029	90,520	93,024	95,716	98,429	101,160	104,091	107,047	110,024
18.	PURCHASED POWER-SEPA	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433	10,433
19.	-RENEWABLE	47,400	56,074	65,481	87,057	116,522	112,632	84,806	99,355	105,307	109,144	113,276	112,973	113,011	112,385	112,106	111,828	111,877	111,270	111,014	110,751
20.	-PPA 2031	0	0	0	0	0	0	0	0	0	0	0	12,438	33,284	57,375	87,525	119,188	154,436	190,355	211,927	233,189
21.	-OTHER	99,817	<u>75,445</u>	53,932	<u>51,856</u>	<u>51,923</u>	<u>54,300</u>	<u>47,749</u>	37,008	36,439	36,207	32,817	<u>38,420</u>	<u>27,384</u>	<u>30,451</u>	<u>33,603</u>	<u>41,117</u>	<u>41,885</u>	<u>36,953</u>	<u>32,969</u>	<u>36,218</u>
22.	TOTAL PRODUCTION (EXCLUDING FUEL)	417,434	409,504	378,825	407,126	430,730	437,921	407,022	395,279	412,605	423,261	421,099	455,362	459,317	486,120	533,712	578,224	619,727	656,916	679,381	707,810
23.	FUEL: SOLAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24.	WINYAH 1, 2, 3, & 4	37,567	34,803	29,718	30,619	27,900	34,325	52,389	0	0	0	0	0	0	0	0	0	0	0	0	0
25.	CROSS 1, 2, 3, & 4	365,626	387,232	382,725	398,477	391,993	393,110	426,771	370,974	372,909	409,699	405,322	406,582	446,850	436,918	431,765	457,629	438,479	441,140	457,887	461,385
26.	EXISTING COMBUSTION TURBINES	33,284	33,704	33,369	23,497	11,281	284	3,477	3,062	3,309	344	696	492	748	582	838	817	1,081	776	542	1,171
27.	COMBUSTION TURBINESFUTURE	0	0	0	0	31	0	30	0	14	0	8	8	0	13	0	0	32	17	0	9
28.	EXISTING COMBINED CYCLES	83,146	77,615	73,704	92,020	94,493	118,981	117,855	114,868	125,443	111,221	134,923	136,959	134,156	146,408	147,180	130,106	159,332	160,705	153,530	169,645
29.	COMBINED CYCLESFUTURE	0	0	0	0	0	0	0	127,676	128,136	132,333	138,167	134,191	135,078	138,409	138,264	146,452	146,806	142,825	156,297	154,736
30.	LANDFILL GAS	873	868	868	868	870	867	868	864	863	850	844	848	849	839	838	840	839	836	837	840
31.	SUMMER NUCLEAR STATION	19,435	16,869	16,276	15,180	15,593	17,969	16,911	17,276	19,725	17,120	17,512	19,734	18,324	18,635	21,035	19,466	19,893	22,420	20,753	21,134
32.	TOTAL FUEL BURNED	539,931	<u>551,091</u>	536,660	560,661	<u>542,161</u>	<u>565,536</u>	618,301	634,720	650,399	671,567	697,472	698,814	736,005	741,804	739,920	755,310	766,462	<u>768,719</u>	789,846	808,920
33.	TOTAL PRODUCTION	957,365	960,595	915,485	967,787	972,891	1,003,457	1,025,323	1,029,999	1,063,004	1,094,828	<u>1,118,571</u>	<u>1,154,176</u>	1,195,322	1,227,924	1,273,632	1,333,534	<u>1,386,189</u>	1,425,635	1,469,227	<u>1,516,730</u>
34.	TRANSMISSION	36.993	34.457	35.191	36.201	36.980	37.402	37.825	38.077	38.933	39.868	40.886	41.990	43.183	44.469	45.851	47.333	48.919	50.613	52.419	54.342
35.	DISTRIBUTION	17,431	17,656	18,363	18,748	19,029	19,313	19,601	19,893	20,188	20,486	20,789	21,095	21,404	21,718	22,035	22,355	22,680	23,008	23,340	23,676
36.	CUSTOMER ACCOUNTING	15.007	15,397	15,402	15,726	16.056	16.393	16,737	17.089	17.448	17.814	18.188	18.570	18,960	19.358	19.765	20.180	20.604	21.036	21,478	21.929
37.	SALES PROMOTION	10,122	11.118	11.184	11.680	12,167	12,681	13,206	13,769	14,296	14,804	15,242	15,533	15,907	16,330	16,712	17,049	17,317	17,566	17,792	18,029
37. 38.	ADMINISTRATIVE & GENERAL	107.617	113.797	116.118	118,771	121,291	123,840	126.512	130.176	132.921	135,724	138,587	141.510	144.494	147,542	150,654	153,739	156.981	160.198	163,576	166,932
39.	FRANCHISE TAXES	5,896	5,908	5,924	6,074	6,202	6,367	6,535	6,670	6,790	6,959	7,085	7,227	7,426	7,571	7,728	7,905	8,047	8,200	8,377	8,510
39. 40.	TAXES PAID FROM REVENUES	212	227	233	236	0,202 <u>244</u>	252	264	259	262	265	266	269	262	221	222	223	237	225	226	8,310 <u>227</u>
40.	TOTAL OF THE PROPERTY OF THE P	<u> </u>	<u> </u>	200	200	244	<u> 202</u>	204	200	202	200	200	200	202	<u>~~1</u>	<u> </u>	220	201	220	220	<u> </u>
41.	TOTAL OPERATING EXPENSES	<u>1,150,642</u>	<u>1,159,156</u>	1,117,899	1,175,223	1,184,860	1,219,705	1,246,004	1,255,931	1,293,841	1,330,748	1,359,614	1,400,370	1,446,958	1,485,132	1,536,599	1,602,318	1,660,974	<u>1,706,482</u>	1,756,436	<u>1,810,375</u>

(1) ADJUSTMENTS ARE CUMULATIVE

SANTEE COOPER SCHEDULE 1 ELECTRIC SYSTEM 11/22/19 PAGE 2 OF 2 CASH FLOW STATEMENT

> FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		2020	2021	2022	2023	2024	<u>2025</u>	<u>2026</u>	2027	2028	2029	2030	<u>2031</u>	2032	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	2038	2039
42. 43.	OPERATING INCOME INTEREST AND MISCELLANEOUS INCOME	629,937 <u>11,151</u>	624,420 <u>11,322</u>	641,287 12,409	635,442 <u>12,434</u>	639,649 <u>13,712</u>	650,883 <u>13,480</u>	673,888 <u>13,304</u>	699,474 12,582	699,253 <u>12,317</u>	694,394 <u>11,732</u>	699,974 <u>11,744</u>	695,691 <u>11,383</u>	705,502 11,361	703,430 <u>11,115</u>	697,698 <u>11,229</u>	676,096 <u>10,746</u>	668,798 <u>10,431</u>	670,998 <u>10,745</u>	683,637 10,834	669,866 <u>10,422</u>
44.	REVENUE AVAILABLE FOR DEBT SERVICE & OTHER DEDUCTIONS	<u>641,088</u>	635,742	<u>653,696</u>	<u>647,876</u>	<u>653,361</u>	664,363	<u>687,192</u>	<u>712,056</u>	<u>711,570</u>	<u>706,126</u>	<u>711,718</u>	<u>707,074</u>	<u>716,863</u>	<u>714,545</u>	708,927	<u>686,842</u>	679,229	<u>681,743</u>	<u>694,471</u>	680,288
45.	DEBT SERVICE (SCHEDULE 7): TOTAL LONG TERM DEBT SERVICE	416,387	434,945	456,942	439,587	449,057	450,813	464,250	494,980	488,053	479,540	484,272	477,907	478,868	477,691	466,549	433,088	421,825	421,459	426,951	408,444
46.	REVENUE AFTER DEBT SERVICE	224,701	200,797	196,754	208,289	204,304	213,550	222,942	217,076	223,517	226,586	227,446	229,167	237,995	236,854	242,378	<u>253,754</u>	<u>257,404</u>	260,284	<u>267,520</u>	<u>271,844</u>
	OTHER DEDUCTIONS:																				
47.	COMMERCIAL PAPER/DIRECT PURCHASE - PRINCIPAL	22,504	2,325	3,980	5,215	3,980	3,980	5,215	5,215	5,215	5,215	3,980	3,980	3,980	3,431	3,431	3,431	3,431	3,431	3,431	3,431
48.	- INTEREST	11,096	11,633	10,794	11,325	12,207	12,439	12,232	9,578	9,373	7,811	7,583	7,030	6,993	6,991	7,089	6,800	6,700	6,812	6,676	5,924
49.	INTEREST ON CUSTOMER DEPOSITS	498	523	550	578	608	639	671	705	741	779	819	861	905	951	999	1,050	1,104	1,160	1,219	1,281
50.	PAYMENT TO COUNTIES	4,465	4,478	4,416	4,545	4,578	4,693	4,816	4,905	4,998	5,078	5,165	5,255	5,396	5,486	5,600	5,710	5,838	5,956	6,113	6,213
51.	PAYMENT TO STATE	17,726 151,145	17,777 151.414	17,533 149,432	18,046 153,797	18,183 155,071	18,642 158,954	19,134	19,487 166,062	19,863 169,232	20,182 171.892	20,525 174,810	20,888 177.866	21,450 182,640	21,810 185.674	22,266 189,556	22,705 193,249	23,217 197,574	23,693 201.611	24,317 206,924	24,717 210,292
52. 53.	CAPITAL IMPROVEMENT FUND (1) TOTAL OTHER DEDUCTIONS	207,434	188,150	186,705	193,506	194,627	199,347	163,116 205,184	205,952	209,422	210,957	212,882	215,880	221,364	224,343	228,941	232,945	237,864	242,663	248,680	251,858
55.	TOTAL OTHER DEDUCTIONS	201,434	100,130	100,703	193,300	194,027	199,541	203,104	200,902	209,422	210,931	212,002	213,000	221,304	224,343	220,941	232,943	237,004	242,003	240,000	231,030
54.	NET REMAINING	<u>17,267</u>	12,647	10,049	14,783	9,677	14,203	17,758	<u>11,124</u>	14,095	15,629	14,564	13,287	<u>16,631</u>	<u>12,511</u>	13,437	20,809	<u>19,540</u>	<u>17,621</u>	<u>18,840</u>	<u>19,986</u>
55.	TOTAL REVENUE AVAILABLE (2)	1,785,834	1.788.990	1,765,671	1.817.025	1.832.019	1.877.701	1.926.661	1.961.317	1.998.621	2.029.915	2.064.247	2.100.217	2.156.396	2.192.106	2.237.798	2.281.255	2.332.156	2.380.025	2,442,530	2,482,153
56.	LESS: REVENUE REQUIRED (3)	1,776,631	1,784,879	1,764,287	1,810,721	1,831,409	1,872,368	1,917,690	1,959,827	1,994,072	2,023,852	2,059,542	2,097,113	2,149,925	2,190,360	2,235,285	2,270,879	2,323,455	2,373,694	2,435,202	2,473,784
57.	WORKING CAPITAL (4)	7,390	3,675	<u>0</u>	<u>5,325</u>	<u>0</u>	4,644	<u>8,455</u>	773	4,114	4,909	3,792	2,836	<u>5,214</u>	<u>1,542</u>	2,182	9,219	7,977	<u>5,885</u>	7,066	7,338
58.	REVENUE SURPLUS/(DEFICIENCY)	<u>1,813</u>	<u>436</u>	<u>1,384</u>	<u>979</u>	<u>610</u>	<u>689</u>	<u>516</u>	<u>717</u>	<u>435</u>	<u>1,154</u>	<u>913</u>	<u>268</u>	<u>1,257</u>	<u>204</u>	<u>331</u>	<u>1,157</u>	<u>724</u>	<u>446</u>	<u>262</u>	<u>1,031</u>

<sup>(1)</sup> THIS AMOUNT REFLECTS THE AMOUNTS TRANSFERRED TO THE CAPITAL IMPROVEMENT FUND

<sup>(2)</sup> EXCLUDES FRANCHISE FEES.

<sup>(3)</sup> REVENUE REQUIRED IS BASED ON TOTAL COST PLUS CAPITAL IMPROVEMENT REQUIREMENT OF 9% THROUGH 2039.

<sup>(4)</sup> INCLUDES CAPITAL IMPROVEMENT REQUIREMENT.

#### SANTEE COOPER **ELECTRIC SYSTEM** LONG-TERM DEBT OUTSTANDING

FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

	<u>2020</u>	<u>2021</u>	2022	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	2032	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1. 2009-C REVENUE OBLIGATION BOND	1,830	1,575	1,305	1,000	825	635	435	225	0	0	0	0	0	0	0	0	0	0	0	0
2. 2009-F REVENUE OBLIGATION BOND	100,000	100,000	100,000	100,000	100,000	82,164	63,306	43,368	22,288	0	0	0	0	0	0	0	0	0	0	0
3. 2010-B REVENUE OBLIGATION BOND REFUNDING	64,150	64,150	64,150	64,150	64,150	64,150	64,150	64,150	64,150	64,150	61,850	31,850	0	0	0	0	0	0	0	0
4. 2010-C REVENUE OBLIGATION BOND	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000
5. 2011-B REVENUE OBLIGATION BOND REFUNDING	35,283	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6. 2011-C REVENUE OBLIGATION BOND REFUNDING	135,855	135,855	135,855	135,855	135,855	135,855	135,855	135,855	135,855	135,855	135,855	135,855	133,239	101,443	66,109	39,009	0	0	0	0
7. 2012-A REVENUE OBLIGATION BOND REFUNDING	62,663	56,488	53,825	51,060	47,558	37,304	28,060	20,116	11,762	3,442	0	0	0	0	0	0	0	0	0	0
8. 2012-B REVENUE OBLIGATION BOND REFUNDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9. 2012-C REVENUE OBLIGATION BOND REFUNDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10. 2012-D REVENUE OBLIGATION BOND	260,547	258,745	255,268	251,136	247,412	243,524	239,474	235,249	231,501	227,597	223,519	219,800	215,937	215,836	215,731	215,626	215,515	215,400	215,400	211,331
11. 2012-E REVENUE OBLIGATION BOND	230,460	228,498	204,957	181,416	157,875	134,335	110,795	86,805	57,870	28,935	0	0	0	0	0	0	0	0	0	0
12. 2013-A REVENUE OBLIGATION BOND	152,655	152,655	152,655	152,655	152,655	152,655	152,655	152,655	152,655	152,655	152,655	152,655	151,536	138,037	123,887	112,274	108,532	103,506	98,855	85,090
13. 2013-B REVENUE OBLIGATION BOND	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	388,730	385,387	345,100	302,799	258,380	211,737
14. 2013-C REVENUE OBLIGATION BOND	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	246,703	206,972	164,923	120,417	101,417	82,417	63,417	44,250
15. 2013-E REVENUE OBLIGATION BOND	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765	506,765
16. 2014-A REVENUE OBLIGATION BOND	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000
17. 2014-B REVENUE OBLIGATION BOND	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	41,910	37,506	32,877	28,022	22,921	17,567	11,941	6,114	0	0
18. 2014-C REVENUE OBLIGATION BOND REFUNDING	695,076	676,638	656,724	631,700	604,503	567,480	541,406	523,667	492,646	460,523	432,703	400,052	381,815	362,311	353,463	344,234	321,560	306,525	285,638	264,610
19. 2014-D REVENUE OBLIGATION BOND REFUNDING	31,795	31,393	26,556	21,579	16,449	11,149	5,670	0	0	0	0	0	0	0	0	0	0	0	0	0
20. 2015-A REVENUE OBLIGATION BOND	569,315	558,552	552,968	535,178	516,518	496,563	475,200	473,251	451,363	446,440	445,478	434,742	432,955	431,024	429,028	426,961	424,810	422,578	420,266	417,868
21. 2015-B REVENUE OBLIGATION BOND REFUNDING	64,870	63,150	42,521	21,748	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22. 2015-C REVENUE OBLIGATION BOND REFUNDING	88,319	18,278	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23. 2015-D REVENUE OBLIGATION BOND	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657	169,657
24. 2015-E REVENUE OBLIGATION BOND	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
25. 2016-A REVENUE OBLIGATION BOND	543,261	537,432	531,845	531,845	531,730	529,643	519,453	505,742	491,486	457,910	422,658	388,936	353,076	305,850	257,240	215,928	161,436	107,220	85,094	80,992
26. 2016-B REVENUE OBLIGATION BOND	508,705	508,705	508,705	508,705	508,705	508,705	508,705	508,705	508,705	508,705	508,071	500,531	493,738	486,609	477,738	453,197	427,431	400,386	371,954	344,383
27. 2016-C REVENUE OBLIGATION BOND REFUNDING	52,400	52,230	50,182	48,033	45,778	43,409	40,923	38,313	35,571	32,694	29,672	26,498	23,168	19,703	15,379	4,001	0	0	0	0
28. 2016-D REVENUE OBLIGATION BOND	174,980	174,980	160,398	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29. 2019-A REVENUE OBLIGATION BOND (VRDB)	143,280	143,280	124,875	117,130	112,120	110,315	109,460	97,210	88,010	72,460	59,460	57,580	46,460	30,920	16,145	0	0	0	0	0
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)	10,000	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>								
31. SUBTOTAL EXISTING LONG-TERM DEBT	6,467,871	6,305,031	<u>6,165,216</u>	<u>5,895,617</u>	<u>5,784,560</u>	<u>5,660,313</u>	<u>5,537,974</u>	<u>5,427,738</u>	5,286,289	5,133,793	5,013,983	<u>4,886,157</u>	<u>4,761,656</u>	4,576,879	4,392,716	4,196,023	3,979,164	3,808,367	3,660,426	3,521,683
32. FUTURE-CAPITAL TRANSMISSION	0	68,069	71,525	69,520	106,736	104,591	155,795	131,455	192,379	173,369	221,624	202,744	246,843	232,302	288,621	278,817	333,150	307,942	373,626	326,429
33. FUTURE-BATTERY STORAGE	0	0	0	0	24,419	23,125	43,435	40,893	77,829	72,991	67,970	62,758	57,349	51,735	45,907	39,859	33,581	27,064	20,301	14,391
34. FUTURE-COMBUSTION TURBINES	0	0	56,222	53,294	110,145	103,756	155,957	145,923	199,932	185,695	170,969	155,737	139,983	123,687	106,832	89,397	71,365	52,712	38,278	26,005
35. FUTURE TRANSMISSION SPECIAL PROJECTS	0	0	60,464	57,175	140,325	132,098	177,930	166,173	157,977	145,184	168,798	153,107	136,878	120,091	102,728	84,770	66,195	49,664	35,248	24,177
36. FUTURE-FERC CAPITAL	0	0	10,899	10,899	15,681	15,681	17,320	16,342	17,491	16,328	17,703	16,318	31,434	29,051	48,408	44,698	51,722	47,136	49,762	44,437
37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	0	83,067	208,742	188,498	298,721	277,989	276,210	245,049	232,024	189,587	180,246	160,659	132,924	114,647	101,136	90,029	79,609	59,865	29,271	15,848
38. FUTURE-COMBINED CYCLE 2027	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	143,603	<u>143,603</u>	<u>424,764</u>	387,488	390,674	386,233	306,116	261,881	214,226	209,147	203,895	202,626	201,981	169,981	104,981	<u>55,531</u>
39. SUBTOTAL FUTURE LONG-TERM DEBT	<u>0</u>	<u>151,136</u>	407,852	379,386	839,630	800,843	1,251,411	1,133,323	1,268,306	1,169,387	1,133,426	1,013,204	959,637	880,660	897,527	<u>830,196</u>	837,603	714,364	<u>651,467</u>	<u>506,818</u>
40. ADJUSTMENT FOR REFINANCING (2)	(12,730)	(79,833)	(121,073)	(138,573)	(423,301)	(561,835)	(800,262)	(802,891)	(829,808)	(835,837)	(854,922)	(913,230)	(951,463)	(1,062,002)	(1,193,976)	(1,302,320)	(1,361,350)	(1,358,772)	(1,395,412)	(1,419,104)
41. ADJUSTMENT FOR DEBT PAYDOWN (3)	(136,548)	(270,028)	(270,028)	(270,028)	(269,933)	(268,793)	(267,607)	(266,374)	(262,678)	(232,409)	(202,087)	(171,710)	(170,209)	(168,648)	(167,025)	(426,415)	(424,660)	(422,834)	(457,863)	(455,888)
42. SUBTOTAL FUTURE LONG-TERM DEBT AND ADJUSTMENTS	(149,278)	(198,725)	<u>16,751</u>	(29,215)	146,396	(29,785)	183,542	64,058	175,820	101,141	76,417	(71,736)	(162,035)	(349,990)	(463,474)	(898,539)	(948,407)	(1,067,242)	(1,201,808)	(1,368,174)
43. TOTAL LONG-TERM DEBT OUTSTANDING	<u>6,318,593</u>	<u>6,106,306</u>	<u>6,181,967</u>	<u>5,866,402</u>	<u>5,930,956</u>	<u>5,630,528</u>	<u>5,721,516</u>	<u>5,491,796</u>	<u>5,462,109</u>	<u>5,234,934</u>	5,090,400	<u>4,814,421</u>	<u>4,599,621</u>	4,226,889	3,929,242	3,297,484	3,030,757	<u>2,741,125</u>	<u>2,458,618</u>	<u>2,153,509</u>

<sup>(1)</sup> BARCLAYS DIRECT PURCHASE AGREEMENT ISSUED FOR FUEL LEVELIZATION.

<sup>(2)</sup> INCLUDES ECONOMIC REFUNDING AND OTHER REFINANCING OF EXISTING DEBT.

<sup>(3)</sup> INCLUDES CALLS OF EXISTING DEBT

SANTEE COOPER SCHEDULE 3

## ELECTRIC SYSTEM RETIREMENT OF LONG-TERM DEBT

FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

									(DULLAR.	S IN THOUSE	(NDS)									
	<u>2020</u>	<u>2021</u>	2022	2023	<u>2024</u>	2025	<u>2026</u>	2027	2028	2029	2030	2031	2032	2033	2034	2035	<u>2036</u>	2037	<u>2038</u>	<u>2039</u>
2009-C REVENUE OBLIGATION BOND	240	255	270	305	175	190	200	210	225	0	0	0	0	0	0	0	0	0	0	0
2. 2009-F REVENUE OBLIGATION BOND	0	0	0	0	0	17,836	18,858	19,938	21,080	22,288	0	0	0	0	0	0	0	0	0	0
3. 2010-B REVENUE OBLIGATION BOND REFUNDING	0	0	0	0	0	0	0	0	0	0	2,300	30,000	31,850	0	0	0	0	0	0	0
4. 2010-C REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<ol><li>2011-B REVENUE OBLIGATION BOND REFUNDING</li></ol>	11,100	35,283	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<ol><li>2011-C REVENUE OBLIGATION BOND REFUNDING</li></ol>	0	0	0	0	0	0	0	0	0	0	0	0	2,616	31,796	35,334	27,100	39,009	0	0	0
<ol> <li>2012-A REVENUE OBLIGATION BOND REFUNDING</li> </ol>	541	6,175	2,663	2,765	3,501	10,254	9,244	7,944	8,355	8,320	3,442	0	0	0	0	0	0	0	0	0
8. 2012-B REVENUE OBLIGATION BOND REFUNDING	4,583	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<ol><li>2012-C REVENUE OBLIGATION BOND REFUNDING</li></ol>	12,435	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10. 2012-D REVENUE OBLIGATION BOND	138	1,802	3,478	4,132	3,724	3,888	4,050	4,225	3,748	3,904	4,078	3,719	3,863	100	105	105	111	115	0	4,069
11. 2012-E REVENUE OBLIGATION BOND	0	1,962	23,541	23,541	23,541	23,540	23,541	23,990	28,935	28,935	28,935	0	0	0	0	0	0	0	0	0
12. 2013-A REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	1,119	13,499	14,150	11,613	3,742	5,026	4,651	13,765
13. 2013-B REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,343	40,287	42,301	44,419	46,643
14. 2013-C REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	3,297	39,731	42,049	44,506	19,000	19,000	19,000	19,167
15. 2013-E REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16. 2014-A REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	365	4,404	4,629	0 4,855	5,101	5,354	5,626	5,827	6,114	0
<ul><li>17. 2014-B REVENUE OBLIGATION BOND</li><li>18. 2014-C REVENUE OBLIGATION BOND REFUNDING</li></ul>	1,529	18,438	19,915	25,024	27,197	37,023	26,074	17,740	31,020	32,123	27,820	32,651	18,238	19,504	8,848	9,230	22,674	15,035	20,887	21,028
<ul><li>18. 2014-C REVENUE OBLIGATION BOND REFUNDING</li><li>19. 2014-D REVENUE OBLIGATION BOND REFUNDING</li></ul>	1,329	402	4.837	4,978	5,130	5,300	5,479	5,670	0 31,020	0	27,020	0	10,230	19,504	0,040	9,230	22,074	15,033	20,007	21,028
20. 2015-A REVENUE OBLIGATION BOND  20. 2015-A REVENUE OBLIGATION BOND	945	10,764	5,583	17,791	18,660	19,955	21,363	1,949	21,888	4,923	963	10,735	1,788	1,930	1,996	2,067	2,152	2,232	2,312	2,398
21. 2015-B REVENUE OBLIGATION BOND REFUNDING	943	1,720	20,629	20,773	21,748	19,955	21,505	1,343	21,000	4,323	0	0,733	1,700	1,950	1,990	2,007	2,132	2,232	2,312	2,390
22. 2015-C REVENUE OBLIGATION BOND REFUNDING	61,716	70,040	18,278	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23. 2015-D REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24. 2015-E REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25. 2016-A REVENUE OBLIGATION BOND	484	5,829	5,587	0	115	2,087	10,190	13,711	14,256	33,576	35,252	33,722	35,860	47,226	48,610	41,313	54,492	54,217	22,125	4,102
26. 2016-B REVENUE OBLIGATION BOND	0	0	0	0	0	0	0	0	0	0	634	7,540	6,793	7,130	8,870	24,542	25,765	27,045	28,432	27,571
27. 2016-C REVENUE OBLIGATION BOND REFUNDING	0	170	2,048	2,149	2,255	2,370	2,485	2,611	2,741	2,877	3,023	3,173	3,331	3,465	4,324	11,378	4,001	0	0	0
	0	0	14,582	160,398	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28. 2016-D REVENUE OBLIGATION BOND	U	0	1 1,002	100,000																
28. 2016-D REVENUE OBLIGATION BOND 29. 2019-A REVENUE OBLIGATION BOND (VRDB)	1,540	0	18,405	7,745	5,010	1,805	855	12,250	9,200	15,550	13,000	1,880	11,120	15,540	14,775	16,145	0	0	0	0
	1,540 <u>16,055</u>	-			-	1,805 <u>0</u>	855 <u>0</u>	12,250 <u>0</u>	9,200 <u>0</u>	15,550 <u>0</u>	13,000 <u>0</u>	1,880 <u>0</u>	11,120 <u>0</u>	15,540 <u>0</u>	14,775 <u>0</u>	16,145 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>
<ul> <li>29. 2019-A REVENUE OBLIGATION BOND (VRDB)</li> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> </ul>	<u>16,055</u>	0 10,000	18,405 <u>0</u>	7,745 <u>0</u>	5,010 <u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	<u>0</u>
29. 2019-A REVENUE OBLIGATION BOND (VRDB)	,	0	18,405	7,745	5,010			12,250 <u>0</u> 110,238					11,120 <u>0</u> 124,504		14,775 <u>0</u> <u>184,162</u>	16,145 <u>0</u> 196,696	0 <u>0</u> <b>216,859</b>	0 <u>0</u> <b>170,798</b>	0 <u>0</u> 147,940	
<ul> <li>29. 2019-A REVENUE OBLIGATION BOND (VRDB)</li> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>31. SUBTOTAL EXISTING LONG-TERM DEBT</li> </ul>	<u>16,055</u>	0 10,000 162,840	18,405 <u>0</u> 139,816	7,745 <u>0</u> <u>269,601</u>	5,010 <u>0</u> <u>111,056</u>	<u>0</u> 124,248	<u>0</u> 122,339	<u>0</u> 110,238	<u>0</u> 141,448	<u>0</u> 152,496	<u>0</u> 119,812	<u>0</u> 127,824	<u>0</u> 124,504	<u>0</u> 184,776	<u>0</u> 184,162	<u>0</u> 196,696				<u>0</u> 138,743
<ul> <li>29. 2019-A REVENUE OBLIGATION BOND (VRDB)</li> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>31. SUBTOTAL EXISTING LONG-TERM DEBT</li> <li>32. FUTURE-CAPITAL TRANSMISSION</li> </ul>	<u>16,055</u>	0 10,000	18,405 <u>0</u> <b>139,816</b> 20,000	7,745 <u>0</u> <u>269,601</u> 2,005	5,010 <u>0</u> <b>111,056</b> 7,074	0 124,248 2,145	0 122,339 7,219	<u>0</u> <u>110,238</u> 24,340	0 141,448 11,730	0 152,496 19,010	0 119,812 16,492	<u>0</u> <b>127,824</b> 18,880	0 124,504 19,357	0 184,776 14,542	0 184,162 29,007	<u>0</u> 196,696 9,804	8,003	25,208	33,436	0 138,743 47,197
<ol> <li>29. 2019-A REVENUE OBLIGATION BOND (VRDB)</li> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>31. SUBTOTAL EXISTING LONG-TERM DEBT</li> <li>32. FUTURE-CAPITAL TRANSMISSION</li> <li>33. FUTURE-BATTERY STORAGE</li> </ol>	<u>16,055</u>	0 10,000 162,840	18,405 <u>0</u> 139,816 20,000 0	7,745 <u>0</u> <b>269,601</b> 2,005 0	5,010 <u>0</u> 111,056 7,074 635	0 124,248 2,145 1,295	0 122,339 7,219 1,907	0 110,238 24,340 2,543	0 141,448 11,730 3,669	0 152,496 19,010 4,838	0 119,812 16,492 5,021	0 127,824 18,880 5,212	0 124,504 19,357 5,409	0 184,776 14,542 5,614	0 184,162 29,007 5,827	0 196,696 9,804 6,049	8,003 6,278	25,208 6,516	33,436 6,764	0 138,743 47,197 5,910
<ul> <li>29. 2019-A REVENUE OBLIGATION BOND (VRDB)</li> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>31. SUBTOTAL EXISTING LONG-TERM DEBT</li> <li>32. FUTURE-CAPITAL TRANSMISSION</li> <li>33. FUTURE-BATTERY STORAGE</li> <li>34. FUTURE-COMBUSTION TURBINES</li> </ul>	<u>16,055</u>	0 10,000 162,840	18,405 <u>0</u> 139,816 20,000 0	7,745 <u>0</u> 269,601 2,005 0 2,928	5,010 <u>0</u> 111,056 7,074 635 4,629	0 124,248 2,145 1,295 6,389	0 122,339 7,219 1,907 8,181	0 110,238 24,340 2,543 10,034	0 141,448 11,730 3,669 12,100	0 152,496 19,010 4,838 14,237	0 119,812 16,492 5,021 14,726	0 127,824 18,880 5,212 15,232	0 124,504 19,357 5,409 15,755	0 184,776 14,542 5,614 16,296	0 184,162 29,007 5,827 16,855	9,804 6,049 17,434	8,003 6,278 18,033	25,208 6,516 18,652	33,436 6,764 14,434	0 138,743 47,197 5,910 12,273
<ol> <li>29. 2019-A REVENUE OBLIGATION BOND (VRDB)</li> <li>30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)</li> <li>31. SUBTOTAL EXISTING LONG-TERM DEBT</li> <li>32. FUTURE-CAPITAL TRANSMISSION</li> <li>33. FUTURE-BATTERY STORAGE</li> <li>34. FUTURE-COMBUSTION TURBINES</li> <li>35. FUTURE-TRANSMISSION SPECIAL PROJECTS</li> </ol>	<u>16,055</u>	0 10,000 162,840	18,405 <u>0</u> 139,816 20,000 0 0 1,617	7,745 <u>0</u> 269,601 2,005 0 2,928 3,289	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716	0 124,248 2,145 1,295 6,389 8,226	0 122,339 7,219 1,907 8,181 9,962	0 110,238 24,340 2,543 10,034 11,757	0 141,448 11,730 3,669 12,100 12,266	0 152,496 19,010 4,838 14,237 12,793	0 119,812 16,492 5,021 14,726 14,218	0 127,824 18,880 5,212 15,232 15,691	0 124,504 19,357 5,409 15,755 16,229	0 184,776 14,542 5,614 16,296 16,786	0 184,162 29,007 5,827 16,855 17,363	9,804 6,049 17,434 17,959	8,003 6,278 18,033 18,575	25,208 6,516 18,652 16,531	33,436 6,764 14,434 14,416	0 138,743 47,197 5,910 12,273 11,071
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL	<u>16,055</u>	0 10,000 162,840 0 0 0 0	18,405 <u>0</u> 139,816 20,000 0 0 1,617 0	7,745 <u>0</u> 269,601 2,005 0 2,928 3,289 0	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0	0 124,248 2,145 1,295 6,389 8,226 0	0 122,339 7,219 1,907 8,181 9,962 882	0 110,238 24,340 2,543 10,034 11,757 978	0 141,448 11,730 3,669 12,100 12,266 1,069	0 152,496 19,010 4,838 14,237 12,793 1,164	0 119,812 16,492 5,021 14,726 14,218 1,273	0 127,824 18,880 5,212 15,232 15,691 1,385	0 124,504 19,357 5,409 15,755 16,229 1,875	0 184,776 14,542 5,614 16,296 16,786 2,382	0 184,162 29,007 5,827 16,855 17,363 2,382	9,804 6,049 17,434 17,959 3,710	8,003 6,278 18,033 18,575 4,434	25,208 6,516 18,652 16,531 4,586	33,436 6,764 14,434 14,416 5,149	0 138,743 47,197 5,910 12,273 11,071 5,326
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	<u>16,055</u>	0 10,000 162,840	18,405 <u>0</u> 139,816 20,000 0 1,617 0 11,000	7,745 <u>0</u> 269,601 2,005 0 2,928 3,289 0 20,244	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0 15,425	0 124,248 2,145 1,295 6,389 8,226 0 20,732	0 122,339 7,219 1,907 8,181 9,962	0 110,238 24,340 2,543 10,034 11,757 978 31,161	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511	9,804 6,049 17,434 17,959 3,710 11,107	8,003 6,278 18,033 18,575 4,434 10,420	25,208 6,516 18,652 16,531 4,586 19,743	33,436 6,764 14,434 14,416 5,149 30,595	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL	<u>16,055</u>	0 10,000 162,840 0 0 0 0	18,405 <u>0</u> 139,816 20,000 0 0 1,617 0	7,745 <u>0</u> 269,601 2,005 0 2,928 3,289 0	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0	0 124,248 2,145 1,295 6,389 8,226 0	0 122,339 7,219 1,907 8,181 9,962 882	0 110,238 24,340 2,543 10,034 11,757 978	0 141,448 11,730 3,669 12,100 12,266 1,069	0 152,496 19,010 4,838 14,237 12,793 1,164	0 119,812 16,492 5,021 14,726 14,218 1,273	0 127,824 18,880 5,212 15,232 15,691 1,385	0 124,504 19,357 5,409 15,755 16,229 1,875	0 184,776 14,542 5,614 16,296 16,786 2,382	0 184,162 29,007 5,827 16,855 17,363 2,382	9,804 6,049 17,434 17,959 3,710	8,003 6,278 18,033 18,575 4,434	25,208 6,516 18,652 16,531 4,586	33,436 6,764 14,434 14,416 5,149	0 138,743 47,197 5,910 12,273 11,071 5,326
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	<u>16,055</u>	0 10,000 162,840 0 0 0	18,405 <u>0</u> 139,816 20,000 0 1,617 0 11,000	7,745 <u>0</u> 269,601 2,005 0 2,928 3,289 0 20,244	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0 15,425	0 124,248 2,145 1,295 6,389 8,226 0 20,732	0 122,339 7,219 1,907 8,181 9,962 882	0 110,238 24,340 2,543 10,034 11,757 978 31,161	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511	9,804 6,049 17,434 17,959 3,710 11,107	8,003 6,278 18,033 18,575 4,434 10,420	25,208 6,516 18,652 16,531 4,586 19,743	33,436 6,764 14,434 14,416 5,149 30,595	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027	16,055 111,306 0 0 0 0 0 0 0	0 10,000 162,840 0 0 0 0 0 0 0	18,405 <u>0</u> 139,816  20,000  0  1,617  0 11,000 <u>0</u> 32,617	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0 15,425 <u>0</u> 33,479	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37,276 118,089	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016	0 14,542 5,614 16,296 16,786 2,382 18,276 5,079	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197	9,804 6,049 17,434 17,959 3,710 11,107 1,269 <b>67,332</b>	8,003 6,278 18,033 18,575 4,434 10,420 645	25,208 6,516 18,652 16,531 4,586 19,743 32.000	33,436 6,764 14,434 14,416 5,149 30,595 65,000	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027	<u>16,055</u>	0 10,000 162,840 0 0 0	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 <u>0</u>	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u>	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0 15,425 <u>0</u>	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37,276	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655	0 14,542 5,614 16,296 16,786 2,382 18,276 5,079	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252	9,804 6,049 17,434 17,959 3,710 11,107 1,269	8,003 6,278 18,033 18,575 4,434 10,420 <u>645</u>	25,208 6,516 18,652 16,531 4,586 19,743 32,000	33,436 6,764 14,434 14,416 5,149 30,595 65,000	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT	16,055 111,306 0 0 0 0 0 0 0	0 10,000 162,840 0 0 0 0 0 0 0 0 0 0	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 0 32,617  172,433	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466  298,067	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0 15,425 <u>0</u> 33,479 144,535	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37,276 118,089 228,327	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5,079 78,975	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359	9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028	8,003 6,278 18,033 18,575 4,434 10,420 645 66,388 283,247	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT	16,055 111,306 0 0 0 0 0 0 0	0 10,000 162,840 0 0 0 0 0 0 0	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 <u>0</u> 32,617  172,433 (22,583)	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466  298,067 (166,809)	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0 15,425 <u>0</u> 33,479 144,535 8,632	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035 (2,311)	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37,276 118,089 228,327 5,093	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225 (1,188)	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416 6,082	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098 (3,226)	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046 (985)	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5,079 78,975 263,751 6,907	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359 1,300	9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028 (4,985)	8,003 6,278 18,033 18,575 4,434 10,420 645 66,388 283,247 (5,868)	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034 (2,504)	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734 (8,631)	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394 27,839
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT	16,055 111,306 0 0 0 0 0 0 0	0 10,000 162,840 0 0 0 0 0 0 0 0 0 0	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 0 32,617  172,433	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466  298,067	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0 15,425 <u>0</u> 33,479 144,535	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37,276 118,089 228,327	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5,079 78,975	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359	9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028	8,003 6,278 18,033 18,575 4,434 10,420 645 66,388 283,247	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT	16,055 111,306 0 0 0 0 0 0 0	0 10,000 162,840 0 0 0 0 0 0 0 0 0 0	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 <u>0</u> 32,617  172,433 (22,583)	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466  298,067 (166,809) (95)	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0 15,425 <u>0</u> 33,479 144,535 8,632	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035 (2,311)	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37,276 118,089 228,327 5,093	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225 (1,188)	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416 6,082	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098 (3,226)	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046 (985)	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5,079 78,975 263,751 6,907	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359 1,300	9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028 (4,985)	8,003 6,278 18,033 18,575 4,434 10,420 645 66,388 283,247 (5,868)	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034 (2,504)	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734 (8,631)	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394 27,839
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2) 42. ADJUSTMENT FOR DEBT PAYDOWN (3)	16,055 111,306 0 0 0 0 0 0 0 0 0 0 0 111,306	0 10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 <u>0</u> 32,617  172,433 (22,583) <u>0</u>	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466  298,067 (166,809)	5,010 0 111,056 7,074 635 4,629 5,716 0 15,425 0 33,479 144,535 8,632 (1,140)	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035 (2,311) (1,186)	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923 6,802 (1,233)	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37.276 118,089 228,327 5,093 (3,696)	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225 (1,188) (30,269)	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416 6,082 (30,322)	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098 (3,226) (30,377)	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046 (985) (1,501)	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520 1,133 (1,561)	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5,079 78,975 263,751 6,907 (1,623)	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359 1,300 (1,688)	0 196,696 9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028 (4,985) (1,755)	8,003 6,278 18,033 18,575 4,434 10,420 645 66,388 283,247 (5,868) (1,826)	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034 (2,504) (1,899)	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734 (8,631) (1,975)	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394 27,839 (6,122)
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2) 42. ADJUSTMENT FOR DEBT PAYDOWN (3)	16,055 111,306 0 0 0 0 0 0 0 0 0 0 0 111,306	0 10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 <u>0</u> 32,617  172,433 (22,583) <u>0</u>	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466  298,067 (166,809) (95)	5,010 0 111,056 7,074 635 4,629 5,716 0 15,425 0 33,479 144,535 8,632 (1,140)	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035 (2,311) (1,186)	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923 6,802 (1,233)	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37.276 118,089 228,327 5,093 (3,696)	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225 (1,188) (30,269)	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416 6,082 (30,322)	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098 (3,226) (30,377)	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046 (985) (1,501)	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520 1,133 (1,561)	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5,079 78,975 263,751 6,907 (1,623)	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359 1,300 (1,688)	0 196,696 9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028 (4,985) (1,755)	8,003 6,278 18,033 18,575 4,434 10,420 645 66,388 283,247 (5,868) (1,826)	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034 (2,504) (1,899)	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734 (8,631) (1,975)	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394 27,839 (6,122)
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2) 42. ADJUSTMENT FOR DEBT PAYDOWN (3)  43. TOTAL RETIREMENT PAID FROM ALL SOURCES  44. ADJUSTMENT FOR PRINCIPAL NOT PAID FROM REVENUE (1)	16,055 111,306 0 0 0 0 0 0 0 0 0 111,306 0 0 111,306 (16,055)	0 10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 162,840 (194) 0 162,646 (10,000)	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 <u>0</u> 32,617  172,433 (22,583) <u>0</u> 149,850	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466 298,067 (166,809) (95) 131,163 <u>0</u>	5,010 0 111,056 7,074 635 4,629 5,716 0 15,425 0 33,479 144,535 8,632 (1,140) 152,027	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035 (2,311) (1,186) 159,538	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923 6,802 (1,233) 186,492 0	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37,276 118,089 228,327 5,093 (3,696) 229,724	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225 (1,188) (30,269) 230,768	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416 6,082 (30,322) 227,176	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098 (3,226) (30,377) 240,495	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046 (985) (1,501) 245,560	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520 1,133 (1,561) 258,092	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5,079 78,975 263,751 6,907 (1,623) 269,035	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359 1,300 (1.688) 273,971	0 196,696 9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028 (4,985) (1,755) 257,288	8,003 6,278 18,033 18,575 4,434 10,420 645 66,388 283,247 (5,868) (1,826) 275,553	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034 (2,504) (1,899) 289,631	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734 (8,631) (1,975) 307,128	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394 27,839 (6,122) 305,111
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2) 42. ADJUSTMENT FOR DEBT PAYDOWN (3)  43. TOTAL RETIREMENT PAID FROM ALL SOURCES	16,055 111,306 0 0 0 0 0 0 0 0 0 0 111,306	0 10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 <u>0</u> 32,617  172,433 (22,583) <u>0</u> 149,850	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466  298,067 (166,809) (95)  131,163	5,010 0 111,056 7,074 635 4,629 5,716 0 15,425 0 33,479 144,535 8,632 (1,140) 152,027	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035 (2,311) (1,186) 159,538	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923 6,802 (1,233) 186,492	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37.276 118,089 228,327 5,093 (3,696)	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225 (1,188) (30,269) 230,768	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416 6,082 (30,322) 227,176	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098 (3,226) (30,377)	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046 (985) (1,501) 245,560	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520 1,133 (1,561) 258,092	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5.079 78,975 263,751 6,907 (1,623) 269,035	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359 1,300 (1,688) 273,971	0 196,696 9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028 (4,985) (1,755) 257,288	8,003 6,278 18,033 18,575 4,434 10,420 <u>645</u> <b>66,388</b> <b>283,247</b> (5,868) (1,826) <b>275,553</b>	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034 (2,504) (1,899)	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734 (8,631) (1,975) 307,128	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394 27,839 (6,122) 305,111
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2) 42. ADJUSTMENT FOR DEBT PAYDOWN (3)  43. TOTAL RETIREMENT PAID FROM ALL SOURCES  44. ADJUSTMENT FOR PRINCIPAL NOT PAID FROM REVENUE (1)  45. TOTAL RETIREMENT OF LONG-TERM DEBT	16,055 111,306 0 0 0 0 0 0 0 0 0 111,306 0 0 111,306 (16,055)	0 10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 <u>0</u> 32,617  172,433 (22,583) <u>0</u> 149,850	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466 298,067 (166,809) (95) 131,163 <u>0</u> 131,163	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0 15,425 <u>0</u> 33,479 144,535 8,632 (1,140) 152,027	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035 (2,311) (1.186) 159,538	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923 6,802 (1,233) 186,492 0	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37,276 118,089 228,327 5,093 (3.696) 229,724 0 229,724	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225 (1,188) (30,269) 230,768	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416 6,082 (30,322) 227,176	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098 (3,226) (30,377) 240,495	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046 (985) (1,501) 245,560	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520 1,133 (1,561) 258,092 0 258,092	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5,079 78,975 263,751 6,907 (1,623) 269,035	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359 1,300 (1,688) 273,971 0 273,971	0 196,696 9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028 (4,985) (1,755) 257,288	8,003 6,278 18,033 18,575 4,434 10,420 645 66,388 283,247 (5,868) (1,826) 275,553	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034 (2,504) (1,899) 289,631	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734 (8,631) (1,975) 307,128	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394 27,839 (6,122) 305,111
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2) 42. ADJUSTMENT FOR DEBT PAYDOWN (3)  43. TOTAL RETIREMENT PAID FROM ALL SOURCES  44. ADJUSTMENT FOR PRINCIPAL NOT PAID FROM REVENUE (1)	16,055 111,306 0 0 0 0 0 0 0 0 0 111,306 0 0 111,306 (16,055)	0 10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 162,840 (194) 0 162,646 (10,000)	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 <u>0</u> 32,617  172,433 (22,583) <u>0</u> 149,850	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466 298,067 (166,809) (95) 131,163 <u>0</u>	5,010 0 111,056 7,074 635 4,629 5,716 0 15,425 0 33,479 144,535 8,632 (1,140) 152,027	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035 (2,311) (1,186) 159,538	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923 6,802 (1,233) 186,492 0	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37,276 118,089 228,327 5,093 (3,696) 229,724	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225 (1,188) (30,269) 230,768	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416 6,082 (30,322) 227,176	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098 (3,226) (30,377) 240,495	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046 (985) (1,501) 245,560	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520 1,133 (1,561) 258,092	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5,079 78,975 263,751 6,907 (1,623) 269,035	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359 1,300 (1,688) 273,971	0 196,696 9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028 (4,985) (1,755) 257,288	8,003 6,278 18,033 18,575 4,434 10,420 645 66,388 283,247 (5,868) (1,826) 275,553	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034 (2,504) (1,899) 289,631	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734 (8,631) (1,975) 307,128	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394 27,839 (6,122) 305,111
29. 2019-A REVENUE OBLIGATION BOND (VRDB) 30. BARCLAYS DIRECT PURCHASE AGREEMENT (1) 31. SUBTOTAL EXISTING LONG-TERM DEBT  32. FUTURE-CAPITAL TRANSMISSION 33. FUTURE-BATTERY STORAGE 34. FUTURE-COMBUSTION TURBINES 35. FUTURE-TRANSMISSION SPECIAL PROJECTS 36. FUTURE-FERC CAPITAL 37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS 38. FUTURE-COMBINED CYCLE 2027  39. SUBTOTAL FUTURE LONG-TERM DEBT  40. SUBTOTAL LONG TERM DEBT  41. ADJUSTMENT FOR REFINANCING (2) 42. ADJUSTMENT FOR DEBT PAYDOWN (3)  43. TOTAL RETIREMENT PAID FROM ALL SOURCES  44. ADJUSTMENT FOR PRINCIPAL NOT PAID FROM REVENUE (1)  45. TOTAL RETIREMENT OF LONG-TERM DEBT	16,055 111,306 0 0 0 0 0 0 0 0 0 111,306 0 0 111,306 (16,055)	0 10,000 162,840 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18,405 <u>0</u> 139,816  20,000 0 1,617 0 11,000 <u>0</u> 32,617  172,433 (22,583) <u>0</u> 149,850	7,745 <u>0</u> 269,601  2,005 0 2,928 3,289 0 20,244 <u>0</u> 28,466 298,067 (166,809) (95) 131,163 <u>0</u> 131,163	5,010 <u>0</u> 111,056 7,074 635 4,629 5,716 0 15,425 <u>0</u> 33,479 144,535 8,632 (1,140) 152,027	0 124,248 2,145 1,295 6,389 8,226 0 20,732 0 38,787 163,035 (2,311) (1.186) 159,538	0 122,339 7,219 1,907 8,181 9,962 882 30,433 0 58,584 180,923 6,802 (1,233) 186,492 0	0 110,238 24,340 2,543 10,034 11,757 978 31,161 37,276 118,089 228,327 5,093 (3.696) 229,724 0 229,724	0 141,448 11,730 3,669 12,100 12,266 1,069 37,106 42,837 120,777 262,225 (1,188) (30,269) 230,768	0 152,496 19,010 4,838 14,237 12,793 1,164 42,437 4,441 98,920 251,416 6,082 (30,322) 227,176	0 119,812 16,492 5,021 14,726 14,218 1,273 22,439 80,117 154,286 274,098 (3,226) (30,377) 240,495	0 127,824 18,880 5,212 15,232 15,691 1,385 19,587 44,235 120,222 248,046 (985) (1,501) 245,560	0 124,504 19,357 5,409 15,755 16,229 1,875 27,736 47,655 134,016 258,520 1,133 (1,561) 258,092 0 258,092	0 184,776 14,542 5,614 16,296 16,786 2,382 18,276 5,079 78,975 263,751 6,907 (1,623) 269,035	0 184,162 29,007 5,827 16,855 17,363 2,382 13,511 5,252 90,197 274,359 1,300 (1,688) 273,971 0 273,971	0 196,696 9,804 6,049 17,434 17,959 3,710 11,107 1,269 67,332 264,028 (4,985) (1,755) 257,288	8,003 6,278 18,033 18,575 4,434 10,420 645 66,388 283,247 (5,868) (1,826) 275,553	25,208 6,516 18,652 16,531 4,586 19,743 32,000 123,236 294,034 (2,504) (1,899) 289,631	33,436 6,764 14,434 14,416 5,149 30,595 65,000 169,794 317,734 (8,631) (1,975) 307,128	0 138,743 47,197 5,910 12,273 11,071 5,326 13,423 49,451 144,651 283,394 27,839 (6,122) 305,111

(1) BARCLAYS DIRECT PURCHASE AGREEMENT ISSUED FOR FUEL LEVELIZATION.
(2) INCLUDES ECONOMIC REFUNDING AND OTHER REFINANCING OF EXISTING DEBT.

(2) INCLUDES ECONOMIC REFUNDING AND OT

(4) DEFEASANCE WITH INTERNAL FUNDS

11/22/19

11/22/19

#### SANTEE COOPER ELECTRIC SYSTEM

#### INTEREST PAID FROM REVENUES FOR LONG-TERM DEBT FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN THOUSANDS)

								,	,		-,									
	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	2027	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1. 2009-C REVENUE OBLIGATION BOND	129	114	98	81	62	51	40	27	14	0	0	0	0	0	0	0	0	0	0	0
2. 2009-F REVENUE OBLIGATION BOND	5,740	5,740	5,740	5,740	5,740	5,740	4,716	3,634	2,489	1,279	0	0	0	0	0	0	0	0	0	0
3. 2010-B REVENUE OBLIGATION BOND REFUNDING	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,793	1,593	0	0	0	0	0	0	0
4. 2010-C REVENUE OBLIGATION BOND	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234
5. 2011-B REVENUE OBLIGATION BOND REFUNDING	2,319	1,764	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6. 2011-C REVENUE OBLIGATION BOND REFUNDING	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,576	5,072	3,305	1,950	0	0	0
7. 2012-A REVENUE OBLIGATION BOND REFUNDING	3,269	3,021	2,715	2,607	2,482	2,319	1,806	1,344	947	539	172	0	0	0	0	0	0	0	0	0
8. 2012-B REVENUE OBLIGATION BOND REFUNDING	229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9. 2012-C REVENUE OBLIGATION BOND REFUNDING	622	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10. 2012-D REVENUE OBLIGATION BOND	12,966	12,959	12,869	12,696	12,496	12,310	12,116	11,913	11,702	11,514	11,319	11,120	10,985	10,791	10,787	10,783	10,779	10,775	10,770	10,770
11. 2012-E REVENUE OBLIGATION BOND	9,682	9,682	9,612	8,768	7,888	6,961	5,989	4,993	3,950	2,634	1,317	0	0	0	0	0	0	0	0	0
12. 2013-A REVENUE OBLIGATION BOND	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,750	7,027	6,319	5,739	5,552	5,300	5,066
13. 2013-B REVENUE OBLIGATION BOND	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,597	17,583	15,468	13,242
14. 2013-C REVENUE OBLIGATION BOND	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,269	11,971	9,539	6,965	5,866	4,767	3,668
15. 2013-E REVENUE OBLIGATION BOND	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609
16. 2014-A REVENUE OBLIGATION BOND	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000
17. 2014-B REVENUE OBLIGATION BOND	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,095	1,875	1,644	1,401	1,146	878	597	306	0
18. 2014-C REVENUE OBLIGATION BOND REFUNDING	33,355	33,279	32,357	31,361	30,145	29,175	27,324	26,020	25,133	23,599	22,176	20,785	19,153	18,253	17,457	17,473	17,020	15,978	15,226	14,182
19. 2014-D REVENUE OBLIGATION BOND REFUNDING	1,052	1,052	1,040	899	746	578	397	204	0	0	0	0	0	0	0	0	0	0	0	0
20. 2015-A REVENUE OBLIGATION BOND	28,051	28,003	27,465	27,186	26,305	25,463	24,466	23,398	23,300	22,206	21,960	21,911	21,377	21,314	21,247	21,176	21,092	21,014	20,932	20,844
21. 2015-B REVENUE OBLIGATION BOND REFUNDING	3,244	3,244	3,158	2,126	1,087	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22. 2015-C REVENUE OBLIGATION BOND REFUNDING	7,502	4,416	914	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23. 2015-D REVENUE OBLIGATION BOND	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093	8,093
24. 2015-E REVENUE OBLIGATION BOND	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750
25. 2016-A REVENUE OBLIGATION BOND	25,805	25,781	25,489	25,210	25,210	25,204	25,100	24,590	23,905	23,192	21,513	19,750	18,080	16,459	14,098	11,682	9,776	7,052	4,341	3,240
26. 2016-B REVENUE OBLIGATION BOND	22,835	22,835	22,856	23,085	23,085	23,085	23,085	23,085	23,169	24,085	24,085	24,054	23,677	23,337	22,980	22,537	21,414	21,272	19,919	18,498
27. 2016-C REVENUE OBLIGATION BOND REFUNDING	2,500	2,500	2,491	2,389	2,281	2,168	2,050	1,926	1,795	1,658	1,514	1,363	1,207	1,071	898	682	120	0	0	0
28. 2016-D REVENUE OBLIGATION BOND	4,179	4,179	4,179	3,830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29. 2019-A REVENUE OBLIGATION BOND (VRDB)	2,829	2,796	2,796	2,437	2,288	2,188	2,153	2,136	1,899	1,717	1,414	1,160	1,125	907	603	315	0	0	0	0
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)	<u>595</u>	135	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>								
31. SUBTOTAL EXISTING LONG-TERM DEBT	322,321	<u>316,918</u>	<u>309,197</u>	303,833	295,233	<u>290,660</u>	284,660	278,688	<u>273,721</u>	<u>267,841</u>	260,888	<u>255,450</u>	<u>249,491</u>	243,821	<u>234,991</u>	226,407	<u>217,016</u>	<u>207,375</u>	<u>198,715</u>	<u>191,196</u>
32. FUTURE-CAPITAL TRANSMISSION	0	1,171	2,745	2,460	3,153	3,672	4,603	5,359	5,772	6,618	7,078	7,624	6,974	8,491	9,459	9,929	11,736	11,460	12,298	12,853
33. FUTURE-BATTERY STORAGE	0	0	0	0	475	926	1,299	1,648	2,322	2,953	2,770	2,579	2,382	2,176	1,963	1,742	1,513	1,275	1,027	771
34. FUTURE-COMBUSTION TURBINES	0	0	965	1,931	2,886	3,782	4,600	5,356	6,146	6,866	6,377	5,871	5,348	4,807	4,247	3,669	3,070	2,451	1,810	1,314
35. FUTURE-TRANSMISSION SPECIAL PROJECTS	0	0	1,065	2,075	3,488	4,817	5,492	6,107	5,774	5,423	5,633	5,794	5,255	4,698	4,122	3,526	2,910	2,272	1,705	1,210
36. FUTURE-FERC CAPITAL	0	0	187	375	457	539	583	596	600	602	607	609	854	1,081	1,560	1,633	1,900	1,747	1,857	1,680
37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	0	1,429	6,934	7,174	8,639	10,270	10,050	9,496	8,838	7,977	6,743	6,196	5,523	4,569	3,941	3,477	3,096	2,738	2,059	1,007
38. FUTURE-COMBINED CYCLE 2027	0	0	0	0	2,724	5,448	10,782	16,116	15,568	14,808	14,656	11,594	9,930	8,109	7,936	7,757	7,714	7,692	6,447	3,918
39. SUBTOTAL FUTURE LONG-TERM DEBT	<u>0</u>	2,600	11,896	14,015	21,822	<u>29,454</u>	37,409	44,678	45,020	45,247	43,864	40,267	36,266	33,931	33,228	31,733	31,939	29,635	27,203	22,753
40. SUBTOTAL INTEREST ON LONG-TERM DEBT	322,321	319,518	321,093	317,848	317,055	320,114	322,069	323,366	318,741	313,088	304,752	295,717	285,757	277,752	268,219	258,140	248,955	237,010	225,918	213,949
41. ADJUSTMENT FOR REFINANCING (2)	(156)	112	(2,134)	2,505	(7,402)	(16,263)	(21,780)	(28,128)	(29,138)	(29,773)	(31,395)	(32,669)	(34,335)	(38,520)	(45,129)	(51,891)	(59,248)	(61,820)	(62,811)	(65,563)
42. ADJUSTMENT FOR DEBT PAYDOWN (3)	<u>(433)</u>	(10,196)	<u>(11,865)</u>	(11,928)	(12,624)	(12,578)	(12,531)	(12,481)	(12,320)	(10,950)	<u>(9,578)</u>	(8,203)	<u>(8,143)</u>	<u>(8.081)</u>	(8,016)	<u>(7,948)</u>	(20.932)	(20,859)	(20,783)	(22,551)
43. TOTAL INTEREST ON LONG-TERM DEBT	321,732	309,434	307,094	308,425	297,029	291,273	287,758	282,757	277,283	272,365	263,779	254,845	243,279	231,151	215,074	198,301	168,775	154,331	142,324	125,835
	•	•	,	-	•	,	•	,		•	•	•	•	,	,	•	,	,		,
44. ADJUSTMENT FOR INTEREST NOT PAID FROM REVENUE (1)	<u>(595)</u>	<u>(135)</u>	<u>U</u>	<u>0</u>																
45. NET LONG-TERM INTEREST PAID FROM REVENUES	<u>321,137</u>	309,299	<u>307,094</u>	<u>308,425</u>	<u>297,029</u>	<u>291,273</u>	<u>287,758</u>	<u>282,757</u>	<u>277,283</u>	<u>272,365</u>	<u>263,779</u>	<u>254,845</u>	<u>243,279</u>	<u>231,151</u>	<u>215,074</u>	<u>198,301</u>	<u>168,775</u>	<u>154,331</u>	142,324	<u>125,835</u>

<sup>(1)</sup> BARCLAYS DIRECT PURCHASE AGREEMENT ISSUED FOR FUEL LEVELIZATION.

<sup>(2)</sup> INCLUDES ECONOMIC REFUNDING AND OTHER REFINANCING OF EXISTING DEBT.

<sup>(3)</sup> INCLUDES CALLS OF EXISTING DEBT

<u>0</u>

SANTEE COOPER SCHEDULE 5

#### RETIREMENT OF SHORT-TERM REVENUE OBLIGATION MINI BONDS (1) FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN THOUSANDS)

<u>0</u>

	2020	<u>2021</u>	2022	2023	<u>2024</u>	2025	2026	<u>2027</u>	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	2037	2038	<u>2039</u>
REVENUE OBLIGATION MINI BONDS:																				
1. TOTAL REVENUE OBLIGATION MINI BONDS	<u>o</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>
2. TOTAL RETIREMENT OF SHORT-TERM BONDS	<u>0</u>	<u>0</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>
	SANTEE COOPER ELECTRIC SYSTEM														SCHEDULE 6					
						INTEREST	PAID FROM	REVENUES	FOR SHORT-	TERM REVE		SATION MIN	BONDS							
								_	CALENDAR DLLARS IN TH											
	2020	<u>2021</u>	2022	2023	2024	2025	2026	2027	2028	2029	2030	<u>2031</u>	2032	2033	2034	2035	2036	2037	2038	2039
REVENUE OBLIGATION MINI BONDS:																				

<u>0</u>

<u>0</u>

(1) MINI BOND PROGRAM HAS BEEN RETIRED

3. TOTAL REVENUE OBLIGATION MINI BONDS

SHORT-TERM INTEREST PAID FROM REVENUES

SANTEE COOPER 2020 CONFORMING CASE SCHEDULE 7

#### **ELECTRIC SYSTEM**

#### LONG-TERM DEBT SERVICE PAID FROM REVENUES FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN THOUSANDS)

	2020	<u>2021</u>	2022	2023	<u>2024</u>	2025	2026	2027	2028	2029	2030	<u>2031</u>	2032	2033	2034	2035	2036	2037	2038	<u>2039</u>
2009-C REVENUE OBLIGATION BOND	369	369	368	386	237	241	240	237	239	0	0	0	0	0	0	0	0	0	0	0
2009-F REVENUE OBLIGATION BOND	5.740	5,740	5,740	5,740	5,740	23,576	23,574	23,572	23,569	23.567	0	0	0	0	0	0	0	0	0	0
2010-B REVENUE OBLIGATION BOND REFUNDING	2.885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	5,185	32,793	33,443	0	0	0	0	0	0	0
4. 2010-C REVENUE OBLIGATION BOND	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234
5. 2011-B REVENUE OBLIGATION BOND REFUNDING	13,419	37,047	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2011-5 REVENUE OBLIGATION BOND REFUNDING     2011-C REVENUE OBLIGATION BOND REFUNDING	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6.699	6,699	6,699	9,315	38,372	40,406	30,405	40.959	0	0	0
7. 2012-A REVENUE OBLIGATION BOND REFUNDING	3.810	9,196	5,378	5,372	5,984	12,573	11,050	9,288	9,302	8,859	3,614	0,000	0,010	00,072	40,400 N	00,400	40,555 N	0	0	0
2012-A REVENUE OBLIGATION BOND REFUNDING     2012-B REVENUE OBLIGATION BOND REFUNDING	4.813	0,100	0,070	0,072	0,504	12,575	11,000	0,200	0,502	0,000	0,014	0	0	0	0	0	0	0	0	0
9. 2012-C REVENUE OBLIGATION BOND REFUNDING	13,056	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10. 2012-0 REVENUE OBLIGATION BOND  10. 2012-D REVENUE OBLIGATION BOND	13,104	14,761	16,347	16,827	16,220	16,198	16,166	16,139	15,449	15,419	15,398	14,839	14,847	10,892	10,892	10,889	10,890	10,889	10,770	14,839
11. 2012-E REVENUE OBLIGATION BOND	9,682	11,644	33,153	32,309	31,429	30,501	29,529	28,982	32,886	31,569	30,251	0	0	0	10,032	0	10,030	0,000	0,770	14,000
12. 2013-A REVENUE OBLIGATION BOND	7.810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	8,929	21,249	21,177	17,932	9,480	10,577	9,952	18,831
13. 2013-B REVENUE OBLIGATION BOND	19.764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	23,108	59,884	59,884	59,887	59,885
14. 2013-C REVENUE OBLIGATION BOND	14.460	14,460	14,460	14,460	14,460	14,460	14,460	14.460	14,460	14,460	14,460	14,460	17,757	54,001	54,020	54,045	25,965	24,866	23,767	22,835
15. 2013-E REVENUE OBLIGATION BOND	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609
16. 2014-A REVENUE OBLIGATION BOND	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000
17. 2014-B REVENUE OBLIGATION BOND	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,479	6,499	6,504	6,499	6,502	6,500	6,505	6,424	6,420	20,000
18. 2014-C REVENUE OBLIGATION BOND REFUNDING	34,884	51,717	52,272	56,385	57,342	66,199	53,398	43,760	56,154	55,722	49,996	53,436	37,390	37,757	26,305	26,703	39,694	31,013	36,113	35,210
2014-0 REVENUE OBLIGATION BOND REFUNDING  19. 2014-D REVENUE OBLIGATION BOND REFUNDING	1,052	1,454	5,877	5,876	5,875	5,878	5,876	5,874	0,134	00,722	49,990	00,400	0 ,590	07,707	20,303	20,703	03,034	01,010	00,110	00,210
20. 2015-A REVENUE OBLIGATION BOND	28,995	38,767	33,048	44,977	44,965	45,418	45,829	25,347	45,188	27,128	22,922	32,647	23,164	23,245	23,243	23,243	23,243	23,245	23,244	23,242
21. 2015-B REVENUE OBLIGATION BOND REFUNDING	3.244	4,964	23,786	22,899	22,835	45,410	45,023 N	23,347	43,100	0	0	02,047	23,104	23,243	25,245	25,245	25,245	25,245	25,244	25,242
22. 2015-C REVENUE OBLIGATION BOND REFUNDING	69,218	74,456	19,192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23. 2015-D REVENUE OBLIGATION BOND	8,093	8,093	8,093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8.093	8,093
24. 2015-E REVENUE OBLIGATION BOND	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750
25. 2016-A REVENUE OBLIGATION BOND	26,289	31,610	31,076	25,210	25,325	27,291	35,290	38,301	38,161	56,768	56,765	53,473	53,940	63,685	62,707	52,994	64,268	61,269	26,466	7,342
26. 2016-B REVENUE OBLIGATION BOND	22,835	22,835	22,856	23,085	23,085	23,085	23,085	23,085	23,169	24,085	24,719	31,593	30,469	30,466	31,851	47,079	47,179	48,317	48,351	46,069
27. 2016-C REVENUE OBLIGATION BOND REFUNDING	2,500	2,670	4,539	4,537	4,536	4,538	4,535	4,537	4,536	4,535	4,537	4,536	4,538	4,536	5,222	12,059	4,121	10,017	10,001	40,005 O
28. 2016-D REVENUE OBLIGATION BOND  28. 2016-D REVENUE OBLIGATION BOND	4.179	4.179	18,760	164,229	4,550	1,000	4,000	0	4,550	4,000	4,557	4,550	1,000	4,550 N	0,222	0	7,121	0	0	0
29. 2019-A REVENUE OBLIGATION BOND (VRDB)	4,369	2,796	21,201	10,182	7,298	3,993	3,008	14,386	11,099	17,267	14,414	3,040	12,245	16,447	15,378	16,460	0	0	0	0
30. BARCLAYS DIRECT PURCHASE AGREEMENT (1)	<u>16,650</u>	10,135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			-	-	-	_	-	_	-	_	_	_	_	-	_	_	_	_	-	-
31. SUBTOTAL EXISTING LONG-TERM DEBT	433,626	<u>479,758</u>	<u>449,011</u>	<u>573,432</u>	406,289	<u>414,909</u>	406,998	<u>388,926</u>	<u>415,170</u>	420,337	380,699	<u>383,275</u>	<u>373,991</u>	<u>428,599</u>	<u>419,153</u>	<u>423,103</u>	<u>433,874</u>	<u>378,170</u>	<u>346,656</u>	<u>329,939</u>
32. FUTURE-CAPITAL TRANSMISSION	0	1,171	22,745	4,465	10,227	5,817	11,822	29,699	17,502	25,628	23,569	26,504	26,332	23,033	38,466	19,732	19,739	36,668	45,734	60,049
33. FUTURE-BATTERY STORAGE	0	0	0	0	1,111	2,221	3,206	4,191	5,991	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	6,680
34. FUTURE-COMBUSTION TURBINES	0	0	965	4,859	7,515	10,172	12,781	15,390	18,246	21,103	21,103	21,103	21,103	21,103	21,103	21,103	21,103	21,103	16,244	13,588
35. FUTURE-TRANSMISSION SPECIAL PROJECTS	0	0	2,682	5,364	9,204	13,043	15,454	17,864	18,040	18,216	19,850	21,485	21,485	21,485	21,485	21,485	21,485	18,803	16,120	12,281
36. FUTURE-FERC CAPITAL	0	0	187	375	457	539	1,465	1,574	1,670	1,765	1,880	1,994	2,729	3,463	3,942	5,343	6,333	6,333	7,005	7,005
37. FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	0	1,429	17,934	27,419	24,064	31,002	40,483	40,657	45,944	50,414	29,182	25,783	33,259	22,846	17,453	14,584	13,515	22,481	32,654	14,430
38. FUTURE-COMBINED CYCLE 2027	0	0	0	0	2,724	5,448	10,782	53,391	58,405	19,249	94,773	55,830	57,584	13,188	13,188	9,026	8,359	39,692	71,447	53,369
39. SUBTOTAL FUTURE LONG-TERM DEBT	<u>0</u>	<u>2,600</u>	<u>44,513</u>	42,482	<u>55,302</u>	68,242	<u>95,993</u>	<u>162,766</u>	<u>165,798</u>	<u>144,166</u>	<u>198,148</u>	<u>160,490</u>	<u>170,283</u>	<u>112,909</u>	<u>123,428</u>	<u>99,064</u>	<u>98,325</u>	<u>152,871</u>	<u>196,995</u>	<u>167,402</u>
40. SUBTOTAL LONG TERM DEBT	433,626	482,358	493,524	615,914	461,591	483,151	502,991	551,692	580,968	564,503	578,847	543,765	544,274	541,508	542,581	522,167	532,199	531,041	543,651	497,341
	(450)	(00)	(0.4.747)	(404.004)	4.000	(40.574)	(4.4.077)	(00.005)	(00.000)	(00.004)	(0.4.000)	(00.054)	(00.000)	(04.046)	(40.000)	(EO 07E)	(OF 446)	(04.004)	(74.446)	(07.70.4)
41. ADJUSTMENT FOR REFINANCING (2)	(156)	(82)	(24,717)	(164,304)	1,230	(18,574)	(14,977)	(23,035)	(30,326)	(23,691)	(34,620)	(33,654)	(33,202)	(31,613)	(43,828)	(56,875)	(65,116)	(64,324)	(71,442)	(37,724)
42. ADJUSTMENT FOR DEBT PAYDOWN (3)	<u>(433)</u>	(10,196)	<u>(11,865)</u>	(12,023)	(13,764)	(13,764)	(13,764)	(16,177)	(42,589)	(41,272)	(39,955)	(9,704)	<u>(9,704)</u>	<u>(9,704)</u>	<u>(9,704)</u>	<u>(9,704)</u>	<u>(22,758)</u>	<u>(22,758)</u>	<u>(22,758)</u>	<u>(28,673)</u>
43. TOTAL LONG TERM DEBT	433,037	472,080	456,942	439,587	449,057	450,813	474,250	512,480	508,053	499,540	504,272	500,407	501,368	500,191	489,049	455,588	444,325	443,959	449,451	430,944
44. CASH DEFEASANCE (4)	<u>0</u>	(27,000)	<u>0</u>	<u>0</u>	0	0	(10,000)	(17,500)	(20,000)	(20,000)	(20,000)	(22,500)	(22,500)	(22,500)	(22,500)	(22,500)	(22,500)	(22,500)	(22,500)	(22,500)
· ,	_		_		<u>×</u>	<u>~</u>														
45. NET LONG-TERM DEBT SERVICE	433,037	445,080	456,942	439,587	449,057	450,813	464,250	494,980	488,053	479,540	484,272	477,907	478,868	477,691	466,549	433,088	421,825	421,459	426,951	408,444
46. ADJUSTMENT FOR DEBT NOT PAID FROM REVENUE (1)	(16,650)	(10,135)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
47. NET LONG-TERM DEBT SERVICE PAID FROM REVENUES	416,387	<u>434,945</u>	456,942	439,587	449,057	<u>450,813</u>	464,250	494,980	488,053	<u>479,540</u>	484,272	<u>477,907</u>	<u>478,868</u>	<u>477,691</u>	466,549	433,088	<u>421,825</u>	<u>421,459</u>	<u>426,951</u>	<u>408,444</u>

(1) BARCLAYS DIRECT PURCHASE AGREEMENT ISSUED FOR FUEL LEVELIZATION. (2) INCLUDES ECONOMIC REFUNDING AND OTHER REFINANCING OF EXISTING DEBT. 2020 CONFORMING CASE SCHEDULE 8

### ELECTRIC SYSTEM

#### TOTAL INTEREST ON LONG-TERM DEBT FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		2020	<u>2021</u>	2022	2023	2024	<u>2025</u>	2026	<u>2027</u>	2028	2029	<u>2030</u>	2031	2032	2033	2034	2035	2036	2037	2038	2039
1	2009-C REVENUE OBLIGATION BOND	129	114	98	81	62	<u></u> 51	40	27	14	0	0	0				0				0
1. 2.	2009-C REVENUE OBLIGATION BOND 2009-F REVENUE OBLIGATION BOND	5,740	5,740	5,740	5,740	5,740	5.740	4,716	3,634	2,489	1,279	0	0	0	0	0	0	0	0	0	0
3.	2010-B REVENUE OBLIGATION BOND REFUNDING	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2.885	2,409	2,885	2,885	2,793	1,593	0	0	0	0	0	0	0
3. 4.	2010-D REVENUE OBLIGATION BOND  2010-C REVENUE OBLIGATION BOND	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234	23,234
5.	2011-B REVENUE OBLIGATION BOND REFUNDING	2,319	1,764	0	0	0	0	0	20,204	0	25,254	20,204	0	25,254	25,254	20,204	25,254	20,204	20,204	25,254	20,204
6.	2011-C REVENUE OBLIGATION BOND REFUNDING	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6,699	6.699	6,699	6,699	6.699	6,576	5,072	3,305	1,950	0	0	0
7	2012-A REVENUE OBLIGATION BOND REFUNDING	3,269	3,021	2,715	2,607	2,482	2,319	1,806	1.344	947	539	172	0,033	0,033	0,570	0,072	0,505	1,330	0	0	0
8.	2012-B REVENUE OBLIGATION BOND REFUNDING	229	0,021	0	2,007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.	2012-C REVENUE OBLIGATION BOND REFUNDING	622	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.	2012-O REVENUE OBLIGATION BOND  2012-D REVENUE OBLIGATION BOND	12,966	12,959	12,869	12,696	12,496	12,310	12,116	11,913	11,702	11,514	11,319	11.120	10.985	10,791	10,787	10,783	10.779	10,775	10,770	10,770
11.	2012-B REVENUE OBLIGATION BOND	9,682	9,682	9,612	8,768	7,888	6,961	5,989	4,993	3,950	2,634	1,317	0	10,303	0,731	10,707	0,703	0,775	10,773	0,770	0,770
12.	2013-A REVENUE OBLIGATION BOND	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,810	7,750	7,027	6,319	5,739	5,552	5.300	5,066
13.	2013-B REVENUE OBLIGATION BOND	19.764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19,764	19.764	19,764	19.764	19.764	19,597	17,583	15,468	13,242
14.	2013-C REVENUE OBLIGATION BOND	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,460	14,269	11,971	9,539	6,965	5,866	4,767	3,668
15.	2013-E REVENUE OBLIGATION BOND	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609	26,609
16.	2014-A REVENUE OBLIGATION BOND	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000
17.	2014-B REVENUE OBLIGATION BOND	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,095	1,875	1,644	1.401	1,146	878	597	306	0
18.	2014-C REVENUE OBLIGATION BOND REFUNDING	33,355	33,279	32,357	31,361	30,145	29,175	27,324	26,020	25,133	23,599	22,176	20,785	19,153	18,253	17,457	17,473	17,020	15,978	15,226	14,182
19.	2014-D REVENUE OBLIGATION BOND REFUNDING	1,052	1,052	1,040	899	746	578	397	204	0	20,000	0	20,700	10,100	0	0	0	0	0,570	0	0
20.	2015-A REVENUE OBLIGATION BOND	28,051	28,003	27,465	27,186	26,305	25,463	24,466	23,398	23,300	22,206	21,960	21,911	21,377	21,314	21,247	21,176	21,092	21,014	20,932	20,844
21.	2015-B REVENUE OBLIGATION BOND REFUNDING	3,244	3,244	3,158	2,126	1,087	0	0	20,000	0	0	0	0	0	21,014	0	21,170	0	21,014	0	0
22.	2015-C REVENUE OBLIGATION BOND REFUNDING	7.502	4,416	914	2,120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23.	2015-D REVENUE OBLIGATION BOND	8.093	8,093	8,093	8,093	8.093	8.093	8,093	8.093	8.093	8.093	8,093	8,093	8.093	8,093	8,093	8.093	8,093	8.093	8,093	8.093
24.	2015-E REVENUE OBLIGATION BOND	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750
25.	2016-A REVENUE OBLIGATION BOND	25,805	25,781	25,489	25,210	25,210	25,204	25,100	24,590	23,905	23,192	21,513	19,750	18,080	16,459	14,098	11,682	9,776	7.052	4,341	3,240
26.	2016-B REVENUE OBLIGATION BOND	22,835	22,835	22,856	23,085	23,085	23,085	23,085	23,085	23,169	24,085	24,085	24,054	23,677	23,337	22,980	22,537	21.414	21,272	19,919	18,498
27.	2016-C REVENUE OBLIGATION BOND REFUNDING	2.500	2,500	2,491	2,389	2,281	2,168	2,050	1,926	1,795	1,658	1.514	1,363	1,207	1,071	898	682	120	0	0	0
28.	2016-D REVENUE OBLIGATION BOND	4.179	4.179	4.179	3,830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29.	2019-A REVENUE OBLIGATION BOND (VRDB)	2,829	2,796	2,796	2,437	2,288	2,188	2,153	2,136	1,899	1,717	1,414	1,160	1,125	907	603	315	0	0	0	0
30.	BARCLAYS DIRECT PURCHASE AGREEMENT (1)	595	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ö
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31.	SUBTOTAL EXISTING LONG-TERM DEBT	322,321	316,918	309,197	303,833	295,233	290,660	284,660	278,688	273,721	267,841	260,888	<u>255,450</u>	249,491	243,821	234,991	226,407	217,016	207,375	<u>198,715</u>	<u>191,196</u>
		_																			
32.	FUTURE-CAPITAL TRANSMISSION	0	1,171	2,745	2,460	3,153	3,672	4,603	5,359	5,772	6,618	7,078	7,624	6,974	8,491	9,459	9,929	11,736	11,460	12,298	12,853
33.	FUTURE-BATTERY STORAGE	0	0	0	0	475	926	1,299	1,648	2,322	2,953	2,770	2,579	2,382	2,176	1,963	1,742	1,513	1,275	1,027	771
34.	FUTURE-COMBUSTION TURBINES	0	0	965	1,931	2,886	3,782	4,600	5,356	6,146	6,866	6,377	5,871	5,348	4,807	4,247	3,669	3,070	2,451	1,810	1,314
35.	FUTURE-TRANSMISSION SPECIAL PROJECTS	0	0	1,065	2,075	3,488	4,817	5,492	6,107	5,774	5,423	5,633	5,794	5,255	4,698	4,122	3,526	2,910	2,272	1,705	1,210
36.	FUTURE-FERC CAPITAL	0	0	187	375	457	539	583	596	600	602	607	609	854	1,081	1,560	1,633	1,900	1,747	1,857	1,680
37.	FUTURE-ENVIRONMENTAL COMPLIANCE PROJECTS	0	1,429	6,934	7,174	8,639	10,270	10,050	9,496	8,838	7,977	6,743	6,196	5,523	4,569	3,941	3,477	3,096	2,738	2,059	1,007
38.	FUTURE-COMBINED CYCLE 2027	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2,724</u>	<u>5,448</u>	10,782	<u>16,116</u>	<u>15,568</u>	<u>14,808</u>	14,656	<u>11,594</u>	9,930	<u>8,109</u>	<u>7,936</u>	<u>7,757</u>	<u>7,714</u>	<u>7,692</u>	6,447	<u>3,918</u>
39.	SUBTOTAL FUTURE LONG-TERM DEBT	<u>0</u>	2,600	<u>11,896</u>	<u>14,015</u>	21,822	29,454	37,409	44,678	<u>45,020</u>	45,247	43,864	40,267	<u>36,266</u>	33,931	33,228	31,733	31,939	29,635	27,203	22,753
40	SUBTOTAL INTEREST ON LONG TERM DEBT	322,321	319,518	321,093	317,848	317,055	320,114	322,069	323,366	318,741	313,088	304,752	295,717	285,757	277,752	268,219	258,140	248,955	237.010	225,918	213.949
40.	SUBTOTAL INTEREST ON LONG TERM DEBT	322,321	313,310	321,093	317,040	317,033	320,114	322,009	323,300	310,741	313,000	304,732	293,717	203,131	211,132	200,219	230,140	240,933	237,010	223,910	213,343
41	ADJUSTMENT FOR REFINANCING (2)	(156)	112	(2,134)	2,505	(7,402)	(16,263)	(21,780)	(28,128)	(29,138)	(29,773)	(31,395)	(32,669)	(34,335)	(38,520)	(45,129)	(51,891)	(59,248)	(61,820)	(62,811)	(65,563)
42	ADJUSTMENT FOR DEBT PAYDOWN (3)	(433)	(10,196)	(11,865)	(11,928)	(12,624)	(12,578)	(12,531)	(12,481)	(12,320)	(10,950)	(9,578)	(8,203)	(8,143)	(8,081)	(8,016)	(7,948)	(20,932)	(20,859)	(20,783)	(22,551)
		1.00/	1.2,.00/	<u>, , / / / / / / / / / / / / /</u>	1,0=0/	1 1	1,0.0/	1100.1	11.0.1	1,0-0/	1.2,000)	12,0.01	10,001	<u>,-,-,0/</u>	12,00.1	1-10.01	1.10.01	1-1100-1	1-11000	<u>,,,/</u>	<u>,,,,,,,</u>
43.	TOTAL INTEREST ON LONG TERM DEBT	321,732	309,434	307,094	308,425	297,029	291,273	287,758	282,757	277,283	272,365	263,779	254,845	243,279	231,151	215,074	198,301	168,775	154,331	142,324	125,835
44.	ADJUSTMENT FOR INTEREST NOT PAID FROM REVENUE (1)	<u>(595)</u>	<u>(135)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>
• ••	.,				_									<u>~</u>	<u>~</u>		_	_	<u>~</u>	<u>~</u>	
45.	NET LONG-TERM INTEREST PAID FROM REVENUES	<u>321,137</u>	<u>309,299</u>	<u>307,094</u>	<u>308,425</u>	<u>297,029</u>	<u>291,273</u>	<u>287,758</u>	<u>282,757</u>	<u>277,283</u>	<u>272,365</u>	<u>263,779</u>	<u>254,845</u>	<u>243,279</u>	<u>231,151</u>	<u>215,074</u>	<u>198,301</u>	<u>168,775</u>	<u>154,331</u>	<u>142,324</u>	<u>125,835</u>

<sup>(1)</sup> BARCLAYS DIRECT PURCHASE AGREEMENT ISSUED FOR FUEL LEVELIZATION.

<sup>(2)</sup> INCLUDES ECONOMIC REFUNDING AND OTHER REFINANCING OF EXISTING DEBT.

<sup>(3)</sup> INCLUDES CALLS OF EXISTING DEBT

**SANTEE COOPER** 2020 CONFORMING CASE SCHEDULE 9 **ELECTRIC SYSTEM** 

#### COMMERCIAL PAPER/DIRECT PURCHASE FINANCING FOR THE CALENDAR YEARS 2020 - 2039

(DOLLARS IN THOUSANDS)

	OUTSTANDING BALANCE	<u>2020</u>	<u>2021</u>	2022	<u>2023</u>	<u>2024</u>	2025	<u>2026</u>	<u>2027</u>	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1. 2. 3. 4. 5.	ISSUES FOR FUTURE CONSTRUCTION FUEL LEVELIZATION PROGRAM (1) ECONOMIC DEVELOPMENT LOANS GENERAL IMPROVEMENTS & OTHER TOTAL	185,727 0 104,616 <u>55,163</u> <b>345,506</b>	141,079 0 105,021 <u>99,392</u> <u>345,492</u>	13,085 0 100,402 <u>74,530</u> <u>188,017</u>	201,017 0 94,893 <u>69,315</u> <u>365,225</u>	0 0 91,356 <u>65,335</u> 156,691	260,085 0 85,645 <u>61,355</u> <u><b>407,085</b></u>	0 0 79,770 <u>56,140</u> <u>135,910</u>	136,857 0 66,921 <u>50,925</u> <b>254,703</b>	0 0 65,686 <u>45,710</u> <u>111,396</u>	64,430 0 65,686 40,495 <b>170,611</b>	0 0 65,686 <u>36,515</u> <u><b>102,201</b></u>	37,284 0 65,686 32,535 135,505	0 0 65,686 <u>28,555</u> <b>94,241</b>	44,706 0 65,686 <u>25,124</u> <u>135,516</u>	0 0 65,686 21,693 <b>87,379</b>	37,922 0 65,686 <u>18,262</u> <u>121,870</u>	0 0 65,686 14,831 <b>80,517</b>	41,418 0 65,686 11,400 118,504	0 0 65,686 <u>7,969</u> <u><b>73,655</b></u>	0 0 65,686 <u>4,538</u> <u><b>70,224</b></u>
	RETIREMENTS																				
6. 7.	GENERAL IMPROVEMENTS & OTHER RETIREMENTS PAID FROM REVENUES	22,504 22,504	2,325 2,325	3,980 <b>3,980</b>	<u>5,215</u> <b>5,215</b>	3,980 <b>3,980</b>	3,980 <b>3,980</b>	<u>5,215</u> <b>5,215</b>	<u>5,215</u> <b>5,215</b>	<u>5,215</u> <b>5,215</b>	<u>5,215</u> <b>5,215</b>	3,980 <b>3,980</b>	3,980 <b>3,980</b>	3,980 <b>3,980</b>	3,431 <b>3,431</b>	3,431 <b>3,431</b>	3,431 3,431	3,431 <b>3,431</b>	3,431 <b>3,431</b>	3,431 3,431	3,431 3,431
8. 9. 10. 11. 12.	ISSUES FOR FUTURE CONSTRUCTION FUEL LEVELIZATION PROGRAM ECONOMIC DEVELOPMENT LOANS GENERAL IMPROVEMENTS & OTHER TOTAL RETIREMENTS PAID FROM ALL SOURCES	0 0 9,974 <u>0</u> 32,478	145,836 0 12,447 <u>0</u> 160,608	286,441 0 11,549 <u>20,910</u> 322,880	0 0 8,628 <u>0</u> <b>13,843</b>	488,785 0 7,061 <u>0</u> 499,826	0 9,546 <u>0</u> <b>13,526</b>	504,062 0 8,711 <u>0</u> <u>517,988</u>	0 0 14,919 <u>0</u> <b>20,134</b>	253,206 0 2,943 <u>0</u> <b>261,364</b>	0 0 1,674 <u>0</u> <u>6,889</u>	117,142 0 1,648 <u>0</u> 122,770	0 0 1,092 <u>0</u> <b>5,072</b>	79,643 0 1,054 <u>0</u> <b>84,677</b>	0 0 591 <u>0</u> <b>4,022</b>	105,994 0 81 <u>0</u> 109,506	0 0 0 <u>0</u> <u>3,431</u>	73,056 0 0 0 <u>0</u> 76,487	0 0 0 <u>0</u> <u>3,431</u>	76,746 0 0 0 <u>0</u> <b>80,177</b>	0 0 0 <u>0</u> <u>3,431</u>
	INTEREST																				
13. 14. 15. 16. 17.	ISSUES FOR FUTURE CONSTRUCTION COMMERCIAL PAPER/DIRECT PURCHASE FIXED CHARGES ECONOMIC DEVELOPMENT LOANS GENERAL IMPROVEMENTS & OTHER INTEREST PAID FROM REVENUES	3,648 3,669 1,774 2,005 11,096	4,494 3,669 1,774 <u>1,696</u> <b>11,633</b>	3,306 3,669 1,774 <u>2,046</u> <b>10,794</b>	4,212 3,669 1,774 <u>1,670</u> <b>11,325</b>	5,208 3,669 1,774 <u>1,557</u> <b>12,207</b>	5,532 3,669 1,774 <u>1,465</u> <b>12,439</b>	5,418 3,669 1,774 <u>1,372</u> <b>12,232</b>	2,880 3,669 1,774 <u>1,256</u> <b>9,578</b>	2,790 3,669 1,774 <u>1,140</u> <b>9,373</b>	1,344 3,669 1,774 <u>1,024</u> <b>7,811</b>	1,230 3,669 1,774 <u>910</u> <b>7,583</b>	768 3,669 1,774 <u>819</u> <b>7,030</b>	822 3,669 1,774 <u>729</u> <b>6,993</b>	912 3,669 1,774 <u>637</u> <b>6,991</b>	1,086 3,669 1,774 <u>561</u> <b>7,089</b>	780 3,669 1,774 <u>577</u> <b>6,800</b>	756 3,669 1,774 <u>501</u> <b>6,700</b>	852 3,669 1,774 <u>517</u> <b>6,812</b>	792 3,669 1,774 <u>441</u> <b>6,676</b>	24 3,669 1,774 <u>458</u> <b>5,924</b>
18. 19. 20. 21.	ISSUES FOR FUTURE CONSTRUCTION FUEL LEVELIZATION PROGRAM ECONOMIC DEVELOPMENT LOANS TOTAL INTEREST PAID FROM ALL SOURCES	0 0 1,286 12,382	0 0 <u>1,361</u> <b>12,994</b>	0 0 <u>1,216</u> <b>12,011</b>	0 0 <u>995</u> <b>12,320</b>	0 0 <u>860</u> <b>13,068</b>	0 0 <u>776</u> <b>13,215</b>	0 0 <u>599</u> <b>12,832</b>	0 0 <u>425</u> <b>10,003</b>	0 0 <u>77</u> <b>9.450</b>	0 0 <u>44</u> <b>7.855</b>	0 0 <u>43</u> <u><b>7.626</b></u>	0 0 <u>29</u> <b>7.059</b>	0 0 <u>28</u> <b>7,021</b>	0 0 <u>16</u> <b>7,007</b>	0 0 <u>1</u> <b>7,090</b>	0 0 <u>0</u> <b>6,800</b>	0 0 <u>0</u> <u>6,700</u>	0 0 <u>0</u> <u>6,812</u>	0 0 <u>0</u> <b>6,676</b>	0 0 <u>0</u> <u>5,924</u>
	TOTAL DEBT SERVICE																				
22. 23. 24. 25. 26.	ISSUES FOR FUTURE CONSTRUCTION COMMERCIAL PAPER/DIRECT PURCHASE FIXED CHARGES ECONOMIC DEVELOPMENT LOANS GENERAL IMPROVEMENTS & OTHER TOTAL DEBT SERVICE PAID FROM REVENUES	3,648 3,669 1,774 24,509 33,600	4,494 3,669 1,774 <u>4,021</u> <b>13,958</b>	3,306 3,669 1,774 <u>6,026</u> <b>14,774</b>	4,212 3,669 1,774 <u>6,885</u> <b>16,540</b>	5,208 3,669 1,774 <u>5,537</u> <b>16,187</b>	5,532 3,669 1,774 <u>5,445</u> <b>16,419</b>	5,418 3,669 1,774 <u>6,587</u> <b>17,447</b>	2,880 3,669 1,774 <u>6,471</u> <b>14,793</b>	2,790 3,669 1,774 <u>6,355</u> <b>14,588</b>	1,344 3,669 1,774 <u>6,239</u> <b>13,026</b>	1,230 3,669 1,774 <u>4,890</u> <b>11,563</b>	768 3,669 1,774 <u>4,799</u> <b>11,010</b>	822 3,669 1,774 <u>4,709</u> <b>10,973</b>	912 3,669 1,774 <u>4,068</u> <b>10,422</b>	1,086 3,669 1,774 <u>3,992</u> <b>10,520</b>	780 3,669 1,774 <u>4,008</u> <b>10,231</b>	756 3,669 1,774 <u>3,932</u> <b>10,131</b>	852 3,669 1,774 <u>3,948</u> <b>10,243</b>	792 3,669 1,774 <u>3,872</u> <b>10,107</b>	24 3,669 1,774 <u>3,889</u> <b>9,355</b>
27. 28. 29. 30. 31.	ISSUES FOR FUTURE CONSTRUCTION FUEL LEVELIZATION PROGRAM ECONOMIC DEVELOPMENT LOANS GENERAL IMPROVEMENTS & OTHER TOTAL PAID FROM ALL SOURCES	0 0 11,259 <u>0</u> 44,859	145,836 0 13,809 <u>0</u> 173,603	286,441 0 12,765 20,910 334,890	0 0 9,622 <u>0</u> <b>26,162</b>	488,785 0 7,921 <u>0</u> <u>512,894</u>	0 0 10,322 <u>0</u> <b>26,741</b>	504,062 0 9,310 <u>0</u> 530,820	0 0 15,343 <u>0</u> <b>30,137</b>	253,206 0 3,020 <u>0</u> <b>270,814</b>	0 0 1,718 <u>0</u> <b>14,744</b>	117,142 0 1,692 <u>0</u> 130,397	0 0 1,120 <u>0</u> 12,130	79,643 0 1,082 <u>0</u> <b>91,698</b>	0 0 606 <u>0</u> 11,028	105,994 0 82 <u>0</u> 116,596	0 0 0 <u>0</u> <b>10,231</b>	73,056 0 0 0 83,187	0 0 0 <u>0</u> 10,243	76,746 0 0 0 <u>0</u> 86,853	0 0 0 <u>0</u> <b>9,355</b>

(1) SEE SCHEDULE 2 FOR FUEL LEVELIZATION PROGRAM EXISTING DEBT.

TOTAL OIL/DIESEL - CENTS/KWH

26.81

27.23

27.15

29.30

27.97

30.77

29.89

11/22/19

# SANTEE COOPER ELECTRIC SYSTEM

SCHEDULE 10

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FUEL SCHEDULE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

2020 2021 2022 2023 2024 2025 2027 2032 2033 2034 2035 <u>2036</u> <u>2037</u> <u>2038</u> 2039 <u>2026</u> 2028 2029 2030 2031 COAL - WINYAH NO. 1, 2, 3, & 4 51,071 36,642 37,342 31,105 20,132 BEGINNING OF PERIOD 46,463 25,996 0 0 0 0 0 0 0 0 0 0 0 24.382 RECEIPTS - NORMAL 32.959 24.982 30.418 22.791 28.461 32.257 0 0 0 0 0 0 0 0 0 0 0 0 2 0 CONSUMPTION 37,567 34,803 29,718 30,619 27,900 34,325 52,389 0 0 0 0 0 0 0 0 0 46,463 36,642 37,342 31,105 25,996 20,132 0 Ω 0 Ω 0 Ω 0 Ω 0 0 END OF PERIOD 0 Ω 0 Ω FUEL COST - CENTS/KWH 3.83 3.88 3.83 3.81 3.87 3.90 3.99 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 5. COAL - CROSS 1, 2, 3, & 4 BEGINNING OF PERIOD 86,195 39,904 45,242 44,238 42,847 44,146 45,350 46,800 46,341 47,251 46,766 47,074 46,471 46,423 46,113 45,936 44,895 45,747 46,403 45,754 319,335 392,570 381,721 397,086 393,292 394,314 428,221 370,515 373,819 405,630 405,979 446,802 436,608 431,588 456,588 439,331 441,796 457,238 **RECEIPTS - NORMAL** 409,214 460,348 CONSUMPTION 365.626 387,232 382,725 398.477 391,993 393,110 426,771 370,974 372,909 409,699 405,322 406,582 446.850 436,918 431,765 457,629 438,479 441.140 457,887 461,385 END OF PERIOD 39,904 45,242 44,238 42,847 44,146 45,350 46,800 46,341 47,251 46,766 47,074 46,471 46,423 46,113 45,936 44,895 45,747 46,403 45,754 44,717 9. 4.57 10. FUEL COST - CENTS/KWH 3.11 3.13 3.07 3.13 3.21 3.30 3.37 3.52 3.59 3.69 3.81 3.90 4.03 4.09 4.19 4.28 4.38 4.50 4.67 TOTAL COAL INVENTORY - END OF PERIOD 86,367 81,884 81,580 73,952 70,142 65,482 46,800 46,341 47,251 46,766 47,074 46,471 46,423 46,113 45,936 44,895 45,747 46,403 45,754 44,717 4.50 12. TOTAL COAL - CENTS/KWH 3.16 3.18 3.12 3.17 3.25 3.34 3.43 3.52 3.59 3.69 3.81 3.90 4.03 4.09 4.19 4.28 4.38 4.57 4.67 OIL - COMBUSTION TURBINES 2,516 13. BEGINNING OF PERIOD 14. RECEIPTS - NORMAL 37 61 60 75 40 4 26 21 48 11 54 46 25 62 13 12 3 44 37 54 44 15. CONSUMPTION 61 60 75 40 4 26 21 48 11 46 25 62 13 12 END OF PERIOD 2,516 2,516 2,516 2,516 2.516 2.516 2.516 2,516 2,516 2.516 2,516 2,516 2,516 2,516 2,516 2.516 2,516 2.516 2,516 2,516 16. 17. FUEL COST - CENTS/KWH 26.81 27.23 27.15 29.30 27.97 30.77 29.89 35.00 36.09 37.93 38.30 40.35 42.37 41.61 43.33 38.10 30.00 27.78 33.33 27.33 2,516 2,516 2,516 2,516 2,516 2,516 TOTAL OIL/DIESEL INVENTORY - END OF PERIOD 2,516 2,516 2,516 2,516 2,516 2,516 2,516 2,516 2,516 2,516 2,516 2,516 2,516 2,516 18.

35.00

36.09

37.93

38.30

40.35

42.37

41.61

43.33

38.10

30.00

27.78

33.33

27.33

**SANTEE COOPER** 11/22/19

**ELECTRIC SYSTEM FUEL SCHEDULE** FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

SCHEDULE 10 PAGE 2 OF 3

		2020	<u>2021</u>	2022	2023	2024	2025	2026	2027	2028	2029	<u>2030</u>	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	2036	<u>2037</u>	<u>2038</u>	<u>2039</u>
	GAS - COMBINED CYCLES																				
20.	BEGINNING OF PERIOD - BACK UP OIL SUPPLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21.	RECEIPTS - BACK UP OIL SUPPLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22.	RECEIPTS - NORMAL	83,146	77,615	73,704	92,020	94,493	118,981	117,855	242,545	253,579	243,554	273,090	271,150	269,234	284,817	285,444	276,558	306,138	303,529	309,827	324,380
23.	CONSUMPTION	83,146	77,615	73,704	92,020	94,493	118,981	117,855	242,545	253,579	243,554	273,090	271,150	269,234	284,817	285,444	276,558	306,138	303,529	309,827	324,380
24.	END OF PERIOD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25.	FUEL COST - CENTS/KWH	2.18	2.02	1.89	2.45	2.61	2.95	2.97	3.28	3.40	3.59	3.69	3.77	3.96	4.09	4.20	4.36	4.47	4.57	4.69	4.76
	GAS - COMBUSTION TURBINES																				
26.	BEGINNING OF PERIOD - BACK UP OIL SUPPLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27.	RECEIPTS - BACK UP OIL SUPPLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28.	RECEIPTS - NORMAL	33,247	33,644	33,309	23,422	11,272	279	3,480	3,042	3,275	333	650	455	723	533	824	809	1,101	788	539	1,136
29.	CONSUMPTION	33,247	33,644	33,309	23,422	11,272	279	3,480	3,042	3,275	333	650	455	723	533	824	809	1,101	788	539	1,136
30.	END OF PERIOD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31.	FUEL COST - CENTS/KWH	3.30	3.22	3.11	3.28	3.42	4.16	4.01	4.22	4.49	5.19	5.90	5.64	5.66	5.87	6.10	6.12	6.86	6.80	6.67	7.69
	GAS - LANDFILL																				
32.	BEGINNING OF PERIOD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33.	RECEIPTS - NORMAL	873	868	868	868	870	867	868	864	863	850	844	848	849	839	838	840	839	836	837	840
34.	CONSUMPTION	873	868	868	868	870	867	868	864	863	850	844	848	849	839	838	840	839	836	837	840
35.	END OF PERIOD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36.	FUEL COST - CENTS/KWH	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
37.	TOTAL GAS INVENTORY - END OF PERIOD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38.	TOTAL GAS - CENTS/KWH	2.40	2.26	2.14	2.56	2.65	2.91	2.96	3.26	3.39	3.57	3.67	3.75	3.93	4.06	4.18	4.32	4.44	4.53	4.65	4.73
	TOTAL FOSSIL FUEL																				
39.	BEGINNING OF PERIOD	139,782	88,883	84,400	84,096	76,468	72,658	67,998	49,316	48,857	49,767	49,282	49,590	48,987	48,939	48,629	48,452	47,411	48,263	48,919	48,270
40.	RECEIPTS (1)	469,597	529,740	520,080	537,853	522,758	542,906	582,707	616,987	631,584	653,962	680,268	678,478	717,633	722,859	718,707	734,803	747,421	746,954	768,444	786,748
41.	CONSUMPTION	520,496	534,223	520,384	545,481	526,568	547,566	601,389	617,446	630,674	654,447	679,960	679,081	717,681	723,169	718,884	735,844	746,569	746,298	769,093	787,785
42.	END OF PERIOD	88,883	84,400	84,096	76,468	72,658	67,998	49,316	48,857	49,767	49,282	49,590	48,987	48,939	48,629	48,452	47,411	48,263	48,919	48,270	47,233
43.	FUEL COST - CENTS/KWH	2.95	2.93	2.85	3.02	3.11	3.24	3.32	3.42	3.51	3.64	3.75	3.84	3.99	4.08	4.19	4.30	4.40	4.51	4.60	4.69
44.	DIFFERENCE IN CASH BASIS	(50,899)	(4,483)	(304)	(7,628)	(3,810)	(4,660)	(18,682)	(459)	910	(485)	308	(603)	(48)	(310)	(177)	(1,041)	852	656	(649)	(1,037)

(1) RECEIPTS INCLUDE FUEL AND GAS TRANSPORTATION FEE.

SANTEE COOPER **ELECTRIC SYSTEM** 11/22/19

> FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

PAGE 3 OF 3 **FUEL SCHEDULE** 

SCHEDULE 10

		2020	<u>2021</u>	2022	2023	2024	2025	2026	2027	2028	2029	2030	<u>2031</u>	2032	2033	2034	2035	2036	<u>2037</u>	2038	2039
	NUCLEAR FUEL SUMMER NUCLEAR PLANT																				
45.	BEGINNING OF PERIOD	85,776	86,776	82,548	77,700	79,727	80,971	65,644	49,865	36,401	39,278	23,305	31,876	38,785	33,935	43,101	36,125	45,669	55,409	47,975	58,143
46.	RELOAD - CASH	20,435	12,641	11,428	17,207	16,837	2,642	1,132	3,812	22,602	1,147	26,083	26,643	13,474	27,801	14,059	29,010	29,633	14,986	30,921	15,637
47.	CONSUMPTION (1)	19,435	16,869	16,276	15,180	15,593	17,969	16,911	17,276	19,725	17,120	17,512	19,734	18,324	18,635	21,035	19,466	19,893	22,420	20,753	21,134
48.	DISPOSAL COST/DECON & DECOM FUND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49.	END OF PERIOD	86,776	82,548	77,700	79,727	80,971	65,644	49,865	36,401	39,278	23,305	31,876	38,785	33,935	43,101	36,125	45,669	55,409	47,975	58,143	52,646
50.	FUEL COST - CENTS/KWH	0.78	0.68	0.58	0.60	0.62	0.64	0.66	0.68	0.70	0.67	0.68	0.70	0.71	0.73	0.75	0.76	0.78	0.80	0.81	0.83
51.	CONSUMPTION - FOSSIL & NUCLEAR	539,931	551,092	536,660	560,661	542,161	565,535	618,300	634,722	650,399	671,567	697,472	698,815	736,005	741,804	739,919	755,310	766,462	768,718	789,846	808,919
	NET GENERATION -																				
52.	FOSSIL & NUCLEAR (GWH)	20,141	20,755	21,104	20,610	19,486	19,740	20,674	20,644	20,822	20,540	20,704	20,515	20,561	20,281	20,001	19,684	19,531	19,365	19,281	19,345
53.	FUEL COST - CENTS/KWH	2.68	2.66	2.54	2.72	2.78	2.86	2.99	3.07	3.12	3.27	3.37	3.41	3.58	3.66	3.70	3.84	3.92	3.97	4.10	4.18

(1) CONSUMPTION INCLUDES FUEL BURNED, DISPOSAL COST, AND DECONTAMINATION & DECOMMISSIONING COST.

SCHEDULE 11

**ELECTRIC SYSTEM** 

TAX SCHEDULE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1.	KWH SALES TAX	1,773	1,778	1,753	1,805	1,818	1,864	1,913	1,949	1,986	2,018	2,053	2,089	2,145	2,181	2,227	2,271	2,322	2,369	2,432	2,472
2.	GENERATION TAX	2,659	2,667	2,630	2,707	2,727	2,796	2,870	2,923	2,979	3,027	3,079	3,133	3,218	3,272	3,340	3,406	3,483	3,554	3,648	3,708
3.	ADDITIONAL SUMS IN LIEU OF TAXES	<u>33</u>																			
4.	TOTAL PAID FROM SPECIAL RESERVE	4,465	4,478	4,416	4,545	4,578	4,693	4,816	4,905	4,998	5,078	5,165	5,255	5,396	5,486	5,600	5,710	5,838	5,956	6,113	6,213
	SUMS IN LIEU OF TAXES	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
	LAND RENTAL TAX	<u>159</u>	<u>174</u>	<u>180</u>	<u>183</u>	<u>191</u>	<u>199</u>	<u>211</u>	206	209	<u>212</u>	<u>213</u>	<u>216</u>	209	<u>168</u>	<u>169</u>	<u>170</u>	<u>184</u>	<u>172</u>	<u>173</u>	<u>174</u>
	TOTAL PAID FROM REVENUES	212	<u>227</u>	<u>233</u>	<u>236</u>	<u>244</u>	<u>252</u>	<u>264</u>	259	262	<u>265</u>	<u>266</u>	<u>269</u>	262	<u>221</u>	<u>222</u>	<u>223</u>	<u>237</u>	<u>225</u>	<u>226</u>	<u>227</u>
8.	TOTAL SUMS IN LIEU OF TAXES FRANCHISE TAX PAYMENT TO STATE	4,677	4,705	4,649	4,781	4,822	4,945	5,080	5,164	5,260	5,343	5,431	5,524	5,658	5,707	5,822	5,933	6,075	6,181	6,339	6,440
9.		5,896	5,908	5,924	6,074	6,202	6,367	6,535	6,670	6,790	6,959	7,085	7,227	7,426	7,571	7,728	7,905	8,047	8,200	8,377	8,510
10.		<u>17,726</u>	<u>17,777</u>	<u>17,533</u>	<u>18,046</u>	<u>18,183</u>	<u>18,642</u>	<u>19,134</u>	<u>19,487</u>	<u>19,863</u>	<u>20,182</u>	<u>20,525</u>	<u>20,888</u>	<u>21,450</u>	<u>21,810</u>	<u>22,266</u>	<u>22,705</u>	<u>23,217</u>	<u>23,693</u>	<u>24,317</u>	<u>24,717</u>
11.	TOTAL SUMS IN LIEU OF TAXES, FRANCHISE TAXES & PAYMENT TO STATE	28.299	28.390	<u>28.106</u>	28.901	29.207	29.954	<u>30.749</u>	<u>31.321</u>	<u>31.913</u>	32.484	<u>33.041</u>	<u>33.639</u>	<u>34.534</u>	<u>35.088</u>	<u>35.816</u>	36.543	<u>37.339</u>	38.074	<u>39.033</u>	<u>39.667</u>

SANTEE COOPER
ELECTRIC SYSTEM

SCHEDULE 13

DEPRECIATION SCHEDULE FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1.	BASE DEPRECIATION	190,984	195,700	200,300	209,315	210,853	212,531	215,777	240,202	241,079	242,140	243,352	244,337	245,075	245,821	246,813	246,813	246,813	246,813	246,813	246,813
2.	DEPRECIATION - TRANSMISSION, DISTRIBUTION & GENERAL PLANT	<u>0</u>	<u>0</u>	<u>0</u>	<u>4,057</u>	<u>7,451</u>	10,889	14,300	17,539	20,888	<u>24,176</u>	27,443	30,707	33,750	36,938	40,174	43,367	<u>46,860</u>	50,297	<u>53,482</u>	<u>56,847</u>
3.	TOTAL DEPRECIATION	190.984	195.700	200.300	213.372	218.304	223,420	230.077	257.741	261.967	266.316	270.795	275.044	278.825	282.759	286.987	290.180	293.673	297.110	300.295	303.660

SANTEE COOPER ELECTRIC SYSTEM

ALLOWANCE FOR DEPRECIATION FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1.	BEGINNING BALANCE	4,066,859	4,221,190	4,379,126	4,540,517	4,701,882	4,878,834	5,059,307	5,245,149	5,457,327	5,672,364	5,890,342	6,111,348	6,335,110	6,561,114	6,789,468	7,020,417	7,252,879	7,487,102	7,722,978	7,960,202
2.	DEPRECIATION EXPENSE	190,984	195,700	200,300	213,372	218,304	223,420	230,077	257,741	261,967	266,316	270,795	275,044	278,825	282,759	286,987	290,180	293,673	297,110	300,295	303,660
3.	REGULATORY ASSET DEPRECIATION ENTRY (1)	394	394	394	(11,525)	344	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.	NET SALVAGE AND COST OF REMOVAL	599	617	635	654	674	694	715	736	758	781	804	829	853	879	905	933	961	989	1,019	1,050
5.	RETIREMENTS	(37,646)	(38,775)	(39,938)	(41,136)	(42,370)	(43,641)	(44,950)	(46,299)	(47,688)	(49,119)	(50,593)	(52,111)	(53,674)	(55,284)	(56,943)	(58,651)	(60,411)	(62,223)	(64,090)	(66,013)
6.	ALLOWANCE FOR DEPRECIATION	<u>4,221,190</u>	4,379,126	<u>4,540,517</u>	4,701,882	4,878,834	<u>5,059,307</u>	<u>5,245,149</u>	<u>5,457,327</u>	5,672,364	5,890,342	<u>6,111,348</u>	<u>6,335,110</u>	<u>6,561,114</u>	6,789,468	<u>7,020,417</u>	<u>7,252,879</u>	<u>7,487,102</u>	<u>7,722,978</u>	<u>7,960,202</u>	<u>8,198,899</u>

(1) REGULATORY ASSET DEPRECIATION ENTRY INCLUDES VC1 NUCLEAR ARO AND ASH POND ARO DEPRECIATION AND ACCRETION CHARGES.

2020 CONFORMING CASE

1/22/19

SANTEE COOPER
ELECTRIC SYSTEM

ELECTRIC SYSTEM
AMORTIZATION SCHEDULE

SCHEDULE 14

FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	<u>2029</u>	2030	<u>2031</u>	<u>2032</u>	<u>2033</u>	2034	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1. 2. 3.	EXISTING DEBT EXPENSE (GAIN)LOSS ON REACQUIRED DEBT FUTURE DEBT EXPENSE	(24,535) 11,937 <u>0</u>	(24,485) 10,851 <u>117</u>	(24,257) 9,043 <u>276</u>	(35,858) 8,333 <u>232</u>	(57,795) 7,767 <u>515</u>	(66,736) 7,278 <u>462</u>	(74,003) 6,824 <u>732</u>	(77,379) 6,363 <u>692</u>	(77,780) 6,147 <u>805</u>	(79,626) 5,605 <u>781</u>	(61,869) 5,290 <u>840</u>	(62,449) 4,998 <u>826</u>	(63,681) 4,532 <u>832</u>	(63,013) 4,168 <u>826</u>	(66,396) 3,768 <u>880</u>	(71,420) 3,379 <u>869</u>	(73,225) 2,930 <u>939</u>	(75,402) 2,344 <u>931</u>	(71,753) 1,833 <u>986</u>	(73,228) 1,479 <u>981</u>
4.	TOTAL DEBT EXPENSE	(12.598)	<u>(13.517)</u>	(14.938)	(27.293)	<u>(49.513)</u>	<u>(58.996)</u>	<u>(66.447)</u>	(70.324)	(70.828)	(73.240)	(55.739)	(56.625)	<u>(58.317)</u>	<u>(58.019)</u>	<u>(61.748)</u>	<u>(67.172)</u>	<u>(69.356)</u>	<u>(72.127)</u>	(68.934)	<u>(70.768)</u>
	SANTEE COOPER SCHEDULE 15  ELECTRIC SYSTEM  COSTS TO BE RECOVERED FROM FUTURE RATES FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)  2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039															SCHEDULE 15					
		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
1.	COSTS TO BE RECOVERED	(952)	4,506	(2,058)	(67,704)	1,976	1,527	4,461	4,461	4,461	2,420	(102)	(2,279)	(1,864)	(2,235)	(5,752)	(18,975)	(3,024)	(3,192)	(3,368)	(3,556)
2.	ADJUSTMENTS: ACCUMULATED DEPRECIATION ON FUTURE DEBT ISSUES	0	0	0	6,398	5,739	5,739	7,643	18,823	23,555	23,555	23,555	23,555	23,555	23,555	23,555	23,555	23,555	23,555	23,555	23,555
3.	PRINCIPAL PAYMENTS ON FUTURE DEBT	<u>0</u>	(2,325)	(23,712)	<u>36,392</u>	(28,893)	(25,933)	(32,574)	(91,517)	(84,107)	(56,715)	(133,367)	(105,290)	(118,097)	<u>(71,537)</u>	(87,817)	(67,655)	<u>(67,713)</u>	(115,561)	(142,899)	(134,975)
4.	COSTS TO BE RECOVERED FROM FUTURE RATES	<u>(952)</u>	<u>2,181</u>	<u>(25,770)</u>	<u>(24,914)</u>	<u>(21,178)</u>	<u>(18,667)</u>	<u>(20,470)</u>	<u>(68,233)</u>	<u>(56,091)</u>	(30,740)	<u>(109,914)</u>	<u>(84,014)</u>	<u>(96,406)</u>	<u>(50,217)</u>	<u>(70,014)</u>	<u>(63,075)</u>	<u>(47,182)</u>	<u>(95,198)</u>	<u>(122,712)</u>	<u>(114,976)</u>

SANTEE COOPER SCHEDULE 16 **ELECTRIC SYSTEM** 

INTEREST, MISCELLANEOUS, OTHER INCOME AND RECEIPTS FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	2022	<u>2023</u>	2024	<u>2025</u>	<u>2026</u>	2027	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	2036	2037	<u>2038</u>	<u>2039</u>
1.	BASE	7,225	7,131	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230	7,230
2.	MISCELLANEOUS INCOME (EXPENSE)	(3,909)	(3,788)	(3,738)	(3,822)	(3,905)	(3,989)	(4,073)	(4,156)	(4,238)	(4,320)	(4,400)	(4,479)	(4,556)	(4,631)	(4,704)	(4,803)	(4,904)	(5,007)	(5,112)	(5,219)
3.	INTEREST INCOME ON FUTURE DEBT SERVICE	<u>183</u>	<u>327</u>	<u>1,265</u>	<u>1,374</u>	<u>2,735</u>	2,587	2,495	<u>1,856</u>	<u>1,673</u>	<u>1,170</u>	1,254	<u>955</u>	994	<u>807</u>	<u>978</u>	<u>577</u>	<u>347</u>	<u>390</u>	<u>584</u>	<u>279</u>
4.	SUBTOTAL INTEREST AND MISCELLANEOUS	3,499	3,670	4,757	4,782	6,060	5,828	5,652	4,930	4,665	4,080	4,084	3,706	3,668	3,406	3,504	3,004	2,673	2,613	2,702	2,290
5.	SUBSIDY ON BUILD AMERICA BONDS	<u>7,652</u>	7,652	<u>7,652</u>	<u>7,652</u>	<u>7,652</u>	<u>7,652</u>	<u>7,652</u>	7,652	<u>7,652</u>	<u>7,652</u>	7,660	<u>7,677</u>	7,693	<u>7,709</u>	<u>7,725</u>	<u>7,742</u>	<u>7,758</u>	<u>8,132</u>	<u>8,132</u>	<u>8,132</u>
6.	TOTAL INTEREST, MISC AND SUBSIDY	11,151	11,322	12,409	12,434	13,712	13,480	13,304	12,582	12,317	11,732	11,744	11,383	11,361	11,115	11,229	10,746	10,431	10,745	10,834	10,422
7.	LEASE PAYMENTS, PARENTAL GUARANTYS, SALVAGE (1)	81,495	214,963	22,256	19,153	16,691	19,021	22,165	32,814	34,085	29,522	29,489	38,123	10,269	10,326	10,376	8,882	8,944	8,882	8,882	8,882
8.	PREMIUM ON GREEN POWER SALES	719	719	719	719	719	719	719	720	720	720	720	720	720	720	720	720	720	720	720	720
9.	LOSS ON DISPOSITION OF PROPERTY (2)	(178,961)	(140,038)	(29,157)	(30,843)	(52,162)	(63,242)	(91,028)	(94,042)	(76,628)	(87,238)	(66,238)	(67,189)	(77,863)	(87,472)	(97,830)	(515,030)	(145,875)	(166,113)	(210,838)	(178,781)
10.	TOTAL INTEREST, MISC AND OTHER INCOME	(85.596)	86.966	6.227	1.463	(21.040)	(30.022)	(54.840)	(47.925)	(29.506)	(45.264)	(24.284)	(16.964)	(55.513)	(65.311)	(75.505)	(494.682)	(125.780)	(145.766)	(190.402)	(158.757)

(1) INCLUDES RECOGNITION OF TOSHIBA PARENTAL GUARANTEE FUNDS AS THEY ARE USED, PROJECTED GAIN/(LOSS) SALE OF LEASE PROPERTY, AND SALVAGE VALUE OF PEE DEE IN 2021. (2) INCLUDES AMORTIZATION OF NUCLEAR UNITS 2 & 3 REGULATORY ASSET AND PEE DEE.

> SANTEE COOPER **ELECTRIC SYSTEM**

SCHEDULE 17

OTHER OPERATING REVENUES FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	2029	2030	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	2039
1. 2.	RENTAL INCOME: RECREATIONAL LOTS POLE ATTACHMENTS	1,594 987	1,736 1,406	1,804 1,837	1,828 2,281	1,908 2,738	1,993 2,887	2,108 3,053	2,056 3,240	2,089 3,449	2,122 3,682	2,131 3,944	2,155 4,238	2,088 4,566	1,685 4,934	1,694 5,346	1,703 5,808	1,837 6,325	1,719 6,904	1,728 7,552	1,742 8,278
3.	WHEELING (1)	3,973	2,829	4,257	4,593	4,434	4,456	4,556	4,987	4,999	5,057	5,845	4,829	6,547	6,547	6,547	6,547	6,547	6,547	6,547	6,547
4.	CUSTOMER DISCOUNTS FORFEITED	2,161	2,269	2,383	2,502	2,627	2,758	2,896	3,041	3,193	3,353	3,520	3,696	3,881	4,075	4,279	4,493	4,718	4,954	5,201	5,461
5.	SALE OF WATER OR WATER POWER	61	68	71	75	78	82	86	90	94	99	103	108	114	119	126	132	139	146	154	162
6.	MISCELLANEOUS	<u>8,133</u>	8,089	7,994	7,861	7,853	7,857	7,898	7,878	7,879	7,938	<u>8,316</u>	<u>8,372</u>	8,434	8,507	8,582	8,660	<u>8,740</u>	8,823	<u>8,907</u>	<u>8,995</u>
7.	TOTAL	<u>16,909</u>	<u>16,397</u>	<u>18,346</u>	<u>19,140</u>	<u>19,638</u>	20,033	20,597	21,292	<u>21,703</u>	<u>22,251</u>	23,859	23,398	<u>25,630</u>	<u>25,867</u>	<u>26,574</u>	<u>27,343</u>	<u>28,306</u>	29,093	<u>30,089</u>	<u>31,185</u>

(1) REVENUE FROM WHEELING INCLUDES SEPA AND TEA.

# **SECTION II**

# SANTEE COOPER ELECTRIC SYSTEM ADDITIONAL SCHEDULES IN RESPONSE TO ACT 95

2020 CONFORMING CASE

SANTEE COOPER

SCHEDULE A

FINANCIAL METRICS: FUNCTIONALIZED FUTURE DEBT-TO-CAPITALIZATION (DOLLARS IN THOUSANDS)

									(DOLLAR	S IN THOU	SANDS)											
	<u>Total</u>	<u>Average</u>	<u>2020</u>	<u>2021</u>	2022	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	2029	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>
GENERATION CAPITAL NEEDS  1. LOAD AND RESOURCES PLAN  2. ENVIRONMENTAL UPGRADES (INCLUDING FERC CAPITAL)  3. OTHER CAPITAL IMPROVEMENTS  4. TOTAL	794,840 421,545 <u>1,279,264</u> 2,495,649	39,742 21,077 <u>63,963</u> 124,782	0 53,605 <u>82,149</u> 135,754	16,660 50,301 110,830 177,791	45,940 54,354 <u>77,142</u> 177,436	73,698 51,838 <u>72,585</u> 198,120	132,922 79,783 <u>82,130</u> 294,836	171,311 21,806 <u>68,476</u> 261,593	195,295 10,052 <u>57,030</u> 262,377	93,598 9,850 <u>70,211</u> 173,659	65,415 15,758 <u>53,011</u> 134,184	0 14,842 <u>65,980</u> 80,822	0 1,506 <u>49,268</u> 50,774	0 5,638 <u>49,377</u> 55,015	0 10,731 <u>59,868</u> 70,599	0 11,074 49,229 60,303	0 10,893 <u>49,173</u> 60,066	0 5,662 <u>66,295</u> 71,956	0 5,682 <u>49,692</u> 55,374	0 5,702 <u>49,624</u> 55,327	0 1,223 <u>62,567</u> 63,790	0 1,245 <u>54,627</u> 55,872
GENERATION SOURCE OF FUNDS  5. CAPITAL CONTRIBUTION (INTERNAL/CIF FUNDS)  6. DEBT FUNDED (EXTERNAL FUNDS)  7. TOTAL	1,232,755 <u>1,262,894</u> 2,495,649	61,638 <u>63,145</u> 124,782	82,150 <u>53,604</u> 135,754	64,343 <u>113,448</u> 177,791	77,128 100,308 177,436	72,588 <u>125,532</u> 198,120	82,124 212,712 294,836	68,477 193,116 261,593	57,033 <u>205,344</u> 262,377	70,207 103,452 173,659	53,004 <u>81,180</u> 134,184	65,980 14,842 80,822	49,268 <u>1,506</u> 50,774	49,377 <u>5,638</u> 55,015	59,868 10,731 70,599	49,229 11,074 60,303	49,173 10,893 60,066	66,295 <u>5,662</u> 71,956	49,692 <u>5,682</u> 55,374	49,624 <u>5,702</u> 55,327	62,567 <u>1,223</u> 63,790	54,627 <u>1,245</u> 55,872
8. CUMULATIVE DEPRECIATION			2,054	6,878	13,631	31,214	52,388	76,952	106,187	161,602	219,220	279,549	342,322	407,314	474,540	543,743	615,168	688,250	762,574	838,138	915,267	993,762
9. DEBT FUNDED PORTION  10. OUTSTANDING DEBT FUNDED PORTION  11. DEBT TO CAPITALIZATION (1)	<u>51%</u>	<u>51%</u>	39% 39% 40%	64% 53% 54%	<u>57%</u> <u>53%</u> <u>54%</u>	63% 55% 55%	<u>72%</u> <u>59%</u> <u>59%</u>	74% 62% 61%	78% 64% 63%	60% 61% 59%	60% 59% 55%	18% 55% 52%	<u>3%</u> <u>49%</u> <u>44%</u>	<u>10%</u> <u>44%</u> <u>40%</u>	15% 39% 34%	18% 36% 32%	18% 33% 30%	<u>8%</u> <u>30%</u> <u>28%</u>	10% 28% 26%	10% 23% 21%	<u>2%</u> 15% 14%	2% 9% 8%
TRANSMISSION CAPITAL NEEDS  12. LOAD AND RESOURCES PLAN  13. OTHER CAPITAL IMPROVEMENTS  14. TOTAL	228,196 <u>896,280</u> 1,124,476	11,410 <u>44,814</u> 56,224	8,586 <u>39,863</u> 48,449	466 38,046 38,512	31,397 32,735 64,132	36,672 27,468 64,140	50,883 33,439 84,322	41,775 36,212 77,987	16,944 45,479 62,423	0 <u>49,216</u> 49,216	2,649 <u>51,558</u> 54,207	16,534 <u>47,544</u> 64,078	22,291 43,565 65,856	0 <u>45,279</u> 45,279	0 <u>45,667</u> 45,667	0 <u>46,786</u> 46,786	0 <u>72,376</u> 72,376	0 <u>52,121</u> 52,121	0 <u>41,557</u> 41,557	0 <u>50,020</u> 50,020	0 <u>47,228</u> 47,228	0 <u>50,121</u> 50,121
TRANSMISSION SOURCE OF FUNDS  15. CAPITAL CONTRIBUTION (INTERNAL FUNDS)  16. DEBT FUNDED (EXTERNAL FUNDS)  17. TOTAL	275,944 <u>848,532</u> 1,124,476	13,797 <u>42,427</u> 56,224	20,201 28,248 48,449	11,200 <u>27,312</u> 38,512	9,124 <u>55,008</u> 64,132	8,580 <u>55,560</u> 64,140	9,058 <u>75,264</u> 84,322	10,427 67,560 77,987	14,183 48,240 62,423	14,368 34,848 49,216	14,403 39,804 54,207	13,558 50,520 64,078	13,212 <u>52,644</u> 65,856	14,091 31,188 45,279	14,095 31,572 45,667	14,854 31,932 46,786	19,888 <u>52,488</u> 72,376	19,553 32,568 52,121	12,721 28,836 41,557	13,744 36,276 50,020	13,172 <u>34,056</u> 47,228	15,513 <u>34,608</u> 50,121
18. CUMULATIVE DEPRECIATION			1,211	3,385	7,163	12,543	20,032	29,471	40,470	52,699	66,284	81,471	98,304	116,269	135,376	155,652	177,738	201,126	225,554	251,232	278,091	306,203
<ul> <li>19. DEBT FUNDED PORTION</li> <li>20. OUTSTANDING DEBT FUNDED PORTION</li> <li>21. DEBT TO CAPITALIZATION (1)</li> </ul>	<u>75%</u>	<u>75%</u>	<u>58%</u> <u>58%</u> <u>60%</u>	<u>71%</u> <u>64%</u> <u>66%</u>	86% 69% 62%	87% 74% 69%	89% 78% 72%	87% 79% 74%	77% 78% 73%	<u>71%</u> <u>75%</u> <u>66%</u>	73% 73% 64%	<u>79%</u> <u>72%</u> <u>61%</u>	80% 71% 60%	69% 69% 57%	69% 67% 54%	68% 65% 52%	73% 63% 49%	62% 61% 48%	69% 60% 47%	73% 58% 45%	72% 56% 42%	69% 53% 38%
OTHER CAPITAL NEEDS 22. CAPITAL IMPROVEMENTS	1,236,262	61,813	77,805	75,900	57,557	54,279	53,042	55,364	58,835	57,133	57,144	60,412	61,848	58,196	61,422	60,906	61,951	62,550	64,110	64,821	65,188	67,799
OTHER CAPITAL PROJECTS SOURCE OF FUNDS  23. CAPITAL CONTRIBUTION (INTERNAL/CIF FUNDS)  24. DEBT FUNDED (EXTERNAL FUNDS)  25. TOTAL	1,190,300 <u>45,962</u> 1,236,262	59,515 <u>2,298</u> 61,813	68,467 <u>9,338</u> 77,805	64,355 <u>11,545</u> 75,900	51,816 <u>5,741</u> 57,557	52,156 2,123 54,279	50,378 2,664 53,042	52,304 3,060 55,364	56,599 2,237 58,835	55,488 <u>1,645</u> 57,133	55,514 <u>1,630</u> 57,144	58,782 <u>1,630</u> 60,412	60,243 <u>1,605</u> 61,848	57,133 <u>1,063</u> 58,196	60,395 <u>1,026</u> 61,422	60,331 <u>575</u> 60,906	61,870 <u>80</u> 61,951	62,550 <u>0</u> 62,550	64,110 <u>0</u> 64,110	64,821 <u>0</u> 64,821	65,188 <u>0</u> 65,188	67,799 <u>0</u> 67,799
26. CUMULATIVE DEPRECIATION			1,219	3,421	6,690	10,598	13,740	16,658	20,000	23,596	27,861	32,161	36,850	42,437	48,429	55,209	62,186	69,395	77,816	87,184	96,991	107,544
27. DEBT FUNDED PORTION 28. OUTSTANDING DEBT FUNDED PORTION 29. DEBT TO CAPITALIZATION (1)	<u>4%</u>	<u>4%</u>	<u>12%</u> <u>8%</u> <u>7%</u>	<u>15%</u> <u>10%</u> <u>10%</u>	<u>10%</u> <u>9%</u> <u>9%</u>	<u>4%</u> <u>7%</u> <u>7%</u>	<u>5%</u> <u>3%</u> <u>3%</u>	<u>6%</u> <u>0%</u> <u>0%</u>	<u>4%</u> <u>0%</u> <u>0%</u>	<u>3%</u> <u>0%</u> <u>0%</u>	<u>3%</u> <u>0%</u> <u>0%</u>	3% 0% 0%	3% 0% 0%	<u>2%</u> <u>0%</u> <u>0%</u>	<u>2%</u> <u>0%</u> <u>0%</u>	<u>1%</u> <u>0%</u> <u>0%</u>	<u>0%</u> <u>0%</u> <u>0%</u>	<u>0%</u> <u>0%</u> <u>0%</u>	<u>0%</u> <u>0%</u> <u>0%</u>	<u>0%</u> <u>0%</u> <u>0%</u>	<u>0%</u> <u>0%</u> <u>0%</u>	<u>0%</u> <u>0%</u> <u>0%</u>
TOTAL CAPITAL NEEDS  30. LOAD AND RESOURCES PLAN  31. ENVIRONMENTAL UPGRADES (INCLUDING FERC CAPITAL)  32. OTHER CAPITAL IMPROVEMENTS  33. TOTAL	1,023,036 421,545 3,411,806 4,856,387	51,152 21,077 <u>170,590</u> 242,819	8,586 53,605 <u>199,817</u> 262,008	17,127 50,301 <u>224,776</u> 292,204	77,338 54,354 <u>167,434</u> 299,125	110,370 51,838 <u>154,332</u> 316,540	183,805 79,783 <u>168,611</u> 432,199	213,085 21,806 <u>160,052</u> 394,943	212,238 10,052 <u>161,344</u> 383,635	93,598 9,850 <u>176,560</u> 280,008	68,064 15,758 <u>161,713</u> 245,536	16,534 14,842 <u>173,936</u> 205,312	22,291 1,506 <u>154,681</u> 178,478	0 5,638 <u>152,852</u> 158,490	0 10,731 <u>166,957</u> 177,688	0 11,074 <u>156,921</u> 167,995	0 10,893 <u>183,500</u> 194,393	0 5,662 <u>180,966</u> 186,628	0 5,682 <u>155,359</u> 161,041	0 5,702 <u>164,465</u> 170,167	0 1,223 <u>174,983</u> 176,206	0 1,245 <u>172,547</u> 173,792
TOTAL SOURCE OF FUNDS  34. CAPITAL CONTRIBUTION (INTERNAL/CIF FUNDS)  35. DEBT FUNDED (EXTERNAL FUNDS)  36. TOTAL	2,698,999 2,157,388 4,856,387	134,950 <u>107,869</u> 242,819	170,818 <u>91,190</u> 262,008	139,899 <u>152,305</u> 292,204	138,068 <u>161,057</u> 299,125	133,325 <u>183,215</u> 316,540	141,560 290,640 432,199	131,207 263,736 394,943	127,814 <u>255,821</u> 383,635	140,063 <u>139,945</u> 280,008	122,922 122,614 245,536	138,320 66,992 205,312	122,723 <u>55,755</u> 178,478	120,601 <u>37,889</u> 158,490	134,359 <u>43,329</u> 177,688	124,414 <u>43,581</u> 167,995	130,932 63,461 194,393	148,398 38,230 186,628	126,523 <u>34,518</u> 161,041	128,189 <u>41,978</u> 170,167	140,927 <u>35,279</u> 176,206	137,939 <u>35,853</u> 173,792
37. CUMULATIVE DEPRECIATION	10,631,012	531,551	4,484	13,684	27,484	54,356	86,160	123,080	166,657	237,898	313,365	393,181	477,476	566,020	658,345	754,604	855,091	958,771	1,065,944	1,176,554	1,290,349	1,407,509
38. DEBT FUNDED PORTION 39. OUTSTANDING DEBT FUNDED PORTION 40. DEBT TO CAPITALIZATION (1)	<u>44%</u>	<u>44%</u>	35% 34% 34%	<u>52%</u> <u>43%</u> <u>44%</u>	<u>54%</u> <u>45%</u> <u>44%</u>	58% 47% 46%	67% 51% 50%	67% 53% 52%	67% 54% 52%	<u>50%</u> <u>51%</u> <u>48%</u>	<u>50%</u> <u>48%</u> <u>45%</u>	33% 45% 41%	31% 40% 36%	24% 36% 32%	24% 32% 28%	26% 30% 26%	33% 28% 25%	20% 25% 23%	21% 24% 22%	25% 20% 19%	20% 16% 14%	21% 12% 11%
CAPITAL IMPROVEMENT FUND CONTRIBUTIONS 41. TOTAL CIF COLLECTED	3,707,107	185,355	159,208	159,950	158,097	162,276	164,138	167,824	171,903	175,696	178,778	181,458	184,669	188,049	192,801	196,439	200,480	203,682	208,413	212,901	218,436	221,909
42. NOMINAL CIF%		<u>9.00%</u>	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	<u>9.00%</u>	9.00%

(1) OUTSTANDING DEBT FUNDED PORTION LESS DEPRECIATION

# FINANCIAL METRICS: FUNCTIONALIZED DEBT SERVICE COVERAGE (1) (DOLLARS IN THOUSANDS)

<u>To</u>	otal_	Average	2020	<u>2021</u>	2022	2023	2024	<u>2025</u>	<u>2026</u>	<u>2027</u>	2028	2029	<u>2030</u>	<u>2031</u>	2032	<u>2033</u>	<u>2034</u>	<u>2035</u>	2036	<u>2037</u>	2038	2039
DEBT SERVICE: GENERATION																						
<ol> <li>EXISTING DEBT SERVICE (2)</li> </ol>	5,787,696	289,385	366,004	359,167	355,543	322,271	320,683	305,096	298,427	313,631	294,408	275,319	293,170	286,259	275,268	279,858	272,121	245,868	236,086	227,759	225,359	235,399
2. FUTURE DEBT SERVICE 1,3	1,293,270	64,664	<u>3,648</u>	5,923	<u>25,074</u>	42,228	47,558	62,508	<u>78,807</u>	82,556	92,680	100,634	<u>81,037</u>	<u>78,924</u>	<u>87,188</u>	77,597	72,857	71,086	70,985	77,363	80,608	<u>54,009</u>
3. TOTAL 7,	7,080,966	354,048	369,652	365,090	380,617	364,499	368,241	367,604	377,234	396,187	387,088	375,953	374,207	365,183	362,456	357,455	344,978	316,954	307,071	305,122	305,967	289,408
DEBT SERVICE: TRANSMISSION																						
	807,016	40.351	56,305	56,593	36,877	52,940	47,294	50,055	45,136	31.035	44.248	36,627	40.498	37.187	39.469	44.587	29.998	44,809	43.459	29,969	26,259	13,672
. ,	744,735	37,237	00,000	1,171	25,427	9,829	19,431	18,860	27,276	47,563	35,542	43,844	43,421	47,989	47.815	44,517	59,951	41,218	41,224	55,471	61,855	72,331
	1,551,751	77,588	56,305	57,764	62,304	62,769	66,725	68,915	72,412	78,598	79,790	80,471	83,919	85,176	87,284	89,104	89,949	86,027	84,683	85,440	88,114	86,003
,	,,	,	,	. , .	,	,		,-	,	-,	.,	,	,		,	, .		,-	,,,,,		,	,
DEBT SERVICE: OTHER																						
. ,	524,890	26,245	17,080	17,109	17,877	17,109	19,907	20,464	20,693	23,779	24,706	25,240	28,195	29,177	30,855	32,995	33,707	31,938	31,931	32,909	34,880	34,338
	<u>206,530</u>	<u>10,326</u>	<u>7,448</u>	<u>9,464</u>	<u>11,468</u>	12,328	<u>10,979</u>	10,887	12,029	<u>11,913</u>	<u>11,798</u>	<u>11,682</u>	10,333	10,242	<u>10,151</u>	<u>9,510</u>	<u>9,434</u>	<u>9,451</u>	<u>9,375</u>	<u>9,391</u>	<u>9,315</u>	<u>9,331</u>
9. TOTAL	731,420	36,571	24,528	26,573	29,345	29,437	30,886	31,351	32,722	35,693	36,504	36,922	38,528	39,419	41,006	42,505	43,141	41,388	41,305	42,300	44,195	43,669
AGGREGATE DEBT SERVICE																						
10. EXISTING DEBT SERVICE (2) 7,	7,119,602	355,980	439,390	432,868	410,297	392,320	387,884	375,616	364,256	368,446	363,362	337,185	361,863	352,623	345,592	357,440	335,826	322,614	311,476	290,637	286,499	283,409
11. FUTURE DEBT SERVICE 2.	2,244,535	112,227	11,096	16,558	61,969	64,385	77,968	92,255	118,112	142,032	140,020	156,160	134,791	137,155	145,154	131,624	142,242	121,755	121,584	142,225	151,778	135,671
12. <b>TOTAL</b> 9,	9,364,136	468,207	450,485	449,426	472,266	456,705	465,852	467,871	482,368	510,478	503,382	493,345	496,654	489,778	490,746	489,064	478,068	444,369	433,060	432,862	438,277	419,080
13. FUNDS AVAILABLE FOR DEBT SERVICE (3) 13,	3.111.779	655,589	615,154	609,623	627,833	621,455	626,853	637,365	659,663	684,168	683,295	677,534	682,768	677,733	686,881	684,171	678,040	655,488	647,320	648,969	661,021	646,445
14. DEBT SERVICE COVERAGE	1.40	1.40	1.36	1.35	1.32	1.36	1.34	1.36	1.36	1.34	1.35	1.37	1.37	1.38	1.39	1.39	1.41	1.47	1.49	1.49	1.50	1.54
								2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	<u>2035</u>	2036	2037	2038	2039
CUSTOMER IMPACT To	<u>otal</u>	<u>Average</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	2021	2020	2025	2000	2001	2002	2033	2034	2033	2030	2037	2000	2005
TOTAL SYSTEM		<u></u>		<del></del>							<del></del>	<u> </u>				<del></del>				· <del></del>		
TOTAL SYSTEM  15. DEBT SERVICE 9,	9,364,136	468,207	450,485	449,426	472,266	456,705	465,852	467,871	482,368	510,478	503,382	493,345	496,654	489,778	490,746	489,064	478,068	444,369	433,060	432,862	438,277	419,080
TOTAL SYSTEM           15. DEBT SERVICE         9,           16. SYSTEM REVENUES         41,	9,364,136 1,218,184	468,207 2,060,909	450,485 1,774,683	449,426 1,777,668	472,266 1,753,262	456,705 1,804,591	465,852 1,818,307	467,871 1,864,221	482,368 1,913,357	510,478 1,948,735	503,382 1,986,304	493,345 2,018,183	496,654 2,052,503	489,778 2,088,834	490,746 2,145,035	489,064 2,180,991	478,068 2,226,569	444,369 2,270,509	433,060 2,321,725	432,862 2,369,280	438,277 2,431,696	419,080 2,471,731
TOTAL SYSTEM  15. DEBT SERVICE 9,	9,364,136	468,207	450,485	449,426	472,266	456,705	465,852	467,871	482,368	510,478	503,382	493,345	496,654	489,778	490,746	489,064	478,068	444,369	433,060	432,862	438,277	419,080
TOTAL SYSTEM           15. DEBT SERVICE         9,           16. SYSTEM REVENUES         41,	9,364,136 1,218,184	468,207 2,060,909	450,485 1,774,683	449,426 1,777,668	472,266 1,753,262	456,705 1,804,591	465,852 1,818,307	467,871 1,864,221	482,368 1,913,357	510,478 1,948,735	503,382 1,986,304	493,345 2,018,183	496,654 2,052,503	489,778 2,088,834	490,746 2,145,035	489,064 2,180,991	478,068 2,226,569	444,369 2,270,509	433,060 2,321,725	432,862 2,369,280	438,277 2,431,696	419,080 2,471,731
TOTAL SYSTEM  15. DEBT SERVICE 9,  16. SYSTEM REVENUES 41,  17. DEBT SERVICE % OF REV.  CENTRAL	9,364,136 1,218,184	468,207 2,060,909	450,485 1,774,683	449,426 1,777,668	472,266 1,753,262	456,705 1,804,591	465,852 1,818,307	467,871 1,864,221	482,368 1,913,357	510,478 1,948,735	503,382 1,986,304	493,345 2,018,183	496,654 2,052,503	489,778 2,088,834	490,746 2,145,035	489,064 2,180,991	478,068 2,226,569	444,369 2,270,509	433,060 2,321,725	432,862 2,369,280	438,277 2,431,696	419,080 2,471,731
TOTAL SYSTEM  15. DEBT SERVICE 9,1  16. SYSTEM REVENUES 41,1  17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6,	9,364,136 1,218,184 22.72%	468,207 2,060,909 22.72% 307,840 1,252,128	450,485 1,774,683 25.38% 300,232 1,065,888	449,426 1,777,668 25.28%	472,266 1,753,262 26.94% 313,417 1,046,642	456,705 1,804,591 25.31% 301,910 1,078,662	465,852 1,818,307 25.62% 307,419 1,092,743	467,871 1,864,221 25.10%	482,368 1,913,357 25.21%	510,478 1,948,735 26.20% 335,624 1,180,602	503,382 1,986,304 25.34% 330,117 1,200,304	493,345 2,018,183 24.45% 327,707 1,238,381	496,654 2,052,503 24.20% 328,846 1,254,932	489,778 2,088,834 23.45% 323,057 1,277,880	490,746 2,145,035 22.88% 322,567 1,308,336	489,064 2,180,991 22.42%	478,068 2,226,569 21.47% 311,697 1,357,211	444,369 2,270,509 19.57% 288,436 1,381,315	433,060 2,321,725 18.65%	432,862 2,369,280 18.27% 279,401 1,444,789	438,277 2,431,696 18.02% 287,424 1,500,052	419,080 2,471,731 16.95% 273,483 1,522,460
TOTAL SYSTEM  15. DEBT SERVICE 9,1  16. SYSTEM REVENUES 41,1  17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6,	9,364,136 1,218,184 22.72%	468,207 2,060,909 22.72% 307,840	450,485 1,774,683 25.38% 300,232	449,426 1,777,668 25.28% 299,030	472,266 1,753,262 26.94% 313,417	456,705 1,804,591 25.31% 301,910	465,852 1,818,307 25.62%	467,871 1,864,221 25.10% 308,292	482,368 1,913,357 25.21% 317,614	510,478 1,948,735 26.20%	503,382 1,986,304 25.34% 330,117	493,345 2,018,183 24.45% 327,707	496,654 2,052,503 24.20% 328,846	489,778 2,088,834 23.45% 323,057	490,746 2,145,035 22.88% 322,567	489,064 2,180,991 22.42% 320,053	478,068 2,226,569 21.47% 311,697	444,369 2,270,509 19.57% 288,436	433,060 2,321,725 18.65% 280,469	432,862 2,369,280 18.27% 279,401	438,277 2,431,696 18.02% 287,424	419,080 2,471,731 16.95% 273,483
TOTAL SYSTEM  15. DEBT SERVICE 9,1  16. SYSTEM REVENUES 41,1  17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6,2  20. NET REVENUE 25,2  21. DEBT SERVICE % OF REV.	9,364,136 1,218,184 22.72% 6,156,796 5,042,553	468,207 2,060,909 22.72% 307,840 1,252,128	450,485 1,774,683 25.38% 300,232 1,065,888	449,426 1,777,668 25.28% 299,030 1,069,562	472,266 1,753,262 26.94% 313,417 1,046,642	456,705 1,804,591 25.31% 301,910 1,078,662	465,852 1,818,307 25.62% 307,419 1,092,743	467,871 1,864,221 25.10% 308,292 1,123,319	482,368 1,913,357 25.21% 317,614 1,155,187	510,478 1,948,735 26.20% 335,624 1,180,602	503,382 1,986,304 25.34% 330,117 1,200,304	493,345 2,018,183 24.45% 327,707 1,238,381	496,654 2,052,503 24.20% 328,846 1,254,932	489,778 2,088,834 23.45% 323,057 1,277,880	490,746 2,145,035 22.88% 322,567 1,308,336	489,064 2,180,991 22.42% 320,053 1,329,615	478,068 2,226,569 21.47% 311,697 1,357,211	444,369 2,270,509 19.57% 288,436 1,381,315	433,060 2,321,725 18.65% 280,469 1,414,673	432,862 2,369,280 18.27% 279,401 1,444,789	438,277 2,431,696 18.02% 287,424 1,500,052	419,080 2,471,731 16.95% 273,483 1,522,460
TOTAL SYSTEM  15. DEBT SERVICE 9,  16. SYSTEM REVENUES 41,  17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6,  20. NET REVENUE 25,  21. DEBT SERVICE % OF REV.  RESIDENTIAL	9,364,136 1,218,184 22.72% 6,156,796 5,042,553 24.59%	468,207 2,060,909 22.72% 307,840 1,252,128 24.59%	450,485 1,774,683 25.38% 300,232 1,065,888 28.17%	449,426 1,777,668 25.28% 299,030 1,069,562 27.96%	472,266 1,753,262 26.94% 313,417 1,046,642 29.95%	456,705 1,804,591 25,31% 301,910 1,078,662 27.99%	465,852 1,818,307 25.62% 307,419 1,092,743 28.13%	467,871 1,864,221 25.10% 308,292 1,123,319 27.44%	482,368 1,913,357 25.21% 317,614 1,155,187 27.49%	510,478 1,948,735 26.20% 335,624 1,180,602 28.43%	503,382 1,986,304 25.34% 330,117 1,200,304 27.50%	493,345 2,018,183 24.45% 327,707 1,238,381 26.46%	496,654 2,052,503 24.20% 328,846 1,254,932 26.20%	489,778 2,088,834 23.45% 323,057 1,277,880 25.28%	490,746 2,145,035 22.88% 322,567 1,308,336 24.65%	489,064 2,180,991 22.42% 320,053 1,329,615 24.07%	478,068 2,226,569 21.47% 311,697 1,357,211 22.97%	444,369 2,270,509 19.57% 288,436 1,381,315 20.88%	433,060 2,321,725 18.65% 280,469 1,414,673 19.83%	432,862 2,369,280 18.27% 279,401 1,444,789 19.34%	438,277 2,431,696 18.02% 287,424 1,500,052 19.16%	419,080 2,471,731 16.95% 273,483 1,522,460 17.96%
TOTAL SYSTEM  15. DEBT SERVICE 9,  16. SYSTEM REVENUES 41,  17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6,  20. NET REVENUE 25,  21. DEBT SERVICE % OF REV.  RESIDENTIAL  22. DEBT SERVICE 1,	9,364,136 1,218,184 22.72% 6,156,796 5,042,553	468,207 2,060,909 22.72% 307,840 1,252,128	450,485 1,774,683 25.38% 300,232 1,065,888	449,426 1,777,668 25.28% 299,030 1,069,562	472,266 1,753,262 26.94% 313,417 1,046,642	456,705 1,804,591 25.31% 301,910 1,078,662	465,852 1,818,307 25.62% 307,419 1,092,743	467,871 1,864,221 25.10% 308,292 1,123,319	482,368 1,913,357 25.21% 317,614 1,155,187	510,478 1,948,735 26.20% 335,624 1,180,602	503,382 1,986,304 25.34% 330,117 1,200,304	493,345 2,018,183 24.45% 327,707 1,238,381	496,654 2,052,503 24.20% 328,846 1,254,932	489,778 2,088,834 23.45% 323,057 1,277,880	490,746 2,145,035 22.88% 322,567 1,308,336	489,064 2,180,991 22.42% 320,053 1,329,615	478,068 2,226,569 21.47% 311,697 1,357,211	444,369 2,270,509 19.57% 288,436 1,381,315	433,060 2,321,725 18.65% 280,469 1,414,673 19.83%	432,862 2,369,280 18.27% 279,401 1,444,789	438,277 2,431,696 18.02% 287,424 1,500,052	419,080 2,471,731 16.95% 273,483 1,522,460
TOTAL SYSTEM  15. DEBT SERVICE 9,  16. SYSTEM REVENUES 41,  17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6,  20. NET REVENUE 25,  21. DEBT SERVICE % OF REV.  RESIDENTIAL  22. DEBT SERVICE 1,	9,364,136 1,218,184 22.72% 6,156,796 5,042,553 24.59%	468,207 2,060,909 22.72% 307,840 1,252,128 24.59%	450,485 1,774,683 25.38% 300,232 1,065,888 28.17%	449,426 1,777,668 25.28% 299,030 1,069,562 27.96%	472,266 1,753,262 26.94% 313,417 1,046,642 29.95%	456,705 1,804,591 25.31% 301,910 1,078,662 27.99%	465,852 1,818,307 25.62% 307,419 1,092,743 28.13%	467,871 1,864,221 25.10% 308,292 1,123,319 27.44%	482,368 1,913,357 25.21% 317,614 1,155,187 27.49%	510,478 1,948,735 26.20% 335,624 1,180,602 28.43%	503,382 1,986,304 25.34% 330,117 1,200,304 27.50%	493,345 2,018,183 24.45% 327,707 1,238,381 26.46% 82,779	496,654 2,052,503 24.20% 328,846 1,254,932 26.20% 84,044	489,778 2,088,834 23.45% 323,057 1,277,880 25.28% 83,485	490,746 2,145,035 22.88% 322,567 1,308,336 24.65% 84,103	489,064 2,180,991 22.42% 320,053 1,329,615 24.07% 84,384	478,068 2,226,569 21.47% 311,697 1,357,211 22.97% 83,134	444,369 2,270,509 19.57% 288,436 1,381,315 20.88%	433,060 2,321,725 18.65% 280,469 1,414,673 19.83%	432,862 2,369,280 18.27% 279,401 1,444,789 19.34%	438,277 2,431,696 18.02% 287,424 1,500,052 19.16% 75,802	419,080 2,471,731 16.95% 273,483 1,522,460 17.96%
TOTAL SYSTEM  15. DEBT SERVICE  16. SYSTEM REVENUES  17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE  20. NET REVENUE  21. DEBT SERVICE % OF REV.  RESIDENTIAL  22. DEBT SERVICE  23. NET REVENUE  24. DEBT SERVICE % OF REV.	9,364,136 1,218,184 22.72% 6,156,796 5,042,553 24.59% 1,563,889 5,073,926	468,207 2,060,909 22.72% 307,840 1,252,128 24.59% 78,194 253,696	450,485 1,774,683 25.38% 300,232 1,065,888 28.17% 71,041 209,084	449,426 1,777,668 25.28% 299,030 1,069,562 27.96% 70,025 210,253	472,266 1,753,262 26.94% 313,417 1,046,642 29.95% 74,230 211,472	456,705 1,804,591 25.31% 301,910 1,078,662 27.99% 72,600 216,529	465,852 1,818,307 25.62% 307,419 1,092,743 28.13% 74,564 221,147	467,871 1,864,221 25.10% 308,292 1,123,319 27.44% 75,377 227,563	482,368 1,913,357 25.21% 317,614 1,155,187 27.49% 77,901 234,699	510,478 1,948,735 26.20% 335,624 1,180,602 28.43% 83,044 241,846	503,382 1,986,304 25.34% 330,117 1,200,304 27.50% 82,612 246,449	493,345 2,018,183 24.45% 327,707 1,238,381 26.46% 82,779 252,433	496,654 2,052,503 24.20% 328,846 1,254,932 26.20% 84,044 257,068	489,778 2,088,834 23.45% 323,057 1,277,880 25.28% 83,485 261,626	490,746 2,145,035 22.88% 322,567 1,308,336 24.65% 84,103 267,678	489,064 2,180,991 22.42% 320,053 1,329,615 24.07% 84,384 272,034	478,068 2,226,569 21.47% 311,697 1,357,211 22.97% 83,134 277,341	444,369 2,270,509 19.57% 288,436 1,381,315 20.88% 78,031 283,210	433,060 2,321,725 18.65% 280,469 1,414,673 19.83% 76,466 287,929	432,862 2,369,280 18.27% 279,401 1,444,789 19.34% 77,007 293,071	438,277 2,431,696 18.02% 287,424 1,500,052 19.16% 75,802 298,985	419,080 2,471,731 16.95% 273,483 1,522,460 17.96% 73,258 303,509
TOTAL SYSTEM  15. DEBT SERVICE 9,  16. SYSTEM REVENUES 41,  17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6,  20. NET REVENUE 25,  21. DEBT SERVICE % OF REV.  RESIDENTIAL  22. DEBT SERVICE 1,  23. NET REVENUE 5,  24. DEBT SERVICE % OF REV.  COMMERCIAL	9,364,136 1,218,184 22.72% 6,156,796 5,042,553 24.59% 1,563,889 5,073,926 30.82%	468,207 2,060,909 22.72% 307,840 1,252,128 24.59% 78,194 253,696 30.82%	450,485 1,774,683 25.38% 300,232 1,065,888 28.17% 71,041 209,084 33.98%	449,426 1,777,668 25,28% 299,030 1,069,562 27,96% 70,025 210,253 33,31%	472,266 1,753,262 26.94% 313,417 1,046,642 29.95% 74,230 211,472 35.10%	456,705 1,804,591 25,31% 301,910 1,078,662 27,99% 72,600 216,529 33,53%	465,852 1,818,307 25,62% 307,419 1,092,743 28,13% 74,564 221,147 33,72%	467,871 1,864,221 25.10% 308,292 1,123,319 27.44% 75,377 227,563 33.12%	482,368 1,913,357 25.21% 317,614 1,155,187 27.49% 77,901 234,699 33.19%	510,478 1,948,735 26.20% 335,624 1,180,602 28.43% 83,044 241,846 34.34%	503,382 1,986,304 25,34% 330,117 1,200,304 27,50% 82,612 246,449 33,52%	493,345 2,018,183 24.45% 327,707 1,238,381 26.46% 82,779 252,433 32.79%	496,654 2,052,503 24.20% 328,846 1,254,932 26.20% 84,044 257,068 32.69%	489,778 2,088,834 23.45% 323,057 1,277,880 25.28% 83,485 261,626 31,91%	490,746 2,145,035 22.88% 322,567 1,308,336 24.65% 84,103 267,678 31.42%	489,064 2,180,991 22.42% 320,053 1,329,615 24.07% 84,384 272,034 31.02%	478,068 2,226,569 21.47% 311,697 1,357,211 22.97% 83,134 277,341 29.98%	444,369 2,270,509 19.57% 288,436 1,381,315 20.88% 78,031 283,210 27.55%	433,060 2,321,725 18.65% 280,469 1,414,673 19.83% 76,466 287,929 26.56%	432,862 2,369,280 18.27% 279,401 1,444,789 19.34% 77,007 293,071 26.28%	438,277 2,431,696 18.02% 287,424 1,500,052 19.16% 75,802 298,985 25.35%	419,080 2,471,731 16.95% 273,483 1,522,460 17.96% 73,258 303,509 24.14%
TOTAL SYSTEM  15. DEBT SERVICE 9, 16. SYSTEM REVENUES 41, 17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6, 20. NET REVENUE 25, 21. DEBT SERVICE % OF REV.  RESIDENTIAL  22. DEBT SERVICE 1, 23. NET REVENUE 5, 24. DEBT SERVICE % OF REV.  COMMERCIAL  25. DEBT SERVICE 1,	9,364,136 1,218,184 22.72% 6,156,796 5,042,553 24.59% 1,563,889 5,073,926 30.82%	468,207 2,060,909 22.72% 307,840 1,252,128 24.59% 78,194 253,696 30.82%	450,485 1,774,683 25.38% 300,232 1,065,888 28.17% 71,041 209,084 33.98%	449,426 1,777,668 25.28% 299,030 1,069,562 27.96% 70,025 210,253 33.31%	472,266 1,753,262 26.94% 313,417 1,046,642 29.95% 74,230 211,472 35.10%	456,705 1,804,591 25,31% 301,910 1,078,662 27,99% 72,600 216,529 33,53% 53,191	465,852 1,818,307 25.62% 307,419 1,092,743 28.13% 74,564 221,147 33.72%	467,871 1,864,221 25.10% 308,292 1,123,319 27.44% 75,377 227,563 33.12%	482,368 1,913,357 25.21% 317,614 1,155,187 27.49% 77,901 234,699 33.19%	510,478 1,948,735 26.20% 335,624 1,180,602 28.43% 83,044 241,846 34.34%	503,382 1,986,304 25.34% 330,117 1,200,304 27.50% 82,612 246,449 33.52%	493,345 2,018,183 24.45% 327,707 1,238,381 26.46% 82,779 252,433 32.79%	496,654 2,052,503 24.20% 328,846 1,254,932 26.20% 84,044 257,068 32.69%	489,778 2,088,834 23.45% 323,057 1,277,880 25.28% 83,485 261,626 31.91% 60,561	490,746 2,145,035 22.88% 322,567 1,308,336 24.65% 84,103 267,678 31.42%	489,064 2,180,991 22.42% 320,053 1,329,615 24.07% 84,384 272,034 31.02%	478,068 2,226,569 21.47% 311,697 1,357,211 22.97% 83,134 277,341 29.98%	444,369 2,270,509 19.57% 288,436 1,381,315 20.88% 78,031 283,210 27.55% 57,597	433,060 2,321,725 18.65% 280,469 1,414,673 19.83% 76,466 287,929 26.56%	432,862 2,369,280 18.27% 279,401 1,444,789 19.34% 77,007 293,071 26.28%	438,277 2,431,696 18.02% 287,424 1,500,052 19.16% 75,802 298,985 25.35%	419,080 2,471,731 16.95% 273,483 1,522,460 17.96% 73,258 303,509 24.14%
TOTAL SYSTEM  15. DEBT SERVICE 9, 16. SYSTEM REVENUES 41, 17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6, 20. NET REVENUE 25, 21. DEBT SERVICE % OF REV.  RESIDENTIAL  22. DEBT SERVICE 1, 23. NET REVENUE 5, 24. DEBT SERVICE % OF REV.  COMMERCIAL  25. DEBT SERVICE 1,	9,364,136 1,218,184 22.72% 6,156,796 5,042,553 24.59% 1,563,889 5,073,926 30.82%	468,207 2,060,909 22.72% 307,840 1,252,128 24.59% 78,194 253,696 30.82%	450,485 1,774,683 25.38% 300,232 1,065,888 28.17% 71,041 209,084 33.98%	449,426 1,777,668 25,28% 299,030 1,069,562 27,96% 70,025 210,253 33,31%	472,266 1,753,262 26.94% 313,417 1,046,642 29.95% 74,230 211,472 35.10%	456,705 1,804,591 25,31% 301,910 1,078,662 27,99% 72,600 216,529 33,53%	465,852 1,818,307 25,62% 307,419 1,092,743 28,13% 74,564 221,147 33,72%	467,871 1,864,221 25.10% 308,292 1,123,319 27.44% 75,377 227,563 33.12%	482,368 1,913,357 25.21% 317,614 1,155,187 27.49% 77,901 234,699 33.19%	510,478 1,948,735 26.20% 335,624 1,180,602 28.43% 83,044 241,846 34.34%	503,382 1,986,304 25,34% 330,117 1,200,304 27,50% 82,612 246,449 33,52%	493,345 2,018,183 24.45% 327,707 1,238,381 26.46% 82,779 252,433 32.79%	496,654 2,052,503 24.20% 328,846 1,254,932 26.20% 84,044 257,068 32.69%	489,778 2,088,834 23.45% 323,057 1,277,880 25.28% 83,485 261,626 31,91%	490,746 2,145,035 22.88% 322,567 1,308,336 24.65% 84,103 267,678 31.42%	489,064 2,180,991 22.42% 320,053 1,329,615 24.07% 84,384 272,034 31.02%	478,068 2,226,569 21.47% 311,697 1,357,211 22.97% 83,134 277,341 29.98%	444,369 2,270,509 19.57% 288,436 1,381,315 20.88% 78,031 283,210 27.55%	433,060 2,321,725 18.65% 280,469 1,414,673 19.83% 76,466 287,929 26.56%	432,862 2,369,280 18.27% 279,401 1,444,789 19.34% 77,007 293,071 26.28%	438,277 2,431,696 18.02% 287,424 1,500,052 19.16% 75,802 298,985 25.35%	419,080 2,471,731 16.95% 273,483 1,522,460 17.96% 73,258 303,509 24.14%
TOTAL SYSTEM  15. DEBT SERVICE  16. SYSTEM REVENUES  17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE  20. NET REVENUE  21. DEBT SERVICE % OF REV.  RESIDENTIAL  22. DEBT SERVICE  23. NET REVENUE  24. DEBT SERVICE % OF REV.  COMMERCIAL  25. DEBT SERVICE % OF REV.  COMMERCIAL  26. NET REVENUE  27. DEBT SERVICE % OF REV.	9,364,136 1,218,184 22.72% 6,156,796 5,042,553 24.59% 1,563,889 5,073,926 30.82% 1,144,310 4,533,018	468,207 2,060,909 22.72% 307,840 1,252,128 24.59% 78,194 253,696 30.82% 57,215 226,651	450,485 1,774,683 25.38% 300,232 1,065,888 28.17% 71,041 209,084 33.98% 51,159 187,182	449,426 1,777,668 25.28% 299,030 1,069,562 27.96% 70,025 210,253 33.31% 51,614 186,773	472,266 1,753,262 26,94% 313,417 1,046,642 29,95% 74,230 211,472 35,10% 54,552 186,661	456,705 1,804,591 25.31% 301,910 1,078,662 27.99% 72,600 216,529 33.53% 53,191 191,688	465,852 1,818,307 25.62% 307,419 1,092,743 28.13% 74,564 221,147 33.72% 54,486 195,653	467,871 1,864,221 25.10% 308,292 1,123,319 27.44% 75,377 227,563 33.12% 54,944 200,785	482,368 1,913,357 25.21% 317,614 1,155,187 27.49% 77,901 234,699 33.19% 57,036 207,848	510,478 1,948,735 26.20% 335,624 1,180,602 28.43% 83,044 241,846 34.34% 60,450 213,487	503,382 1,986,304 25.34% 330,117 1,200,304 27.50% 82,612 246,449 33.52% 59,847 217,024	493,345 2,018,183 24,45% 327,707 1,238,381 26,46% 82,779 252,433 32,79% 59,858 222,524	496,654 2,052,503 24.20% 328,846 1,254,932 26.20% 84,044 257,068 32.69% 60,680 226,434	489,778 2,088,834 23.45% 323,057 1,277,880 25.28% 83,485 261,626 31,91% 60,561 231,530	490,746 2,145,035 22.88% 322,567 1,308,336 24.65% 84,103 267,678 31.42% 61,476 239,005	489,064 2,180,991 22.42% 320,053 1,329,615 24.07% 84,384 272,034 31.02% 62,189 244,497	478,068 2,226,569 21.47% 311,697 1,357,211 22.97% 83,134 277,341 29.98% 61,363 249,824	444,369 2,270,509 19.57% 288,436 1,381,315 20.88% 78,031 283,210 27.55% 57,597 255,949	433,060 2,321,725 18.65% 280,469 1,414,673 19.83% 76,466 287,929 26.56% 56,441 260,902	432,862 2,369,280 18.27% 279,401 1,444,789 19.34% 77,007 293,071 26.28% 56,841 266,194	438,277 2,431,696 18.02% 287,424 1,500,052 19.16% 75,802 298,985 25.35% 55,951 272,259	419,080 2,471,731 16.95% 273,483 1,522,460 17.96% 73,258 303,509 24.14% 54,074 276,799
TOTAL SYSTEM  15. DEBT SERVICE 9, 16. SYSTEM REVENUES 41, 17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6, 20. NET REVENUE 25, 21. DEBT SERVICE % OF REV.  RESIDENTIAL  22. DEBT SERVICE 1, 23. NET REVENUE 5, 24. DEBT SERVICE % OF REV.  COMMERCIAL  25. DEBT SERVICE % OF REV.  COMMERCIAL  26. NET REVENUE 4, 27. DEBT SERVICE % OF REV.  INDUSTRIAL FIRM	3,364,136 1,218,184 22.72% 5,156,796 5,042,553 24.59% 1,563,889 5,073,926 30.82% 1,144,310 4,533,018 25.24%	468,207 2,060,909 22.72% 307,840 1,252,128 24.59% 78,194 253,696 30.82% 57,215 226,651 25.24%	450,485 1,774,683 25.38% 300,232 1,065,888 28.17% 71,041 209,084 33.98% 51,159 187,182 27.33%	449,426 1,777,668 25.28% 299,030 1,069,562 27.96% 70,025 210,253 33.31% 51,614 186,773 27.63%	472,266 1,753,262 26.94% 313,417 1,046,642 29.95% 74,230 211,472 35.10% 54,552 186,661 29.22%	456,705 1,804,591 25,31% 301,910 1,078,662 27,99% 72,600 216,529 33,53% 53,191 191,688 27,75%	465,852 1,818,307 25,62% 307,419 1,092,743 28,13% 74,564 221,147 33,72% 54,486 195,653 27,85%	467,871 1,864,221 25.10% 308,292 1,123,319 27.44% 75,377 227,563 33.12% 54,944 200,785 27.36%	482,368 1,913,357 25.21% 317,614 1,155,187 27.49% 77,901 234,699 33.19% 57,036 207,848 27.44%	510,478 1,948,735 26.20% 335,624 1,180,602 28.43% 83,044 241,846 34.34% 60,450 213,487 28.32%	503,382 1,986,304 25,34% 330,117 1,200,304 27,50% 82,612 246,449 33,52% 59,847 217,024 27,58%	493,345 2,018,183 24.45% 327,707 1,238,381 26.46% 82,779 252,433 32.79% 59,858 222,524 26.90%	496,654 2,052,503 24,20% 328,846 1,254,932 26,20% 84,044 257,068 32,69% 60,680 226,434 26,80%	489,778 2,088,834 23.45% 323,057 1,277,880 25.28% 83,485 261,626 31,91% 60,561 231,530 26.16%	490,746 2,145,035 22.88% 322,567 1,308,336 24.65% 84,103 267,678 31.42% 61,476 239,005 25.72%	489,064 2,180,991 22.42% 320,053 1,329,615 24.07% 84,384 272,034 31.02% 62,189 244,497 25,44%	478,068 2,226,569 21.47% 311,697 1,357,211 22.97% 83,134 277,341 29.98% 61,363 249,824 24.56%	444,369 2,270,509 19.57% 288,436 1,381,315 20.88% 78,031 283,210 27.55% 57,597 255,949 22.50%	433,060 2,321,725 18.65% 280,469 1,414,673 19.83% 76,466 287,929 26.56% 56,441 260,902 21.63%	432,862 2,369,280 18.27% 279,401 1,444,789 19.34% 77,007 293,071 26.28% 56,841 266,194 21.35%	438,277 2,431,696 18.02% 287,424 1,500,052 19.16% 75,802 298,985 25.35% 55,951 272,259 20.55%	419,080 2,471,731 16.95% 273,483 1,522,460 17.96% 73,258 303,509 24.14% 54,074 276,799 19.54%
TOTAL SYSTEM  15. DEBT SERVICE 9, 16. SYSTEM REVENUES 41, 17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6, 20. NET REVENUE 25, 21. DEBT SERVICE % OF REV.  RESIDENTIAL  22. DEBT SERVICE 9 OF REV.  COMMERCIAL  25. DEBT SERVICE % OF REV.  COMMERCIAL  26. NET REVENUE 4, 27. DEBT SERVICE % OF REV.  INDUSTRIAL FIRM  28. DEBT SERVICE	9,364,136 1,218,184 22.72% 6,156,796 5,042,553 24.59% 1,563,889 5,073,926 30.82% 1,144,310 4,533,018 25.24%	468,207 2,060,909 22.72% 307,840 1,252,128 24.59% 78,194 253,696 30.82% 57,215 226,651 25,24%	450,485 1,774,683 25.38% 300,232 1,065,888 28.17% 71,041 209,084 33.98% 51,159 187,182 27.33% 28,053	449,426 1,777,668 25.28% 299,030 1,069,562 27.96% 70,025 210,253 33.31% 51,614 186,773 27.63%	472,266 1,753,262 26.94% 313,417 1,046,642 29.95% 74,230 211,472 35.10% 54,552 186,661 29.22% 30,067	456,705 1,804,591 25.31% 301,910 1,078,662 27.99% 72,600 216,529 33.53% 53,191 191,688 27.75%	465,852 1,818,307 25.62% 307,419 1,092,743 28.13% 74,564 221,147 33.72% 54,486 195,653 27.85%	467,871 1,864,221 25,10% 308,292 1,123,319 27,44% 75,377 227,563 33,12% 54,944 200,785 27,36%	482,368 1,913,357 25.21% 317,614 1,155,187 27.49% 77,901 234,699 33.19% 57,036 207,848 27.44% 29,817	510,478 1,948,735 26.20% 335,624 1,180,602 28.43% 83,044 241,846 34.34% 60,450 213,487 28.32% 31,359	503,382 1,986,304 25.34% 330,117 1,200,304 27.50% 82,612 246,449 33.52% 59,847 217,024 27.58% 30,806	493,345 2,018,183 24,45% 327,707 1,238,381 26,46% 82,779 252,433 32,79% 59,858 222,524 26,90%	496,654 2,052,503 24.20% 328,846 1,254,932 26.20% 84,044 257,068 32.69% 60,680 226,434 26.80%	489,778 2,088,834 23.45% 323,057 1,277,880 25.28% 83,485 261,626 31,91% 60,561 231,530 26.16%	490,746 2,145,035 22.88% 322,567 1,308,336 24.65% 84,103 267,678 31,42% 61,476 239,005 25,72%	489,064 2,180,991 22.42% 320,053 1,329,615 24.07% 84,384 272,034 31.02% 62,189 244,497 25,44% 22,437	478,068 2,226,569 21,47% 311,697 1,357,211 22,97% 83,134 277,341 29,98% 61,363 249,824 24,56% 21,874	444,369 2,270,509 19.57% 288,436 1,381,315 20.88% 78,031 283,210 27.55% 57,597 255,949 22.50%	433,060 2,321,725 18.65% 280,469 1,414,673 19.83% 76,466 287,929 26.56% 56,441 260,902 21.63%	432,862 2,369,280 18.27% 279,401 1,444,789 19.34% 77,007 293,071 26.28% 56,841 266,194 21.35%	438,277 2,431,696 18.02% 287,424 1,500,052 19.16% 75,802 298,985 25.35% 55,951 272,259 20.55%	419,080 2,471,731 16.95% 273,483 1,522,460 17.96% 73,258 303,509 24.14% 54,074 276,799 19.54%
TOTAL SYSTEM  15. DEBT SERVICE 9, 16. SYSTEM REVENUES 41, 17. DEBT SERVICE % OF REV.  CENTRAL  19. DEBT SERVICE 6, 20. NET REVENUE 25, 21. DEBT SERVICE % OF REV.  RESIDENTIAL  22. DEBT SERVICE 9 OF REV.  COMMERCIAL  25. DEBT SERVICE % OF REV.  COMMERCIAL  26. NET REVENUE 4, 27. DEBT SERVICE % OF REV.  INDUSTRIAL FIRM  28. DEBT SERVICE	3,364,136 1,218,184 22.72% 5,156,796 5,042,553 24.59% 1,563,889 5,073,926 30.82% 1,144,310 4,533,018 25.24%	468,207 2,060,909 22.72% 307,840 1,252,128 24.59% 78,194 253,696 30.82% 57,215 226,651 25.24%	450,485 1,774,683 25.38% 300,232 1,065,888 28.17% 71,041 209,084 33.98% 51,159 187,182 27.33%	449,426 1,777,668 25.28% 299,030 1,069,562 27.96% 70,025 210,253 33.31% 51,614 186,773 27.63%	472,266 1,753,262 26.94% 313,417 1,046,642 29.95% 74,230 211,472 35.10% 54,552 186,661 29.22%	456,705 1,804,591 25,31% 301,910 1,078,662 27,99% 72,600 216,529 33,53% 53,191 191,688 27,75%	465,852 1,818,307 25,62% 307,419 1,092,743 28,13% 74,564 221,147 33,72% 54,486 195,653 27,85%	467,871 1,864,221 25.10% 308,292 1,123,319 27.44% 75,377 227,563 33.12% 54,944 200,785 27.36%	482,368 1,913,357 25.21% 317,614 1,155,187 27.49% 77,901 234,699 33.19% 57,036 207,848 27.44%	510,478 1,948,735 26.20% 335,624 1,180,602 28.43% 83,044 241,846 34.34% 60,450 213,487 28.32%	503,382 1,986,304 25,34% 330,117 1,200,304 27,50% 82,612 246,449 33,52% 59,847 217,024 27,58%	493,345 2,018,183 24.45% 327,707 1,238,381 26.46% 82,779 252,433 32.79% 59,858 222,524 26.90%	496,654 2,052,503 24,20% 328,846 1,254,932 26,20% 84,044 257,068 32,69% 60,680 226,434 26,80%	489,778 2,088,834 23.45% 323,057 1,277,880 25.28% 83,485 261,626 31,91% 60,561 231,530 26.16%	490,746 2,145,035 22.88% 322,567 1,308,336 24.65% 84,103 267,678 31.42% 61,476 239,005 25.72%	489,064 2,180,991 22.42% 320,053 1,329,615 24.07% 84,384 272,034 31.02% 62,189 244,497 25,44%	478,068 2,226,569 21.47% 311,697 1,357,211 22.97% 83,134 277,341 29.98% 61,363 249,824 24.56%	444,369 2,270,509 19.57% 288,436 1,381,315 20.88% 78,031 283,210 27.55% 57,597 255,949 22.50%	433,060 2,321,725 18.65% 280,469 1,414,673 19.83% 76,466 287,929 26.56% 56,441 260,902 21.63%	432,862 2,369,280 18.27% 279,401 1,444,789 19.34% 77,007 293,071 26.28% 56,841 266,194 21.35%	438,277 2,431,696 18.02% 287,424 1,500,052 19.16% 75,802 298,985 25.35% 55,951 272,259 20.55%	419,080 2,471,731 16.95% 273,483 1,522,460 17.96% 73,258 303,509 24.14% 54,074 276,799 19.54%

(1) INCLUDES COMMERCIAL PAPER/DIRECT PURCHASE
(2) FUNCTIONALIZED PORTION OF EXISTING DEBT SERVICE (NET PLANT ALLOCATION)
(3) AFTER PAYMENT TO STATE

#### CASH FLOW STATEMENT FOR THE CALENDAR YEARS 2020 - 2039 (DOLLARS IN THOUSANDS)

		2020	<u>2021</u>	2022	2023	<u>2024</u>	<u>2025</u>	2026	<u>2027</u>	2028	2029	2030	<u>2031</u>	2032	2033	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	2038	<u>2039</u>
	CASH FLOWS FROM OPERATING ACTIVITIES																				
1.	RECEIPTS FROM CUSTOMERS	1,774,683	1,777,668	1,753,262	1,804,591	1,818,307	1,864,221	1,913,357	1,948,735	1,986,304	2,018,183	2,052,503	2,088,834	2,145,035	2,180,991	2,226,569	2,270,509	2,321,725	2,369,280	2,431,696	2,471,731
2.	PAYMENTS TO NON-FUEL SUPPLIERS	(267,540)	(277,972)	(241,552)	(271,941)	(262,015)	(257,597)	(271,991)	(258,505)	(254,684)	(276,858)	(273,908)	(273,571)	(283,690)	(284,005)	(280,898)	(303,208)	(308,599)	(296,492)	(319,691)	(323,833)
3.	PAYMENTS FOR FUEL	(489,032)	(546,608)	(536,356)	(553,033)	(538,351)	(560,876)	(599,619)	(634,261)	(651,309)	(671,082)	(697,780)	(698,211)	(735,957)	(741,494)	(739,743)	(754,269)	(767,314)	(769,375)	(789,197)	(807,883)
4	PURCHASED POWER	(157,650)	(141,952)	(129,846)	(149,346)	(178,878)	(177,365)	(142,988)	(146,796)	(152,179)	(155,784)	(156,526)	(174,264)	(184,112)	(210,644)	(243,667)	(282,566)	(318,631)	(349,011)	(366,343)	(390,591)
5	PAYMENTS TO EMPLOYEES	(179,960)	(186,858)	(191,966)	(196,498)	(201,141)	(205,897)	(210,768)	(215,758)	(220,870)	(226,107)	(231,472)	(236,968)	(242,598)	(248,366)	(254,276)	(260,330)	(266,533)	(272,889)	(279,400)	(286,072)
6.	OTHER RECEIPTS-NET	(1,163)	(9,113)	21,415	6,183	(2,564)	20,128	21,398	25,277	15,721	23,789	18,178	928	(3,365)	(3,767)	(1,424)	(5,305)	(3,851)	(3,256)	(5,838)	(11,071)
7.	NET CASH PROVIDED BY OPERATING ACTIVITIES	679,338	615,165	674,957	639,956	635,358	682,614	709,389	718,692	722,983	712,141	710,995	706,748	695,313	692,715	706,561	664,831	656,797	678,257	671,227	652,281
	CASH FLOWS FROM NON-CAPITAL RELATED FINANCING ACTIVITIES																				
8.	DISTRIBUTION TO STATE	(17,726)	(17,777)	(17,533)	(18,046)	(18,183)	(18,642)	(19, 134)	(19,487)	(19,863)	(20,182)	(20,525)	(20,888)	(21,450)	(21,810)	(22,266)	(22,705)	(23,217)	(23,693)	(24,317)	(24,717)
9.	PROCEEDS FROM ISSUANCE OF COMMERCIAL PAPER/DIRECT PURCHAS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.	REPAYMENT OF COMMERCIAL PAPER/DIRECT PURCHASE	(32,354)	(10,000)	(21,458)	(548)	(548)	(548)	(548)	(549)	(549)	(549)	(549)	(549)	(549)	0	0	0	0	0	0	0
11.	DEFEASANCE OF LONG-TERM DEBT	(155,000)	(140,000)	0	0	0	0	(10,000)	(17,500)	(20,000)	(20,000)	(20,000)	(22,500)	(22,500)	(22,500)	(22,500)	(349,950)	(22,500)	(22,500)	(69,145)	(22,500)
12.	PROCEEDS FROM ISSUANCE OF LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13.	REPAYMENT OF LONG-TERM DEBT	(364)	(6,349)	(28,185)	(30,092)	(46,425)	(56,061)	(56,538)	(65,052)	(43,060)	(54,740)	(34,543)	(34,333)	(42,718)	(51,919)	(56,889)	(62,514)	(88,489)	(100,899)	(87,882)	(98,316)
14.	INTEREST PAID ON LONG-TERM DEBT	(183,958)	(174,176)	(172,235)	(172,321)	(163,399)	(155,703)	(146,755)	(140,205)	(136,137)	(133,409)	(129,521)	(126,806)	(123,970)	(120,724)	(116,856)	(110,663)	(88,374)	(81,858)	(75,666)	(67,874)
15.	INTEREST PAID ON COMMERCIAL PAPER/DIRECT PURCHASE	(3,532)	(2,636)	(2,219)	(1,922)	(1,907)	(1,892)	(1,877)	(1,862)	(1,848)	(1,833)	(1,818)	(1,803)	(1,788)	(1,774)	(1,774)	(1,774)	(1,774)	(1,774)	(1,774)	(1,774)
16.	NUCLEAR SALE PROCEEDS	0	150,000	0	0	0	0	0	0	0	0	0	0	0	, o	, o	0	, o	, o	o o	, o
17.	BOND ISSUANCE AND OTHER RELATED COSTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			-					-	<u>-</u>					_			<u>-</u>		_		_
18.	NET CASH USED IN NON-CAPITAL RELATED FINANCING ACTIVITIES	(392,933)	(200,939)	(241,629)	(222,928)	(230,462)	(232,846)	(234,852)	(244,655)	(221,457)	(230,713)	(206,956)	(206,879)	(212,976)	(218,727)	(220,284)	(547,606)	(224,354)	(230,724)	(258,784)	<u>(215,181)</u>
	CASH FLOWS FROM CAPITAL RELATED FINANCING ACTIVITIES																				
19.	PROCEEDS FROM ISSUANCE OF COMMERCIAL PAPER/DIRECT PURCHAS	97,503	160,594	165,405	191,050	291,292	263,921	246,813	138,927	118,056	66,104	54,360	38,376	43,413	45,297	61,369	37,922	35,134	41,418	35,328	0
20.	REPAYMENT OF COMMERCIAL PAPER/DIRECT PURCHASE	(16,179)	(160,608)	(301,422)	(13,295)	(499,278)	(12,978)	(517,440)	(19,585)	(260,815)	(6,340)	(122,221)	(4,523)	(84,128)	(4,022)	(109,506)	(3,431)	(76,487)	(3,431)	(80,177)	(3,431)
21.	DEFEASANCE OF LONG-TERM DEBT	0	(27,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22.	PROCEEDS FROM ISSUANCE OF LONG-TERM DEBT	0	151,135	289,334	0	493,723	0	509,156	0	255,763	0	118,323	0	80,447	0	107,065	0	73,794	0	106,895	0
23.	REPAYMENT OF LONG-TERM DEBT	(94,887)	(119,297)	(121,665)	(101,071)	(105,602)	(103,477)	(119,954)	(147,172)	(167,708)	(152,436)	(185,952)	(188,727)	(192,874)	(194,616)	(194,582)	(172,274)	(164,564)	(166,232)	(196,746)	(184,295)
24.	INTEREST PAID ON LONG-TERM DEBT	(137,180)	(135,123)	(134,859)	(136,104)	(133,630)	(135,570)	(141,003)	(142,552)	(141,146)	(138,956)	(134,258)	(128,039)	(119,309)	(110,427)	(98,218)	(87,638)	(80,401)	(72,473)	(66,658)	(57,961)
25.	INTEREST PAID ON COMMERCIAL PAPER/DIRECT PURCHASE	(9,446)	(10,493)	(9,792)	(10,398)	(11,161)	(11,323)	(10,955)	(8,141)	(7,602)	(6,022)	(5,808)	(5,255)	(5,232)	(5,233)	(5,317)	(5,026)	(4,926)	(5,038)	(4,902)	(4,151)
26.	BOND ISSUANCE AND OTHER RELATED COSTS	0	(1,511)	(2,893)	0	(4,937)	0	(5.092)	0	(2,558)	0	(1,183)	0	(804)	0	(1,071)	0	(738)	0	(1,069)	0
27.	CONSTRUCTION AND BETTERMENTS OF UTILITY PLANT	(261,995)	(292,192)	(299,132)	(316,538)	(432,205)	(394,939)	(383,630)	(280,010)	(245,540)	(205,312)	(178,488)	(158,490)	(177,685)	(168,002)	(194,396)	(186,629)	(161,036)	(170,161)	(176,204)	(173,791)
28.	NET CASH USED IN CAPITAL RELATED FINANCING ACTIVITIES	(422,183)	(434,495)	(415,024)	(386,356)	(401,798)	(394,367)	(422,104)	<u>(458,534)</u>	(451,549)	(442,962)	(455,228)	(446,658)	<u>(456,171)</u>	(437,003)	(434,656)	(417,076)	(379,224)	(375,918)	(383,533)	(423,628)
	CASH FLOWS FROM INVESTING ACTIVITIES																				
29.	INTEREST ON INVESTMENTS	7,408	7,458	8,495	8,604	9,965	9,817	9,725	9,086	8,903	8,400	8,484	<u>8,185</u>	8,224	8,037	8,208	7,807	7,577	7,620	7,814	7,509
23.	INTEREST ON INVESTMENTS	7,400	1,430	0,433	0,004	9,905	9,017	3,123	9,000	0,303	0,400	0,404	0,103	0,224	0,007	0,200	<u>1,001</u>	1,511	7,020	7,014	<u>1,509</u>
30.	NET CASH PROVIDED BY INVESTING ACTIVITIES	7,408	7,458	<u>8,495</u>	8,604	9,965	9,817	9,725	9,086	<u>8,903</u>	8,400	8,484	<u>8,185</u>	8,224	<u>8,037</u>	8,208	7,807	<u>7,577</u>	7,620	<u>7,814</u>	7,509
31.	NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(128,371)	(12,810)	26,798	39,276	13,064	<u>65,218</u>	<u>62,158</u>	24,589	<u>58,880</u>	46,866	<u>57,295</u>	<u>61,396</u>	34,390	45,023	59,829	(292,043)	60,797	<u>79,236</u>	36,724	20,980
22	CASH AND CASH EQUIVALENTS - BEGINNING	599.807	471.436	458.626	485.424	524.700	537.763	602.981	665.139	689.728	748.609	795,474	852.769	914.165	948.555	993.578	1.053.407	761.364	822.160	901.396	938.120
o∠.	CASH AND CASH EQUIVALENTS - BEGINNING  CASH AND CASH EQUIVALENTS - ENDING	,	471,436 458.626	,	,	524,700	,	665.139	689.728	,	748,609	/	,	914,165	948,555	,-	, , -	- ,	901.396	,	958,120
33.	CASH AND CASH EQUIVALENTS - ENDING	471,436	458,6∠6	485,424	524,700	537,763	602,981	000,139	009,728	748,609	795,474	852,769	914,165	948,555	993,5/8	1,053,407	761,364	822,160	901,396	938,120	959,100

# SANTEE COOPER ELECTRIC SYSTEM

#### FINANCIAL IMPACT OF NUCLEAR DEBT ON CUSTOMERS FOR THE CALENDAR YEARS 2020-2039 (DOLLARS IN THOUSANDS)

	NUCLEAR DEBT SERVICE	TOTAL	PRESENT VALUE (5%)	AVERAGE	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	AVERAGE 2040-2056
1.	DEBT SERVICE - EXISTING (1)	7,918,295	2,440,143	214,008	111,478	143,799	201,982	203,445	204,310	222,717	221,570	215,411	224,983	230,184	205,569	177,415	184,282	190,829	191,233	201,384	226,232	226,191	202,218	201,006	231,297
2.	PRINCIPAL RESTRUCTURE	(414,117)	251,275	(11,192)	0	0	0	1,483	17,036	10,192	27,250	29,303	26,367	24,323	23,945	25,659	31,298	30,877	34,340	29,127	30,307	40,598	45,132	52,210	(52,563)
3.	TOSHIBA FUNDS USED TO AVOID DEBT ISSUANCE	(479,499)	(210,510)	(12,959)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(8,333)
4.	FUTURE DEBT REDUCTION PROGRAM SAVINGS	(934,608)	(211,500)	(25,260)	(433)	(10,196)	(11,865)	(12,023)	(13,764)	(13,764)	(13,764)	(16,177)	(42,589)	(41,272)	(39,955)	(9,704)	(9,704)	(9,704)	(9,704)	(9,704)	(22,758)	(22,758)	(22,758)	(28,673)	(33,726)
5.	FUTURE DEBT DEFEASANCE SAVINGS	(314,000)	(171,090)	(8,486)	0	(24,000)	0	0	0	0	(10,000)	(17,500)	(20,000)	(20,000)	(20,000)	(22,500)	(22,500)	(22,500)	(22,500)	(22,500)	(22,500)	(22,500)	(22,500)	(22,500)	0
6.	FUTURE ECONOMIC REFUNDING OF DEBT	(1,815,682)	(277,639)	(49,072)	<u>0</u>	<u>0</u>	<u>5</u>	(1,328)	(11,086)	(20,899)	(29,425)	(27,575)	(31,375)	(26,913)	(26,999)	(27,988)	(27,829)	(28,749)	(32,974)	(38,520)	(47,868)	(52,265)	(52,035)	(49,343)	<u>(75,442)</u>
7.	TOTAL	3,960,389	1,820,679	107,038	94,153	92,711	173,230	174,686	179,605	181,354	178,739	166,571	140,493	149,430	125,668	125,990	138,656	143,862	143,504	142,896	146,521	152,374	133,165	135,808	61,234
8. 9. 10. 11.	ALLOCATION TO CUSTOMER CLASSES RESIDENTIAL COMMERCIAL INDUSTRIAL CENTRAL	521,855 436,945 147,563 2,854,025	242,930 203,404 68,693 1,305,652	14,104 11,809 3,988 77,136	12,822 10,736 3,626 66,969	12,558 10,514 3,551 66,088	23,469 19,651 6,636 123,474	23,715 19,856 6,706 124,408	24,374 20,408 6,892 127,930	24,688 20,671 6,981 129,014	24,359 20,395 6,888 127,097	22,712 19,017 6,422 118,420	19,120 16,009 5,406 99,958	19,425 16,264 5,493 108,249	16,349 13,689 4,623 91,007	16,396 13,728 4,636 91,230	18,022 15,089 5,096 100,449	18,727 15,680 5,295 104,160	18,656 15,620 5,275 103,953	18,566 15,545 5,250 103,535	18,982 15,893 5,367 106,279	19,730 16,519 5,579 110,546	17,229 14,426 4,872 96,638	17,537 14,684 4,959 98,628	7,907 6,621 2,236 44,470
12. 13. 14. 15.	CUSTOMER BILL IMPACTS RESIDENTIAL COMMERCIAL INDUSTRIAL CENTRAL			5.2% 5.2% 3.8% 5.8%	6.1% 6.1% 3.5% 6.3%	6.0% 6.0% 3.4% 6.2%	11.1% 11.3% 6.4% 11.8%	11.0% 11.1% 6.4% 11.5%	11.0% 11.2% 6.5% 11.7%	10.8% 11.0% 6.4% 11.5%	10.4% 10.5% 6.2% 11.0%	9.4% 9.5% 5.7% 10.0%	7.7% 7.9% 4.8% 8.3%	7.7% 7.8% 6.1% 8.7%	6.3% 6.5% 5.0% 7.3%	6.3% 6.3% 5.0% 7.1%	6.7% 6.7% 5.4% 7.7%	6.9% 6.8% 5.5% 7.8%	6.7% 6.7% 5.4% 7.7%	6.5% 6.5% 5.3% 7.5%	6.6% 6.5% 5.3% 7.5%	6.7% 6.6% 5.5% 7.7%	5.8% 5.6% 4.7% 6.4%	5.8% 5.6% 4.7% 6.5%	2.3% 2.2% 1.9% 2.6%

<sup>(1)</sup> INCLUDES THE BUILD AMERICA BOND SUBSIDY

SANTEE COOPER SCHEDULE E **ELECTRIC SYSTEM** 

#### PROJECTED SYSTEM REVENUE REQUIREMENTS FOR THE CALENDAR YEARS 2020 - 2039

										THE OALL			.000								
		2020	<u>2021</u>	2022	2023	2024	2025	2026	2027	2028	2029	2030	<u>2031</u>	2032	2033	2034	2035	2036	2037	<u>2038</u>	2039
	TOTAL SYSTEM DEVENUE DECLIDEMENTS																				
	TOTAL SYSTEM REVENUE REQUIREMENTS	=	4 450 040			4 470 050	4 0 4 0 0 0 0	4 000 400	4 0 4 0 0 0 4		4 000 700	4 050 500	4 000 440		== ==.	4 500 074	4.504.440	4 050 005	4 000 000	4 7 40 0 50	4 004 005
1.	OPERATING EXPENSES	1,144,746	1,153,248	1,111,975	1,169,149	1,178,658	1,213,338	1,239,469	1,249,261	1,287,051	1,323,789	1,352,529	1,393,143	1,439,532	1,477,561	1,528,871	1,594,413	1,652,927	1,698,282	1,748,059	1,801,865
2.		450,485	449,426	472,266	456,705	465,852	467,871	482,368	510,478	503,382	493,345	496,654	489,778	490,746	489,064	478,068	444,369	433,060	432,862	438,277	419,080
	PAYMENT TO COUNTIES	4,465	4,478	4,416	4,545	4,578	4,693	4,816	4,905	4,998	5,078	5,165	5,255	5,396	5,486	5,600	5,710	5,838	5,956	6,113	6,213
4.	PAYMENT TO STATE	17,726	17,777	17,533	18,046	18,183	18,642	19,134	19,487	19,863	20,182	20,525	20,888	21,450	21,810	22,266	22,705	23,217	23,693	24,317	24,717
5.	CAPITAL IMPROVEMENT FUND	159,208	159,950	158,097	162,276	164,138	167,824	171,903	175,696	178,778	181,458	184,669	188,049	192,801	196,439	200,480	203,682	208,413	212,901	218,436	221,909
6.		<u>7,390</u> <b>1,784,021</b>	<u>3,675</u> <b>1,788,553</b>	1,764,287	<u>5,325</u> <b>1,816,046</b>	1 921 400	4,644 1,877,012	<u>8,455</u> <b>1,926,145</b>	773 1,960,600	4,114 4,000,406	4,909 <b>2,028,761</b>	3,792	<u>2,836</u> <b>2,099,949</b>	<u>5,214</u> <b>2,155,140</b>	<u>1,542</u> <b>2,191,902</b>	<u>2,182</u> <b>2,237,468</b>	9,219 <b>2,280,098</b>	7,977 <b>2,331,432</b>	<u>5,885</u> <b>2,379,579</b>	7,066 <b>2,442,268</b>	<u>7,338</u> <b>2,481,122</b>
7.	SYSTEM REVENUE REQUIREMENTS	1,704,021	1,700,555	1,704,207	1,010,040	1,831,409	1,077,012	1,520,145	1,960,600	1,998,186	2,020,761	2,063,334	2,055,545	2,155,140	2,191,902	2,237,466	2,200,090	2,331,432	2,379,579	2,442,200	2,401,122
	SYSTEM REVENUES																				
8	DISTRIBUTION	396,266	397,026	398,133	408,218	416,801	428,352	442,581	455,404	463,545	475,031	483,576	493,232	506,761	516,609	527,244	539,240	548,913	559,348	571,328	580,393
9.		240.244	240,181	235,165	240,622	243,872	249.136	254,246	251.894	255,095	231,565	235,170	238,140	244.338	246,820	250,490	255,582	259,307	263,207	267,787	270.913
	. WHOLESALE	1,121,264	1,124,064	1,101,618	1,136,611	1,137,996	1,166,700	1,195,933	1,220,145	1,245,961	1,289,336	1,309,898	1,334,064	1,368,306	1,391,695	1,422,261	1,448,345	1,485,199	1,517,632	1,562,492	1,589,240
	. OTHER	16,909	16,397	18,346	19.140	19,638	20,033	20,597	21,292	21.703	22,251	23,859	23,398	25,630	25,867	26,574	27,343	28,306	29,093	30,089	31,185
	. INTEREST & MISC INCOME	11.151	11,322	12,409	12,434	13,712	13,480	13,304	12,582	12,317	11,732	11.744	11,383	11.361	11,115	11,229	10.746	10.431	10,745	10,834	10,422
13.	TOTAL SYSTEM REVENUES	1,785,834	1,788,990	1,765,671	1,817,026	1,832,020	1,877,701	1,926,661	1,961,317	1,998,621	2,029,915	2,064,248	2,100,217	2,156,396	2,192,106	2,237,798	2,281,255	2,332,156	2,380,025	2,442,530	2,482,153
	PRODUCTION (GENERATION) REVENUE REQUIREMENTS																				
14.	. OPERATING EXPENSES	1,024,069	1,031,191	987,195	1,041,317	1,048,171	1,080,513	1,104,242	1,111,394	1,146,319	1,180,109	1,205,861	1,243,524	1,286,768	1,321,489	1,369,402	1,431,501	1,486,475	1,528,211	1,574,217	1,624,130
15.	. DEBT SERVICE	369,652	365,090	380,617	364,499	368,241	367,604	377,234	396,187	387,088	375,953	374,207	365,183	362,456	357,455	344,978	316,954	307,071	305,122	305,967	289,408
16.	. PAYMENT TO COUNTIES	3,880	3,877	3,790	3,902	3,914	4,010	4,110	4,166	4,241	4,305	4,366	4,438	4,554	4,622	4,716	4,822	4,940	5,040	5,167	5,257
17.	. PAYMENT TO STATE	15,402	15,393	15,046	15,495	15,544	15,930	16,328	16,552	16,854	17,110	17,350	17,640	18,102	18,377	18,752	19,176	19,646	20,049	20,556	20,913
18.		130,640	129,935	127,416	129,514	129,746	131,859	134,436	136,359	137,476	138,280	139,140	140,211	142,399	143,577	144,668	145,280	147,780	150,073	152,493	153,246
19.		6,468	3,189	<u>0</u>	4,594	0	3,988	7,312	<u>666</u>	<u>3,553</u>	4,247	3,283	2,454	4,519	1,333	<u>1,885</u>	7,961	6,883	<u>5,067</u>	<u>6,088</u>	6,322
20.	PRODUCTION REVENUE REQUIREMENTS	1,550,112	1,548,675	1,514,064	1,559,322	1,565,615	1,603,903	1,643,662	1,665,325	1,695,531	1,720,004	1,744,207	1,773,451	1,818,799	1,846,853	1,884,401	1,925,694	1,972,795	2,013,561	2,064,488	2,099,276
	PRODUCTION OPERATING REVENUES																				
21	DISTRIBUTION	292.476	291.992	291,428	299,903	306,861	316,482	327,899	338,031	344,708	354,701	361,786	369,808	381,670	389,865	399,126	409,825	418,185	427,374	438,115	445,990
21.		216,620	216,556	211,540	216,997	220,248	225,505	230,574	228,169	231,409	213,566	217,169	220,137	226,333	228,814	232,482	237,586	241,310	245,208	249,786	252,910
23.		1,004,262	1,007,577	982,076	1,014,086	1,026,443	1,055,232	1,083,854	1,106,470	1,129,294	1,165,243	1,181,642	1,201,929	1,233,399	1,253,259	1,280,335	1,306,410	1,341,633	1,370,954	1,409,109	1,434,400
	OTHER	8,974	9.169	9,289	9,367	9,498	9,641	9,815	9,825	9,920	10,019	10,424	10,518	10,522	10,192	10,276	10,363	10,577	10,542	10,635	10,737
25.		9,150	9,198	<u>10,001</u>	9,924	10,839	10,591	<u>10,405</u>	9,765	9,472	8,941	8,849	<u>8,487</u>	8,391	8,124	8.103	<u>7,665</u>	<u>7,396</u>	7,574	<u>7,563</u>	7,197
26.		1,531,483	1,534,492	1,504,334	1,550,278	1,573,889	1,617,451	1,662,547	1,692,259	1,724,803	1,752,469	1,779,870	1,810,880	1,860,315	1,890,254	1,930,323	1,971,849	2,019,101	2,061,652	2,115,209	2,151,235
		, ,	, , -	, ,	,,	,,	,- , -	, ,-	, ,	, ,	, - ,	, -,	,,	, , -	, , .	,,-	,- ,-	,, -	, ,	, , , , , ,	, . ,
	TRANSMISSION REVENUE REQUIREMENTS																				
27.	. OPERATING EXPENSES	59,868	58,554	60,021	61,496	62,708	63,564	64,444	65,353	66,670	68,073	69,566	71,152	72,834	74,614	76,502	78,478	80,585	82,788	85,131	87,579
28.	. DEBT SERVICE	56,305	57,764	62,304	62,769	66,725	68,915	72,412	78,598	79,790	80,471	83,919	85,176	87,284	89,104	89,949	86,027	84,683	85,440	88,114	86,003
29.		346	325	341	347	360	370	383	401	409	415	429	436	448	457	465	461	462	470	484	486
30.		1,374	1,290	1,354	1,379	1,432	1,469	1,520	1,595	1,625	1,650	1,704	1,734	1,779	1,816	1,847	1,831	1,839	1,870	1,927	1,932
31.		19,899	11,664	12,266	12,461	12,978	13,284	13,723	14,434	14,686	14,895	15,391	15,676	16,056	16,417	16,691	16,496	16,573	16,869	17,373	17,407
32.		<u>457</u>	<u>233</u>	0	<u>352</u>	0	314	<u>545</u>	<u>50</u>	<u>266</u>	<u>314</u>	242	<u>182</u>	<u>331</u>	<u>100</u>	<u>143</u>	606	<u>529</u>	<u>398</u>	<u>479</u>	<u>501</u>
33.	TRANSMISSION REVENUE REQUIREMENTS	138,248	129,830	136,286	138,804	144,203	147,916	153,026	160,432	163,446	165,817	171,250	174,356	178,732	182,507	185,596	183,898	184,672	187,836	193,508	193,907
	TRANSMISSION OPERATING REVENUES																				
34	DISTRIBUTION	15,674	15,732	15,936	16,130	16,332	16,627	17,142	17,669	17,865	18,071	18,283	18,524	18,778	19,044	19,258	19,447	19,654	19,863	20,087	20,293
35.		22,263	22,264	22,264	22,264	22,264	22,267	22,294	22,329	22,329	16,642	16,644	16,645	16,646	16,648	16,649	16,648	16,647	16,648	16,650	16,650
36.		100,129	103,243	106,139	108,903	97,582	101,251	105,556	111,002	113,957	121,354	125,484	129,319	132,044	135,538	138,983	138,944	140,536	143,608	150,262	151,676
37.		3,973	2,829	4,257	4,593	4,434	4,456	4,556	4,987	4,999	5,057	5,845	4,829	6,547	6,547	6,547	6,547	6,547	6,547	6,547	6,547
38.		1,394	1,455	1,637	1,709	1,964	1,986	1,997	1,937	1,952	1,914	1,984	1,980	2,021	2,025	2,113	2,080	2,040	2,121	2,178	2,139
39.	. TOTAL REVENUES	143,433	145,523	150,232	153,598	142,576	146,587	151,545	157,923	161,102	163,038	168,241	171,297	176,037	179,802	183,549	183,666	185,424	188,787	195,724	197,305
	OTHER REVENUE REQUIREMENTS																				
40	OTHER REVENUE REQUIREMENTS	60,809	63,502	64,760	66,336	67,780	69,261	70,783	72,514	74,062	75,608	77,102	78,466	79,930	81,458	82,968	84,435	85,867	87,283	88,712	90,155
	OPERATING EXPENSES																				
	DEBT SERVICE	24,528	26,573	29,345	29,437	30,886	31,351	32,722	35,693	36,504	36,922	38,528	39,419	41,006	42,505	43,141	41,388	41,305	42,300	44,195	43,669
	PAYMENT TO COUNTIES	239 950	276 1,094	285 1,132	295 1,172	304 1,207	313 1,243	324 1,286	337 1,340	348 1,384	358 1,422	370	381 1,513	395 1,569	407 1,617	419 1,667	427 1,698	436 1,732	446 1,774	461 1,835	471 1,872
	. PAYMENT TO STATE . CAPITAL IMPROVEMENT FUND	8,669	18,351	18,415	20,301	21,414	22,681	23,744	24,903	26,616	28,283	1,471 30,138	32,162	34,346	36,445	39,121	41,906	44,060	45,959	48,570	51,256
	. WORKING CAPITAL	464	253	10,413	379	21,414	342	508	24,903 <u>56</u>	20,010 295	348	268	201	364	109	155	652	564	420	499	51,230 516
	OTHER REVENUE REQUIREMENTS	95,661	110,048	113,93 <del>7</del>	117, <u>921</u>	121,59 <u>2</u>	125,192	129,457	134,843	139,209	142,941	147,877	152,142	157,609	162,542	167, <u>471</u>	170, <del>506</del>	173,964	178,182	184, <del>272</del>	187, <mark>939</mark>
<del>4</del> 0.		30,001	,		,021	,002	0,.02	5, 40 !	10-1,0-10	.00,200	1-2,041	1-11,011	.02,172	101,000	.02,072	.07,771	5,000	,,,,,,	,	10-1,212	101,000
	OTHER OPERATING REVENUES																				
	. DISTRIBUTION	88,115	89,303	90,770	92,185	93,608	95,243	97,540	99,704	100,972	102,258	103,507	104,899	106,313	107,700	108,860	109,968	111,074	112,111	113,127	114,110
	. INDUSTRIAL	1,360	1,361	1,361	1,361	1,361	1,364	1,379	1,397	1,357	1,357	1,357	1,357	1,358	1,359	1,360	1,347	1,349	1,350	1,351	1,353
	. WHOLESALE	16,872	13,244	13,402	13,623	13,971	10,218	6,523	2,674	2,710	2,740	2,772	2,816	2,863	2,898	2,942	2,991	3,030	3,070	3,121	3,163
	. OTHER	3,962	4,399	4,800	5,180	5,706	5,936	6,226	6,480	6,784	7,175	7,590	8,051	8,561	9,128	9,751	10,433	11,182	12,004	12,907	13,901
	. INTEREST INCOME	<u>607</u>	<u>669</u>	771	801 442	909	903	903	<u>880</u>	893	<u>878</u>	911	<u>916</u>	949	<u>966</u>	<u>1,013</u>	<u>1,001</u>	<u>995</u>	<u>1,050</u>	<u>1,092</u>	<u>1,086</u>
51.	TOTAL REVENUES	110,917	108,976	111,105	113,150	115,555	113,664	112,570	111,135	112,716	114,408	116,137	118,040	120,044	122,050	123,926	125,740	127,631	129,585	131,598	133,613

SCHEDULE F 2020 CONFORMING CASE

## **ELECTRIC SYSTEM** ELECTRIC OPERATING REVENUES PER KILOWATT HOUR BY CLASS FOR THE CALENDAR YEARS 2020 - 2039

¢/kWh

			<u>2020</u>	<u>2021</u>	2022	2023	2024	2025	<u>2026</u>	<u>2027</u>	2028	2029	<u>2030</u>	<u>2031</u>	2032	2033	2034	<u>2035</u>	2036	<u>2037</u>	<u>2038</u>	<u>2039</u>
	DISTRIBUTION SER\	VICE																				
1.		RESIDENTIAL	11.56	11.56	11.46	11.59	11.69	11.82	12.02	12.23	12.30	12.45	12.54	12.63	12.79	12.87	12.98	13.12	13.21	13.32	13.44	13.51
2.		COMMERCIAL	9.00	8.96	8.86	8.98	9.05	9.17	9.38	9.53	9.58	9.73	9.81	9.91	10.11	10.21	10.34	10.50	10.60	10.72	10.87	10.95
3.	INDUSTRIAL	ALL INDUSTRIAL	4.82	4.79	4.69	4.80	4.87	4.98	5.08	5.03	5.09	5.15	5.23	5.29	5.43	5.49	5.57	5.68	5.76	5.85	5.95	6.02
4.		FIRM	5.82	5.79	5.69	5.80	5.87	5.98	6.09	6.20	6.26	6.53	6.61	6.69	6.83	6.91	7.02	7.16	7.25	7.35	7.48	7.56
5.		NON-FIRM (1)	4.24	4.21	4.11	4.22	4.28	4.39	4.48	4.34	4.41	4.53	4.61	4.67	4.80	4.84	4.92	5.02	5.10	5.18	5.27	5.33
	WHOLESALE:																					
6.		CENTRAL	7.30	7.25	7.03	7.20	7.22	7.38	7.53	7.63	7.67	7.86	7.91	7.99	8.09	8.17	8.27	8.34	8.44	8.55	8.80	8.84

<sup>(1)</sup> INCLUDES REVENUES FROM INTERRUPTIBLE AND ECONOMY POWER.



8.5 Status of Litigation as of November 22, 2019

#### 8.5 STATUS OF LITIGATION AS OF NOVEMBER 22, 2019

#### **Employment Related Claims**

**Employment Discrimination Cases**: None Pending.

**Workers Compensation Claims:** Safety is critical in everything Santee Cooper does and is one of Santee Cooper's core values. Despite best efforts, employees are sometimes injured during the course of their duties. The worker's compensation team efficiently and fairly handles workers compensation claims to ensure employees injured on job have the resources to recover from their injuries, and in best case scenarios, continue to work at Santee Cooper. Santee Cooper is currently handling thirty open workers compensation claims at various stages. Some of these claims date as far back as 2008, with several claims from injuries in 2019.

#### **General Litigation**

In the ordinary course of business, Santee Cooper is sometimes sued by individuals who allege they were injured on property in which Santee Cooper allegedly has some interest. Santee Cooper is handling seven premises liability cases, ranging from allegations involving slip and falls on a sidewalk in front of a distribution box to motorcyclists injured on a road. Recovery in these cases is capped by the State Tort Claims Act.<sup>1</sup>

Santee Cooper works with the State's Insurance Reserve Fund, and counsel hired by the Insurance Reserve Fund, to defend these cases. Santee Cooper generally does possess a fee simple ownership interest in the premises on which these events occur and works to have the cases dismissed on dispositive motions, to save the time and expense of litigation. There is always a possibility some will to go to trial.

Santee Cooper is self-insured for motor vehicle accidents, but again recovery for plaintiffs is capped by the State Tort Claims Act. Although Santee Cooper has a low number of preventable motor vehicle accidents, Santee Cooper endeavors to fairly treat any claimants who may have been injured in at-fault accidents caused by Santee Cooper employees in the course of their employment. Treating these individuals fairly, by paying valid claims, results in fewer lawsuits.

At present, there is one motor vehicle case against Santee Cooper. At the scene, law enforcement cited the plaintiff for illegally riding a bicycle on a sidewalk, the wrong way, and for being intoxicated. He ran into a fleet vehicle driven by a Santee Cooper employee. The responding officer listed the cyclist at fault for the collision. The cyclist sued Santee Cooper. Santee Cooper is vigorously defending the lawsuit.

#### **Complex Litigation/Class Actions**

#### Hearn v. South Carolina Public Service Authority

Case No. 2017-CP-26-05256, Horry County Court of Common Pleas (15th Cir.) (Business Court).

On August 16, 2017, Plaintiff George Hearn, on behalf of a putative class of retail customers, filed a class action complaint in Horry County alleging the Authority acted negligently when it decided to build the Pee Dee coal generating facility in Florence County, and acted negligently when the decision to cancel construction was made. The complaint further alleges the Authority was negligent in accounting for the Pee Dee assets. The specific claims

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<sup>&</sup>lt;sup>1</sup> S.C. Code Ann. § 15-78-120.

are: breach of duty to ratepayers, breach of contract, unjust enrichment, injunction and declaration of wrongful conduct, and money had and received. Legal defenses include the business judgment rule, burden on plaintiff to show bad faith (ultra vires action, etc.), and statute of limitations/laches. Plaintiff claims damages of approximately \$600 million. The Authority filed a motion to dismiss in response to Plaintiff's complaint. The hearing on the Authority's motion to dismiss took place on September 27, 2018 and an order denying the same was entered on April 4, 2019. The Authority filed an Answer on April 19, 2019. Discovery and depositions are ongoing.

#### Nuclear Litigation (litigation resulting from V. C. Summer Units 2 & 3)

#### Cook et al. v. South Carolina Public Service Authority et al.

Originally filed in the Court of Common Pleas, Hampton County, South Carolina, Case No. 2017-CP-25-00348 on August 22, 2017; Fifth Amended Complaint filed on July 25, 2019; Order transferring venue to the Court of Common Pleas, Greenville County, South Carolina, Case No. 2019- CP-23-06675 entered on November 5, 2019; on November 21, 2019 SCE&G Co., SCANA Corp., and SCANA Services, Inc. submitted a Notice of Removal to the U.S. Dist. Court for the Dist. of S.C. Greenville Division.

Plaintiffs filed this class action in the Hampton County Court of Common Pleas on August 22, 2017, in connection with the Authority's decision to suspend construction of Summer Nuclear Units 2 and 3. Numerous amended complaints, responsive pleadings and cross-claims have been filed, including the operative Fifth Amended Complaint, filed on July 25, 2019. The class was certified on November 5, 2019 and includes all customers of the Authority and electric cooperatives who paid utility bills that included "pre-construction, capital, in-service, construction, interest, and other pre-operational costs associated with Summer Nuclear Units 2 and 3 from January 1, 2007, to the present."

The Fifth Amended Complaint asserts nine claims against the Authority: (1) declaratory judgment that rates were not statutorily authorized; (2) breach of contract or breach of implied contract (direct customers); (3) unconstitutional taking; (4) violation of due process (direct customers); (5) negligence and/or gross negligence; (6) breach of contract or breach of implied contract (cooperative customers); (7) unjust enrichment/money had and received; (8) constructive trust (over the payment received under the Toshiba Settlement Agreement, any profits, performance bonuses, retirement packages, and other benefits, any sale profits, and previously-paid rates); and (9) equity. Plaintiffs' claims seek repayment of the amounts paid by ratepayers attributable to Summer Units 2 and 3 under statutory, contract, tort, and equitable theories. The Fifth Amended Complaint also includes allegations that the Authority agreed to sell a 5% interest in Summer Units 2 and 3 to SCE&G, declaring this portion of ownership unnecessary for the Authority's purposes, and thereafter improperly continued to fund costs for that portion of the project. Plaintiffs assert claims against the Board for breach statutory and fiduciary duties, unjust enrichment, constructive trust, and equity.

On August 16, 2019, the Authority and its directors filed their answer to the Fifth Amended Complaint and the Authority asserted cross-claims against Central and Palmetto Electric Cooperative, Inc. (Palmetto), one of the Central Cooperatives, seeking a declaratory judgment regarding the rights of the parties under the Act. The Authority also filed a Third Party Complaint against the Electric Cooperatives of South Carolina (ECSC), the statewide service and trade association for electric cooperatives in the State, and asserted cross-claims against Central and Palmetto seeking a declaratory judgment regarding the rights of the Authority and Central under the Coordination Agreement, which is the contract governing Central's purchase of energy and power from the Authority. The Authority also asserted cross-claims against SCE&G for (1) breach of contract accompanied by fraudulent act; (2) gross negligence; (3) breach of fiduciary duties; (4) breach of contract accompanied by bad faith; (5) waste; (6) contractual indemnification; and (7) equitable indemnification.

Plaintiffs also assert claims against Palmetto, Central, SCANA, SCE&G, and SCANA Services.

On August 9, 2019, Central filed its answer to plaintiffs' Fifth Amended Complaint and asserted the following cross-claims against the Authority and its directors: (1) declaratory judgment that the Authority breached its statutory duties; (2) breach of the Central Agreement by the Authority; (3) constructive trust (over the payment received from Citibank under the Assignment and Purchase Agreement); (4) breach of statutory duties by the Authority's directors; and (5) contractual indemnification pursuant to the Central Agreement. The Authority and its directors filed their answer to Central's cross-claims on September 3, 2019.

If Central were to successfully obtain a judgment that the Authority is not entitled to recover costs of Summer Units 2 and 3 from Central under the calculation methodology set forth in the Coordination Agreement, such result would materially adversely affect the Authority's revenues. It is not known at this time whether the Authority would be able to increase rates to the Authority's other customers to make up for such a revenue shortfall. In addition, Central claims the Authority must refund amounts Central already paid to the Authority for costs of Summer Nuclear Units 2 and 3, as well as a portion of the proceeds the Authority received under the Toshiba Settlement Agreement. Such costs are estimated to be in excess of \$430 million through 2018. Such a monetary judgment in favor of Central could adversely affect the Authority's liquidity. Such a revenue shortfall and adverse effect on the Authority's liquidity would result in a failure by the Authority to pay debt service on its Revenue Obligations and the occurrence of an event of default under the Revenue Obligation Resolution. Central also alleges a constructive trust should be imposed on the Citibank Payment, contending this Citibank Payment amounts to \$831.2 million, and requests an order directing the Authority to pay 70% of this amount to Central.

On August 9, 2019, Palmetto filed its answer to Plaintiffs' Fifth Amended Complaint and asserted seven cross-claims against SCANA, SCE&G, the Authority, and the Authority's directors. Three are asserted against all defendants: (1) negligence; (2) unjust enrichment; and (3) equity. Three are asserted solely against the Authority: (1) taking; (2) declaratory judgment that the Authority breached its statutory duties for charging rates for facilities that are not used and useful and establishing rates that were not just and reasonable; and (3) constructive trust with respect to the \$831.2 million Citibank Payment. Finally, Palmetto asserted one cross-claim against the Authority's directors for a declaratory judgment that they breached their statutory duties for charging rates that are not just and reasonable. The Authority's and directors' answers to Palmetto's cross-claims were filed on September 27, 2019.

On September 11, 2019, the State's Supreme Court issued an order assigning a new judge to preside over V.C. Summer Units 2 and 3 litigation regarding customer-related claims requesting reimbursements or refunds of monies paid in the form of increased utility rates since abandonment of the Project. Pursuant to the order, the Honorable Jean H. Toal is vested with exclusive jurisdiction to hear and resolve all pretrial motions and matters in any such case that may arise statewide, and upon the conclusion of pretrial matters, Justice Toal may preside over the trial of the case or assign the trial to another judge.

On October 8, 2019, the judge convened a motions hearing and scheduling conference. The hearing resulted in orders, entered on November 5, 2019, granting Plaintiffs' motion for class certification (discussed above) and granting the Authority's and SCE&G's motion to transfer venue from Hampton County to Greenville County, with the trial to begin on February 24, 2020. She stayed SCE&G's motion to compel arbitration of the Authority's cross-claims against SCE&G and granted the Authority's motion to sever Central's claims against the Authority from the trial of Plaintiffs' claims and to stay Central's claims; that order also severs and stays Santee Cooper's claims against Central, Palmetto, and ECSC, and Palmetto's claims against Santee Cooper.

The Court convened a mediation on October 14, 2019, which lasted for two days. The mediation was adjourned without a resolution and the mediator subsequently declared an impasse on October 30, 2019.

On November 12, 2019, hearings were held on (a) the Authority's Motion for Specific Performance and/or Injunctive Relief against Dominion Energy South Carolina; (b) SCE&G's Motion to Compel Arbitration of the Authority's Defenses and Contentions; and (c) several Parties' discovery motions. The judge requested proposed orders, and

Santee Cooper submitted orders granting Santee Cooper's Motion for Specific Performance and staying SCE&G's Motion to Compel Arbitration on November 15, 2019. On November 18, 2019, Justice Toal stated that she would sign the orders submitted by Santee Cooper, which were subsequently filed.

#### Turka v. South Carolina Public Service Authority and Lonnie Carter

U.S. District Court, D.S.C., Charleston, Case No. 2:19-cv-1102-RMG

Plaintiff filed this putative class action in the Charleston Division of the United States District Court for the District of South Carolina on April 15, 2019. The action asserts securities law claims against the Authority and Mr. Carter under Section 10(b) and Rule 10b-5 of the Exchange Act and against Mr. Carter under Section 20(a) of the Exchange Act the arising out of alleged misrepresentations made in the Authority's mini-bond offering documents regarding the status of Summer Nuclear Units 2 and 3. Specifically, the plaintiff alleges that the disclosure statements in the mini-bond offerings understated the extent of the risks associated with construction of Summer Nuclear Units 2 and 3 and that as a result the interest rate on the mini-bonds was artificially deflated. Plaintiff further alleges that if he had known the interest rate on the mini-bonds had been artificially deflated, he would not have purchased the mini-bonds. The proposed class includes purchasers of the Authority's mini-bonds from August 23, 2013 to July 31, 2017. The Authority and Carter moved to dismiss the Complaint on July 12, 2019. No ruling has been made to date in respect to this motion to dismiss.

Funds have been irrevocably escrowed for retirement of the Authority's mini-bonds. The retirement of these bonds greatly diminishes the damages that may be alleged by the proposed class.

#### Glibowski et al. v. South Carolina Public Service Authority et al.

U.S. District Court, D.S.C., Beaufort, Case No. 9:18-cv-273-TLW

Plaintiffs filed this putative class action in the Beaufort Division of the United States District Court for the District of South Carolina on January 31, 2018. The Plaintiffs filed an amended complaint on April 23, 2018 adding the Authority as a defendant. The Plaintiffs' claims arise from the Authority's decision to suspend construction of Summer Nuclear Units 2 and 3. The action is being brought on behalf of putative classes of persons comprised of SCANA customers, and of Authority customers and Central Cooperative customers, who were charged and paid charges for costs associated with the construction of the units from 2007 to the present.

Amended complaints have been filed in this action since its inception, including a operative Third Amended Complaint filed on July 30, 2019. The Third Amended Complaint asserts Racketeer Influenced and Corrupt Organizations Act (RICO) and RICO Conspiracy claims against SCANA, SCE&G, SCANA's officers, the Authority and the following employees of the Authority: Lonnie Carter (now retired), Marion Cherry, and Michael Crosby, as well as a takings claim against the Authority. Plaintiffs seek actual damages, treble damages under RICO, and attorneys' fees. Specifically, (i) under the RICO and RICO conspiracy claims, the plaintiffs allege that the class lost over \$2.5 billion and seek damages in an amount to be determined at trial, but no less than this amount, and (ii) under the takings claim, the plaintiffs allege that the Authority has taken over \$540 million from the Santee Cooper customer class and seek the return of this amount. The Authority and its employees filed a motion to dismiss the complaint on August 20, 2019. As of November 19, 2019, no ruling has been made in respect to the Authority's motion to dismiss.

#### Westinghouse Electric Company, LLC, as reorganized v. South Carolina Public Service Authority

United States Bankruptcy Court for the Southern District of New York, Case No. 19-01109-cgm, 17-10751-mew

On April 5, 2019, WEC filed an adversary proceeding complaint in the United States Bankruptcy Court for the Southern District of New York against Santee Cooper, alleging a cause of action for recovery of chattel. WEC claims it is the owner of certain equipment related to the construction of Units 2 and 3 of the V.C. Summer Nuclear Generating Station.

The pleadings stage of this action is complete. Santee Cooper answered and asserted counterclaims for declaratory judgment and to quiet title to the equipment. In reply, WEC also asserted a counterclaim for declaratory judgment based upon the Owners' recent termination of the EPC. Discovery is proceeding under an expedited scheduling order.

#### Contested Administrative Claim in the Westinghouse Bankruptcy Proceeding

United States Bankruptcy Court for the Southern District of New York, Case No. 17-10751-mew

On August 30, 2018, South Carolina Electric & Gas Company and Santee Cooper (Owners) filed an Administrative Claim in the Westinghouse Bankruptcy Proceeding for overpayment to the Debtors under the terms of the Interim Assessment Agreement with respect to the V.C. Summer New Nuclear Project.

In 2008, the Owners executed an Engineering, Procurement and Construction Agreement (EPC) with a Consortium consisting of Westinghouse Electric Company LLC (WEC) and Stone & Webster, Inc., as Contractor, to design and build two nuclear power units in Jenkinsville, South Carolina. The EPC had been amended several times over the years.

Shortly prior to the filing of the Chapter 11 petition in this case, WEC and its parent company, Toshiba Corporation, advised the Owners that WEC was going to exit the nuclear construction business due to historic losses and anticipated future losses associated with construction of the V.C. Summer Project and the Vogtle Project in Georgia. WEC and Toshiba Corporation also advised the Owners that it was WEC's intention to enter Chapter 11, and upon filing, immediately cease all construction activities on the V.C. Summer Project. In response to WEC's stated intention to cease construction, the V.C. Summer Owners and WEC and WECTEC, Inc. (f/k/a Stone & Webster, Inc.) entered into an Interim Assessment Agreement, dated March 28, 2017 (the "IAA").

The IAA contemplated the continued construction at the V.C. Summer; however, it required the Owners to fund the costs of continued construction during the IAA period. Funds were advanced weekly by the Owners based upon WEC's estimate of engineering and construction services during the coming week. The IAA made clear that funds advanced by the Owners would be maintained in a segregated, interest-bearing account, and could only be used to pay obligations incurred to Vendors and Subcontractors to the V.C. Summer Project during the Interim Assessment Period (i.e., from the Petition Date through the IAA Termination Date).

Pursuant to several amendments, the IAA was extended through August 10, 2017. The IAA was terminated by the Owners effective August 7, 2017.

Based upon an initial review of the Disbursement Report contemplated by the IAA, the Owners determined that the amounts paid by the Owners to the Debtors exceeded the actual and appropriate cost incurred by the Debtors during the IAA period. As of the date the Administrative Claim was filed, the Owners determined that the amount of the overpayment was \$215,564,030.70. However, as contemplated by the IAA, the Owners continued to perform the reconciliation contemplated by the IAA and have revised and reduced their claim since that time.

W. Wind Down Company, LLC is the special purpose entity established pursuant to the Debtors' confirmed Chapter 11 Plan of Reorganization for the liquidation and distribution of the assets transferred to Wind Down Company, including the resolution of Claims in accordance with this Plan. Among the assets transferred to Wind Down Company, LLC for distribution was the entire balance of the Owners segregated interesting bearing account, which had been transferred to Wind Down Company, LCC from WEC as reorganized, on March 27, 2019. W. Wind Company, LLC's objection to the Owners Administrative Claim is broadly based upon a perceived failure by the Owners to meet their burden of proof, coupled with a much broader understanding of the types of costs that the Owners committed to pay through the IAA during the IAA Period.

On May 16, 2019, a Stipulation and Order Regarding Discovery and Scheduling was entered with respect to the Administrative Expense Claims of the Plant Vogtle Owners and the V.C. Summer Owners<sup>2</sup>. The Stipulation and Scheduling Order provides for an initial 60-day reconciliation period, which may be extended by mutual agreement by Wind Down Company, LLC and the respective claimant.

The reconciliation period on the V.C. Summer Owners Claim has been extended on four occasions, with the Reconciliation period now scheduled to end on December 16, 2019, unless extended further. If the agreement is not reached by W. Wind Down Company, LLC and the Owners and the Reconciliation period is not extended further, the following schedule would apply:

- December 23, 2019: Owners Dispute File; Wind Down Company File
- January 13, 2020: Deadline to serve discovery requests
- February 13, 2020: Deadline to serve responses and objections to discovery request
- February 13, 2020: Deadline to commence production of responsive documents on a rolling basis
- February 28, 2020: Document Discovery End Date
- April 11, 2020: Privilege Logs Serve
- April 18, 2020 Deadline to Issue Deposition Notices
- April 18, 2020: Deposition Start Date
- May 20, 2020: Discovery End Date
- June 4, 2020: Opening Briefs Due
- June 16, 2020: Pretrial Hearing
- June 18, 2020: Supplemental Briefs Due
- TBD 7 days: Joint Pre-Trial Order Due
- TBD: Evidentiary hearing on Consolidated Motions

#### Santee Cooper v. WEC, Brookfield Business Partners, L.P., & Doe Defendants

United States District Court for the District of South Carolina, Case No. 2:19-cv-01432-RMG

On May 14, 2019, Santee Cooper filed a quiet title and declaratory judgment action against WEC, Brookfield Business Partners, and Doe Defendants, who are fictitious names representing all unknown persons or entities who may claim an interest, to declare it has sole title to certain property for construction and operation of V.C.

<sup>&</sup>lt;sup>2</sup> On June 20, 2019, Notice was given at the Bankruptcy docket of the settlement of the Vogtle Administrative Claim.

Summer Units 2 and 3. Santee Cooper has dismissed WEC without prejudice given the Bankruptcy Court's decision to retain jurisdiction. Santee Cooper has also voluntarily dismissed Brookfield Business Partners pursuant to a stipulation whereby Brookfield specifically disclaimed any and all legal or equitable interests in, liens against, title to, or ownership, possession, or control of any equipment, materials, personal property, real property, or property of any kind located at, procured for, purchased for, or otherwise related to V.C. Summer. The action remains viable against the Doe Defendants, but no such Defendants have appeared after service by publication.

#### **Other Nuclear Actions**

South Carolina Public Service Authority v. Dominion Energy South Carolina f/k/a South Carolina Electric & Gas Co.

Case No. 2019-CP-40-6303, Richland County Court of Common Pleas.

Dominion Energy South Carolina, Inc. f/k/a South Carolina Electric & Gas Co. v. South Carolina Public Service Authority

American Arbitration Association.

On October 20, 2011, the Authority and SCE&G (now Dominion) entered into a Design and Construction Agreement (the "DCA"), which set forth the terms and conditions of the parties' joint undertaking to construct Summer Nuclear Units 2 and 3, including contributing a proportionate share of certain costs of Summer Nuclear Units 2 and 3 based on their respective ownership interests. Such costs included claims brought by third parties with respect to services provided by SCE&G under the DCA. SCE&G is currently a named defendant in several lawsuits with respect to Summer Nuclear Units 2 and 3, including the *Cook, Glibowski* and DOR matters described above. On October 21, 2019, Dominion asserted that, under the cost-sharing provisions of the DCA, the Authority may be liable for costs associated with such lawsuits against SCE&G, even if it is not a named defendant therein.

In the *Cook* action, Santee Cooper filed a Motion for Specific Performance, identified above. On November 11, 2019, Santee Cooper also filed an action against Dominion asserting the same claim as raised in the *Cook* Motion for Specific Performance, seeking a preliminary and permanent injunction or specific performance related to the obligation of the DCA, and filed a motion seeking for preliminary injunction.

Later on November 11, 2019, Dominion filed a Demand for Arbitration before the American Arbitration Association, seeking in excess of \$1,000,000,000 for a portion of "costs incurred for third-party claims relating to" the suspended nuclear project, alleged to be approximately \$2,240,000,000 as of the date of the filing. Dominion alleges that under the DCA, the Authority is responsible for 45% of all costs SCE&G has incurred, is incurring, and will incur in connection with third-party claims related to the nuclear project, including nine (9) separate actions, including the *Lightsey* class action settlement in which Dominion agreed to provide more than \$2 billion in rate relief to the settlement class.

On November 12, 2019, the judge presiding over *Cook* heard Santee Cooper's Motion for Specific Performance and SCE&G's Motion to Compel Arbitration filed in *Cook* and the Motion for Preliminary Injunction filed in *Santee Cooper v. DESC*. The judge requested proposed orders, and Santee Cooper submitted orders on the *Cook* motions and the *Santee Cooper v. DESC* Motion for Preliminary Injunction on November 15, 2019. On November 18, 2019, Justice Toal stated that she would sign the orders submitted by Santee Cooper. Also on November 18, her law clerk stated that those orders had been signed and electronically filed. The orders were published on November 21, 2019.

On November 21, 2019, Dominion's counsel notified AAA that it had withdrawn the demand for arbitration.

#### Insurance Coverage

Santee Cooper has initiated several actions against its carriers regarding coverage of V.C. Summer matters.

#### Summer Nuclear Units 2 and 3 Governmental Inquiries

Various executive-branch entities have requested information related to Summer Nuclear Units 2 and 3. Specifically, the Authority has received subpoenas for information from the U.S. Securities & Exchange Commission, the U.S. Department of Justice, and the South Carolina State Law Enforcement Division. It has also received information requests and directives to provide information from the Governor of South Carolina. The Authority also received legislative inquiries from the S.C. House of Representatives and the S.C. Senate. The Authority continues to comply and cooperate with these subpoenas, information requests and directives and legislative inquiries

#### **Recoup Cases**

As a steward of the State's resources, Santee Cooper endeavors, whenever possible, to recoup any money owed and weighs the benefits of participating in class action antitrust suits, and other suits.

#### In Re: Liquid Aluminum Sulfate Antitrust Litigation

Santee Cooper, along with numerous municipalities, water authorities, chemical companies, mills, design firm, paper companies, and private water companies from all over the country are plaintiffs in this Multi District Litigation against companies that sold or marketed aluminum sulfate. More specifically, the defendant companies are manufacturers and distributors of the Alum used by municipalities to treat potable water and/or wastewater, by pulp and paper manufacturers as part of their manufacturing process, and in lake treatment to reduce phosphorous levels contributing to degraded water quality.

Plaintiffs allege violations of the Sherman Anti-Trust Act, 15 U.S.C. § 1, et seq. and the Clayton Antitrust Act, 15 U.S.C. §§ 12-17 & 29 U.S.C. §§ 52-53 (Claim I). South Carolina specific claims include claims for violations of South Carolina Code Ann. § 39-3-10 et seq. and claims for fraud, breach of contract, and restitution/disgorgement/unjust enrichment. The Plaintiffs allege defendants conspired to suppress and eliminate competition in the sale and marketing of aluminum sulfate (Alum) by agreeing to rig bids and allocate customers for, and to fix, stabilize, inflate, and maintain the price of Alum sold to companies and municipal authorities in the United States from January 1, 1997 through at least February 2011 and until such time as to be determined (the "Conspiracy Period"). The various complaints allege Defendants conspired, combined, and contracted to fix, raise, maintain, and stabilize the prices at which Alum would be sold. Defendants engaged in regular communications throughout. The anti-trust issues allowed federal question jurisdiction. There is a related DOJ investigation and related criminal indictments

Plaintiffs seek compensatory damages, restitution, disgorgement, treble damages, punitive damages, injunctive relief, and other relief, including but not limited to an award of attorneys' fees and expenses, as well as prejudgment and post-judgment interest on the damages awarded, against Defendants, jointly and severally. In addition, the South Carolina Plaintiffs seek a refund of the full price paid for their Alum supply contracts (believed to be in excess of \$7,900,000) for the same actions by one or more Defendants. Defendants' actions caused municipalities across the United States to overpay by many millions of dollars for the Alum they needed. Plaintiffs, which have paid millions of dollars to purchase Alum, seek to recover damages they suffered from the initiation of the conspiracy until the cessation of the anticompetitive effects resulting therefrom (the "Injury Period").

Santee Cooper survived a Motion to Dismiss. The District Court judge found Santee Cooper demonstrated subject matter jurisdiction. Numerous defendants have settled. Recently, Santee Cooper and a handful of other plaintiffs filed a new action in U.S. District Court in Charleston against Brenntag.

#### In re Rail Freight Fuel Surcharge Antitrust Litigation

Putative class actions were filed in 2007 in the United States District Court for the District of Columbia by rail shippers alleging that the four largest Class I railroads—CSX, Norfolk Southern, BNSF, and Union Pacific—conspired to set artificially-high rate-based fuel surcharges 2003 and 2008.

Plaintiffs allege this collusion cost shippers billions of dollars they would not have lost in an otherwise competitive market.

In 2017, District Court Judge Paul Friedman ruled that, despite the "strong evidence of conspiracy and antitrust injury to rail shippers," the putative class had failed to establish predominance and he denied class certification. The case was stayed pending appeal and the railroads agreed to continue to toll the claims of all shipper class members during the appeal period.

On August 16, 2019, the United States Court of Appeals for the D.C. Circuit affirmed Judge Friedman's decision to deny class certification.

Santee Cooper and CSX entered a confidential tolling agreement on September 5, 2019.

#### SCPSA v. U.S. Army Corps of Engineers

Santee Cooper filed a claim against the U.S. Army Corps of Engineers (COE) at the Armed Services Board of Contract Appeals (ASBCA), seeking a determination that the COE Rediversion Contract does not require Santee Cooper to credit the COE for a capacity value surcharge and that the COE owes The Authority approximately \$1.4 million in contract payments for 2015.

The COE denied the claim, asserted Santee Cooper was required to pay the credit, and that a credit in the amount of \$716,874 was due to the COE for 2015.

The parties have asked the ASBCA to determine the rights under the contract. If the ASBCA determines that no credit is required, the Authority will prevail at the Board level. If the ASBCA determines that a credit is required, the parties will be required to attempt to determine the amount of the credit due to the COE for the remainder of the contract. If the parties do not reach an agreement, the court will decide the amount. The parties briefed the issues in the summer of 2018 but no timetable for a decision has been provided by the ASBCA. The parties have attempted settlement discussions but have been unsuccessful.



# 8.6 Public Power vs. IOUs

#### **8.6** Public Power vs. IOUs

Public power utilities like Santee Cooper have provided Americans low-cost, reliable electricity for over 100 years. Today, over 2,000 public power utilities serve large areas of rural and urban America. Many cities, states and regions including municipalities in Colorado, California, Maine and others are currently examining the conversion of investor-owned utilities (IOUs) to public power ownership in order to reduce rates and allow for local control of utility resources.

Public power provides a number of customer benefits including access to federal hydroelectric resources, such as the Southeastern Power Administration (SEPA), at attractive cost-based rates and to Federal Emergency Management Agency (FEMA) funds for storm restoration (rather than seeking recovery exclusively from customers). For example, after Superstorm Sandy, the Long Island Power Authority (LIPA) recovered \$1.4 billion from FEMA and the federal government to support repairs to the grid and to assist with future storm mitigation efforts. An IOU would not have had access to such funding.

Public power utilities establish customer rates differently than IOUs. In this section, we evaluate the key components of public power ratemaking that, all else equal, provide for lower bills than those under an IOU format.

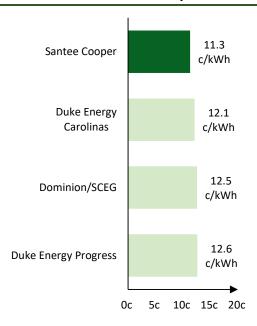
The key differences between public power and IOU ratemaking are as follows:

- Cost-of-service ratemaking under a not-for-profit model
- Ability to finance with a higher percentage of low-cost debt
- Lower cost of debt and equity (with all earnings reinvested in the system)
- Exemption from federal and state income taxes

These benefits are described further below, including through an illustrative comparison of the customer bill impact of a public power utility and an IOU building a new transmission asset.

The following figure compares Santee Cooper's residential customer rates to those of regional IOUs. Our rates remain lower than the IOUs due to the benefits of the public power format and our diligence in managing costs. As outlined in our Reform Plan, we will keep customer prices flat for at least the next seven years. Several of our IOU regional peers have recently requested or announced significant rate increases for this same period. For example, in October 2019, Duke Energy Progress requested a 12.3% rate increase and, in September 2019, Duke Energy Carolinas requested a 9.2% rate increase (currently pending Public Service Commission rate case proceeding).

Figure 1 – Residental Prices Comparison Vs. IOUs <sup>1</sup>



Cost of Service Rate Making Under a Not-for-Profit Model

A key tenet of the public power rate model is the independent authority to set rates, which is consistent with the original purpose of the public power model—to provide power to customers at a cost of service with no profit. The State statute under which Santee Cooper was created provides that we establish rates and charges that produce revenues sufficient to provide for payment of all expenses, including the conservation, maintenance and operation of our facilities and properties, and the payment of the principal and interest on our notes, bonds, or other obligations.

At Santee Cooper, customer rates are set by a 12-member board of directors appointed by the Governor and comprised of representatives from across South Carolina. The directors are screened by the Public Utilities Review Committee and confirmed by the State Senate.

IOUs on the other hand, operate under a "for-profit" model whereby they seek to provide investors with a return on their investment—a return on equity. As such, there is an inherent tug-of-war between the investor—seeking higher returns—and the customers—seeking to pay lower rates. This conflict is typically resolved by a state public service commission, which, after a lengthy process, determines the rates that an IOU may charge its customers.

Ability to Finance with a Higher Percentage of Low-cost Debt

Similar to other public power entities, Santee Cooper's capital investment program and operations are primarily debt financed as there are no stockholders to purchase equity. Our current capital structure is comprised of 58% tax-exempt debt, 18% taxable debt and 24% of net position (retired equity for which we do not earn a return). Similarly, The Tennessee Valley Authority (TVA), CPS Energy (San Antonio), Sacramento Municipal Utility District (SMUD), and Los Angeles Department of Water and Power (LADWP) have total debt / capital ratios of 67%, 63%, 64%, and 65%, respectively. IOUs, conversely, typically have a capital structure with 50% debt and 50% equity (which has a higher cost for customers).

<sup>&</sup>lt;sup>1</sup> IOU rates determined based on data available on South Carolina Office of Regulatory Staff Webpage - https://regulatorystaff.sc.gov/regulated-utilities/electric-natural-gas/electric/historical-electric-residential-bills

Santee Cooper's independent rate setting authority, derived by statute, allows for a higher proportion of lower-cost debt funding than an IOU while also allowing us to maintain a strong credit rating. Standard & Poor's, one of Santee Cooper's credit rating agencies, specifically cites our independent rate setting as a key factor supporting our A rating.

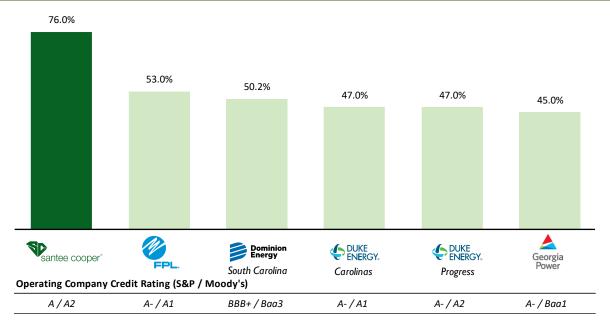


Figure 2 - Santee Cooper Total Debt / Capital vs. IOUs<sup>2</sup>

The Revenue Obligation Resolution, the contract under which we issue our revenue bonds, requires us to collect from customers certain minimum amounts each year to fund a Capital Improvement Fund (CIF) (described in further detail below). The CIF supports our ability to issue debt at favorable rates. Using funds from the CIF reduces Santee Cooper's need to issue additional debt for capital expenses.

As described in further detail below, the ability to finance a large percentage of our expenses with tax-exempt debt is beneficial because it is among the most economical sources of capital to finance capital assets.

#### **Lower Cost Debt and Equity**

Santee Cooper benefits both from being able to issue long-term debt at favorable interest rates and from not having an obligation to earn a return for, and pay a dividend to, equity investors.

#### Cost of Debt

Santee Cooper issues tax-exempt debt which, all else equal, allows us to raise debt at a lower cost than IOUs. Our cost of debt is approximately 0.90%³ lower pre-tax and approximately 0.19% lower after-tax versus the average of our regional IOU neighbors. This means that the component of customer rates that is collected for interest expense on the same amount of debt would be ~10% lower for a Santee Cooper customer on a post-tax basis versus an average neighboring IOU customer. Furthermore, we are able to finance our capital needs using a greater share of debt financing relative to IOUs that have to rely on a higher proportion of equity financing which is more expensive.

<sup>&</sup>lt;sup>2</sup> IOU data based on target capital structure from latest rate case.

<sup>&</sup>lt;sup>3</sup> Reflects average of yield-to-worst of debt maturing in 10-years or closest equivalent for Duke Energy Carolinas, Duke Energy Progress, Dominion Energy South Carolina, Georgia Power and Florida Power & Light.

We can also refund our tax-exempt debt prior to maturity when it produces savings for our customers which is advantageous over IOUs where refinancing debt early typically requires a make-whole penalty payment.

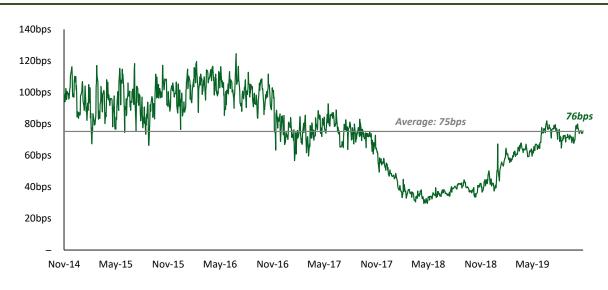
In addition, the average maturity of Santee Cooper's debt is 19.6 years versus 14.5 years for neighboring IOUs, giving customers more rate certainty and protection from interest rate risk over a longer period of time.

Figure 3 – Santee Cost of Debt vs. IOUs4

	santee cooper®	DUKE ENERGY.	DUKE ENERGY. Progress	Dominion Energy South Carolina	Georgia Power	FPL.	
Pre-Tax Cost of Debt <sup>(4)</sup>	1.8%	2.5%	2.5%	2.7%	3.1%	2.7%	
Tax Rate (21.0% Federal + State)	0.0%	23.0%	23.0%	25.7%	25.3%	25.7%	
After-Tax Cost of Debt	1.8%	1.9%	1.9%	2.0%	2.3%	2.0%	
Average Debt Tenor (yrs)	19.6	13.3	13.3	12.7	16.0	16.8	

Tax-exempt debt is typically cheaper than taxable debt as the investor does not pay tax on the interest payments. The investor is accordingly willing to take a lower interest rate. The figure below presents the difference between taxable and tax-exempt debt interest rates over the last five years. During that time period, tax exempt debt has been approximately 0.75% cheaper on average than taxable debt. Assuming \$1 billion of debt, that would imply annual savings of \$7.5 million.

Figure 4 – Corporate vs. Muni Bond Spread<sup>5</sup>



Additionally, over a ten period period, tax exempt debt has been approximately 0.95% cheaper on average than taxable debt. Assuming the same principal amount, that would imply annual savings of \$9.5 million.

<sup>&</sup>lt;sup>4</sup> Pre-tax cost of debt reflects yield-to-worst of debt maturing in 10-years or closest equivalent.

<sup>&</sup>lt;sup>5</sup> Reflects Moody's 10-Year AA Corporate Bond Index – Bloomberg-Barclays 10-Year AA Muni Bond Index.

#### Cost of Equity

Santee Cooper operates as a not-for-profit entity for the benefit of its customers and South Carolinians at large. Since IOUs operate on a for-profit basis, a key part of their business model involves earning a Return on Equity (ROE). The ROE is generally determined through a rate case proceeding in front of a state public service commission. As illustrated in Figure 5, the average allowed ROE for Santee Cooper's neighbors is 10.15% and their earned ROEs for 2016 – 2018 have averaged 11.06% (utilities can over-earn their allowed ROE due to particularly warm/cold weather, taking out costs, or other measures between rate proceedings).

In addition, a large part of the appeal for investors in IOUs is the prospect for dividend payments. From 2016 - 2018, the average dividend payout ratio<sup>6</sup> for utilities was approximately 72%. This means that of the net income earned by an IOU, 72% is distributed to investors while 28% is reinvested in the business. Santee Cooper's earnings after its payment to the State of South Carolina are retained and reinvested in the system to fund capital projects or to reduce future rates.

While Santee Cooper does not target any set earned ROE as a result of its not-for-profit business model, it does collect funds from customers that are placed in our CIF. Collection of this fund is required by Santee Cooper's bond resolution for the purpose of ensuring for bondholders that adequate cash flows exist to repay Santee Cooper's debt and fund its ongoing capital needs. These funds, when not used for capital needs, are used to repay debt which reduces the amount Santee Cooper recovers from customers. But even considering Santee Cooper's collection of CIF, the return on Santee Cooper's net position from 2016 – 2018 was 5.6%, and it is expected to be 3.4% over the next 10 years under the 2020 Reform Plan.

Figure 5 – Santee Cooper Cost of Equity vs. IOUs<sup>7</sup>

		Santee cooper®	DUKE ENERGY.  Carolinas		Dominion Energy South Carolina	Georgia Power	FPL.
Return on	Allowed ROE	n.a. '20-'29E	9.50%	9.50%	10.25%	10.95%	10.55%
Equity	'16 - '18 Avg. Earned ROE	3.41% 5.61%	11.26%	9.23%	9.73%	12.17%	12.98%

#### Return on Capital

When combining the elements described above, the result is that public power entities in general, and Santee Cooper in particular, enjoy a lower cost of capital than IOUs. Santee Cooper's return on invested capital (ROIC) from 2016–2018 averaged 3.8%, while neighboring IOU's ROIC averaged approximately 7.4% over the same period.

<sup>&</sup>lt;sup>6</sup> Dividend payout ratio reflects a company's dividend declared divided by its net income.

<sup>&</sup>lt;sup>7</sup> ROE is calculated as normalized net income / (average book value of equity – goodwill). Allowed ROE figures as of May 1, 2019, September 26, 2018, December 17, 2013, and November 2, 2016 for Duke Energy Carolinas/Progress, South Carolina Electric & Gas, Georgia Power, and Florida Power & Light, respectively. Santee Cooper average earned ROE presented here is 2016-2018A average (for the 5.61%) and 2020-2029 average (for the 3.51%).

Figure 6 – Santee Cooper Cost of Capital vs. IOUs<sup>8</sup>

		santee cooper		DUKE ENERGY. SProgress	Dominion Energy South Carolina	Georgia Power	FPL.
Return on	Allowed Return on Rate Base	n.a. '20-'29E	7.16%	6.99%	8.05%	7.71%	6.65%
Capital	'16 - '18 Avg. ROIC	4.69% 3.78%	7.57%	5.90%	6.38%	7.99%	9.75%

#### **Exemption from Federal and State Income Taxes**

Because Santee Cooper is a state agency, it is exempt from paying federal and state income taxes. IOUs are not exempt from paying federal and state taxes. As such, the rates they charge customers are burdened by this incremental cost, which is not borne by public power entities.

Santee Cooper Rate Design vs. IOUs—An Illustrative Investment Example

In order to demonstrate the benefits of public power vs. an IOU, the following analysis compares the long-term revenue requirements for Santee Cooper and a hypothetical IOU for an illustrative \$500 million investment in a new transmission asset. Operating costs are kept constant between the Santee Cooper example and the IOU example so the only differences are driven by the factors that differentiate public power entities from IOUs.

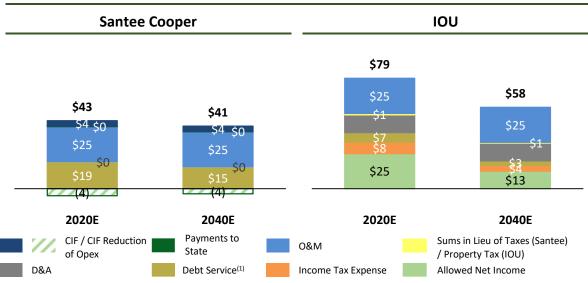
The following graph illustrates the different components of the revenue requirement during the first year the hypothetical asset is in service under the two business models. Under this example, IOU rates would need to be approximately 34% higher on average than Santee Cooper's for a similar investment.

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<sup>&</sup>lt;sup>8</sup> Santee Cooper average earned ROIC figures show 2016-2018A average for 4.69% and 2020-2029 average for 3.78%. Allowed Return on Rate Base figures as of May 21, 2019, August 31, 2018, December 17, 2013, and March 17, 2010 for Duke Energy Carolinas/Progress, South Carolina Electric & Gas, Georgia Power, and Florida Power & Light, respectively. Calculated as (normalized operating income \* (1 – tax rate)) / (average book value of debt + average book value of equity - goodwill).

<sup>&</sup>lt;sup>9</sup> This example is not representative of our Reform Plan assumptions, but for illustrative purposes only.

Figure 7 – Illustrative Revenue Requirement Breakdown<sup>10</sup> (\$mm)



Over a 20-year period, Santee Cooper would recover ~\$366 million less from customers vs. an IOU for the same investment.

Figure 8 – Illustrative Revenue Requirement Over Time (\$mm)

As demonstrated above, Santee Cooper's public power model and cost-based ratemaking offers customers a significant cost advantage vs. IOUs over the long term.

IOU

Santee Cooper

While the preceding pages address why the public power model is structurally superior from a customer rate and cost of service perspective, it is important to note that the absence of a profit motive (or the need to grow earnings or pay dividends) fundamentally alters how utilities view their responsibilities to customers and communities at

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<sup>&</sup>lt;sup>10</sup> Santee Cooper model includes \$10 million of annual principal repayment.

large. It changes how capital is raised, where it is spent and the timeframe for which investments are made even when there is no / little short-term economic benefit. Public power utilities are locally governed and built to be engines of growth and economic development for the regions that they serve. That core purpose drives public power entities to take a broad view of their socio-economic role in the communities they serve and results in the recognition that there are multiple stakeholders that matter when solving for the holistic upliftment of the region. Santee Cooper is constantly aware of its impact on customers, fixed income investors, employees, employers, charities, the State government and the State at large. We have faithfully served the people of South Carolina for over eight decades and will continue to be an effective tool for the State's development in our current form.



# **8.7 Codification of Pricing Process**

#### 8.7 CODIFICATION OF PRICING PROCESS

The new statutory-based retail rate process shall consist of the following procedures and guidance to ensure consumer and legislative oversight of any proposed retail rate increase.

#### Notice Requirement

Santee Cooper shall provide notice to customers who will be affected by a retail rate increase at least sixty (60) days before the Board of Directors' vote on the proposed rate increase. The notice required under the statute must be given in the following forms:

- 1. First-class United States Mail addressed to the customer's billing address in the authority's records at the time of the notice; or
- 2. By the same means of communication used for customers who have elected to receive paperless billing; and
- 3. By advertisements in newspaper of general circulation within Santee Cooper's service territory; and
- 4. By way of Santee Cooper's regularly maintained website; and
- 5. By issuance of a news release to local news outlets.

Santee Cooper shall also provide notice contemporaneously to the ORS and Consumer Advocate, who shall be granted authority to appear and engage in the retail rate-making process.

#### Contents of Notice

The notice of proposed retail rate increases required by this statute shall contain the following information:

- 1. The date, time, and location of all public meetings.
- 2. The date, time, and location of the meetings at which a proposed retail rate increase is expected to be submitted to the Board of Directors for its consideration.
- 3. The date, time, and location of the meeting at which the Board of Directors is expected to vote on the proposed retail rate increase.
- 4. A notification to customers of a right to:
  - a. Review the proposed retail rate schedules;
  - b. Appear and speak in person concerning the proposed retail rates at public meetings or the specified meetings of the Board of Directors; and
  - c. Submit written comments.
- 5. The means by which customers can submit written comments, including the email and physical addresses to which written comments may be submitted, and the deadline for submitting such comments; and
- 6. The means by which customers can access and review a written report containing the proposal of proposed rate adjustments, any rate study, or other documentation developed by the authority in support of the retail rate increase, when these materials become available.

#### Comprehensive Review Process

Santee Cooper shall provide a comprehensive review of its rate structure and rates, consistent with the provisions of Chapter 31, Title 58 and its bond covenants concerning revenue requirements. This review should include such

subjects as Santee Cooper's revenue requirements, a cost of service analysis, and rate/tariff design. To accomplish the review, Santee Cooper management may engage consultants to assist with the process.

Santee Cooper shall provide a written report of management's recommendations concerning proposed retail rate adjustments, and provide an opportunity for customers who will be affected by a retail rate increase – in advance of Board of Directors' consideration and determination of rates – to review the proposed rate schedules and written findings and analysis of employees and consultants retained by the authority that support the proposed retail rate increase, provided that:

- 1. Santee Cooper shall make the proposed rate schedules and written findings and analysis supporting the retail rate increase available at a physical location, at public meetings, and via Santee Cooper's website; and
- 2. Customers who will be affected by a retail rate increase may submit written comments to be considered by the Board of Directors before any vote concerning the proposed retail rate increase

Santee Cooper shall host at least two (2) public meetings to be held at a minimum of two (2) locations convenient for customers who will be affected by a retail rate increase within the Authority's service territory. Customers who will be affected by a retail rate increase may appear and speak in person at the public meetings. Santee Cooper will ensure at least one representative of its staff or management and at least one member of the Board of Directors attend the public meeting.

To further facilitate transparency during this process, Santee Cooper shall cause a transcript of all such meetings to be prepared and maintained as a public record and for consideration by the Board of Directors prior to its consideration and vote on the proposed retail rate increase.

Thereafter, the Board of Directors must convene – at least thirty (30) days prior to the Board of Directors' scheduled vote on the proposed retail rate increase – and receive management's recommendations, the proposed rate schedules, documentation supporting the same, customer comments, transcripts of the public meetings, and submissions from the ORS and Consumer Advocate. Customers who will be affected by the retail rate increase will also be entitled to appear and address the Board directly. Accordingly, Santee Cooper will also have a transcript of this meeting prepared and maintained as a public record.

Finally, Santee Cooper's Board of Directors will convene at the scheduled time to vote on the proposed retail rate increase with any increase becoming effective no earlier than sixty (60) days after the Board votes.



# **8.8 History of Central Agreements**

#### **8.8** HISTORY OF CENTRAL AGREEMENTS

#### 1950-1980: Pre-Coordination Agreement

Prior to the Coordination Agreement (CA), Santee Cooper served Central through a series of power contracts beginning in 1950. These contracts (denoted as A-F Power Contracts) were largely tied to leases by Santee Cooper of Central-owned transmission and generation facilities. Central financed these facilities through the Rural Utilities Service (RUS), then known as the Rural Electrification Administration (REA). The final power contract in this series of contracts – the F Power Contract – was entered into in 1971. The oil embargo and energy crisis throughout the 1970's caused high fuel prices and interest rates. Because of this, the rates paid by Central to Santee Cooper under the F Power Contract were not enough to recover the cost to produce power for Central. After several years of hardship on Santee Cooper and their other customers, Santee Cooper and Central entered into a new formal agreement – the 1980 Coordination Agreement.

#### 1980-2012: Coordination Agreement and subsequent amendments

The original 1980 CA provided for Santee Cooper to continue to provide and sell to Central all of Central's power requirements, other than certain hydro purchases from Southeastern Power Administration (SEPA), other pre-existing purchase agreements, and new resources allowed under the contract. A planning committee was established for the purpose of coordinating generation planning and related matters. Both parties were provided an option to co-own new resources developed by the other party. Central had the option to participate in ownership of V.C. Summer Nuclear Station (Unit 1) and Cross Generating Station; Central did not exercise either option. This agreement also provided for Santee Cooper to jointly dispatch the parties' resources for the mutual benefit of the system.

Two types of power and energy were provided to Central: (1) reserves capacity and energy and other interchange energy to backup Central's resources, and (2) supplemental capacity and associated supplemental energy to meet Central's supplemental needs. The price for these power sales and transmission service was, and remains, strictly cost-based as determined by the formula-rate provisions in the agreement.

Between 1980 and 1986, the CA was amended four times. The amendments were generally insignificant except for the following two changes: (1) extending the right to Central to purchase power from Santee Cooper under Santee Cooper's retail industrial rate schedule, and (2) providing for a true-up of rates based on projections to reflect actual costs following the close of each year.

The fifth, and more significant amendment, occurred in 1988. The parties agreed that Central would receive certain rate concessions through changes to the way the rate for supplemental capacity was calculated. In return, Central agreed not to obtain any eligible capacity resources to reduce its purchases from Santee Cooper. Simply put, Central agreed to purchase essentially all of its requirements from Santee Cooper (except for SEPA and other pre-existing agreements).

Following 1988, several letters and memoranda of understanding were executed to address new costs, resolve differences in interpreting provisions of the CA, document understandings of certain matters not covered by the CA, etc. One of the more significant memoranda to be executed involved the sale of power and energy by Santee Cooper to serve the loads of the former distribution cooperative members of Saluda River Electric Cooperative (Saluda load). Santee Cooper began providing service to the Saluda load in 2001 under an agreement separate from the CA. At the time, this service was supplemental to the Saluda load's ownership interest in the Catawba nuclear station and several small diesel and run-of-the-river hydro resources as well as its capacity and energy allotment from the SEPA. Subsequently, the Saluda load sold its interest in the station and those cooperatives became

members of Central. Central then began purchasing power and energy under the CA to serve the Saluda load. Later, in 2010, Santee Cooper and Central executed a memorandum of understanding that allowed a transition of the Saluda load to another service provider. In return, Central agreed not to exercise its option to terminate the CA prior to 2031. The Saluda load transitioned off the Santee Cooper system in increments beginning January 1, 2013 and ending January 1, 2019.

#### **2013: Amended Coordination Agreement**

Santee Cooper and Central began negotiations to amend the Coordination Agreement not long after the 2010 Saluda load memorandum was finalized. The significant changes to the CA in this amendment include:

- Term: The CA cannot be terminated prior to January 1, 2059 (extended from the previous 2031 date).
- Opt Out: Central has the right under a defined generation expansion planning process to opt out of new
  major generating resources and certain modifications to existing resources proposed by Santee Cooper. If
  this were to occur, each party would be required to supply their proportionate share of the required
  capacity (including reserves) and each fully bear the costs of its new non-shared resource. Central opting
  out of a future proposed resource does not diminish its responsibility for fixed costs of existing resources
  (including V.C. Summer units 2 & 3). Instead, the opt out allows Central to substitute the costs of its own
  non-shared resource for what would have been the cost of a new shared resource.
- Modifications to rates and charges: Formula rates were modified to include:
  - Allocation of debt service and lease payments to functional classifications based on net plant investment
  - Capital improvement allowance of at least 8.5% of gross revenues, allocated based on net investment
  - Classification for each individual production O&M account is specified based on the FERC predominance method, resulting in slightly more expenses being classified as energy-related costs
  - Classification of all fuel expenses as energy-related costs
  - Classification of certain fixed production-related revenue requirements as energy-related costs that were previously classified as demand-related costs
  - Limitation of Santee Cooper's annual payment to the State to 1% of gross revenues rather than the previous limit based on net revenues
  - Exclusion from rates and charges the costs of, and revenues from, future non-shared resources of Santee Cooper
  - Inclusion of certain new protections against increases in cost to Central as a result of new offsystem sales and new non-firm, on-system sales by Santee Cooper
- Pooling and Interchange: The benefits and shared risks of non-shared generating resources will be
  accounted for through interchange transactions patterned after accepted practices within "power pools".
   Santee Cooper will dispatch existing resources (including non-shared resources) with no adverse
  distinction between its own resources and Central resources.
- Other: Other miscellaneous matters contained in this amendment include:
  - Santee Cooper has the new right to require Central to enforce Central's contracts with its member cooperatives
  - Central receives more information on a regular basis regarding fuel supply and strategy for existing and shared resources
  - Santee Cooper and Central will work more closely through the planning committee in planning future generating resources
  - Central's has the right to purchase its proportionate share of Santee Cooper's shared generating and transmission facilities at expiration or termination of the CA

#### Agreements Subsequent to 2013

Since 2013, Santee Cooper and Central have continued to work together through letter agreements and memorandums of understanding as the relationship evolves to meet changing needs, market dynamics, and regulatory developments.

- The 2013 Memorandum of Understanding related to Economic Development Rates.
- The 2013 Amended and Restated Supplemental Memorandum of Understanding and Agreeement related to service to the former Saluda cooperatives
- The 2015 Memorandum of Agreement regarding Marlboro Electric Cooperative's service to the City of Bennettsville.
- The 2015 Memorandum of Understanding related to the Experimental Large Light and Power Economic Development Service Tiered Rider.
- The 2015 SCEDIF Letter Agreement
- The 2015 Site Readiness Fund Overview
- The 2015 Letter Agreement related to Webb Forging.
- The 2016 Memorandum of Agreement related to wholesale electricity contracts with South Carolina municipalities.
- The 2016 Memorandum of Understanding related to Solar Power Resources.
- The 2016 Memorandum of Understanding related to Service to the Haile Gold Mine Load Connected to the Transmission System of the Authority.
- The 2016 Trunked Radio System User Agreement
- The 2017 Letter of Agreement related to the Inland Port Grant
- The 2017 Letter of Agreement related to the Samsung Expense
- The 2018 Memorandum of Understanding related to the Subscription of Solar Power & Energy from Colleton County Solar Farm.
- The 2019 Memorandum of Understanding related to Solar Power Resources Located at Volvo Car U.S. Operations, Inc.

#### **Transmission-Related Services to Central**

#### • <u>Transmission Service</u>

Transmission service to Central is not provided under an Open Access Transmission Tariff (OATT); it is governed under the provisions of the CA, including its cost of service rate.

#### Transmission O&M

More than 500 miles of Central-owned designated transmission facilities (transmission lines and rights-of-way) are operated and maintained by Santee Cooper at cost under the provisions of the CA.



# **8.9 Consultant Reports**



# 8.9.1 Navigant Consulting



# 2019 Business Forecast Review

### **Prepared for:**

**South Carolina Public Service Authority (Santee Cooper)** 



#### Submitted by:

Navigant Consulting, Inc. 101 S Tryon. Suite 2820 Charlotte, NC 28202

704.347.7621 navigant.com

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<sup>&</sup>lt;sup>1</sup> On October 11, 2019, Guidehouse LLP completed its previously announced acquisition of Navigant Consulting Inc. In the months ahead, we will be working to integrate the Guidehouse and Navigant businesses. In furtherance of that effort, we recently renamed Navigant Consulting Inc. as Guidehouse Inc. We will continue to perform as proposed during and after this consolidation, using the same personnel and methods described in this proposal and without changes to the schedule, price, or level of effort proposed.



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## 1. Executive Summary

#### **Background**

Santee Cooper's new management team has developed its 2019 Business Forecast (Forecast) to transform the company into "an innovative 21st century electric utility serving its core purpose of providing affordable, reliable electricity and water to customer and providing economic development benefits to South Carolina." The Forecast includes a significantly cleaner resource mix and strategies to reduce operating costs and enhance customer service offerings. Key resource plan elements include:

- 1. Retirement of the coal-fired Winyah Generating Station;
- 2. Increasing solar generation by an additional 1000 MW by 2024 and an another 500 MW in 2027-2031:
- 3. Integrating 200 MW of battery storage between 2024 and 2028;
- 4. Adding 100 MW of dual-fuel aeroderivative turbines by 2023; and
- 5. Adding 500 MW of gas-fired capacity in 2027 and another 500 MW in the early 2030's.

Santee Cooper believes this proposed resource plan, along with other financial transactions and partnerships, will enable the company to keep electric prices at or below current levels for at least five (5) years and reduce carbon emissions by ~30% over the next decade.

Navigant has significant experience in utility strategy and integrated resource planning. In support of the 2019 Business Forecast, Santee Cooper engaged Navigant to assess key Forecast assumptions including renewable energy integration opportunities and potential operating synergies that may be achieved through partnerships with neighboring utilities.

#### **Navigant's Approach**

Given the accelerated timeline to present the Forecast to its Board of Directors, Santee Cooper requested that Navigant primarily review key Forecast assumptions based on our existing industry knowledge and experience evaluating renewable integration opportunities and partnership synergies for other utilities. Should the management team move forward with implementing the Business Forecast, Navigant recommends performing more detailed analysis such as performing production cost analysis to assess the impacts on cost and carbon emissions from joint dispatch agreements, additional renewable generation and battery storage, and evaluating other operational savings that may be achieved through partnerships with neighboring utilities or service providers.

#### **Key Insights and Recommendations**

#### Renewable Generation and Energy Storage Resources

Navigant reviewed the Santee Cooper Forecast and found the proposed addition of 1500 MW of solar capacity and 200 MW of battery storage as resources to meet load requirements to be reasonable. Based on our experience performing renewable studies for other utilities, we believe the proposed level of solar and storage capacity can be cost-effectively integrated without compromising system reliability.

Navigant performed an independent analysis of both effectively load carrying capacity (ELCC) and operating reserve requirements for an additional 1500 MW of solar. While the ELCC for solar is anticipated to be very low at that level of penetration, it is above zero, and Navigant recommends using a value in the range provided. The ELCC will decrease as more solar is added to the system, so it may be best to decrease the value across the range over time.

Navigant also performed an analysis on additional monthly load-following reserves that would be required



#### **Santee Cooper 2019 Business Forecast Support**

at 1500 MW of solar. Santee Cooper did not have an independent analysis of this value and has adopted the values we have provided.

Due to the potential future benefits of large-scale storage, we have also recommended that Santee Cooper look at storage as a potential replacement for additional gas-fired generation prior to commencing permitting and construction. At this time storage is not cost competitive with a CCGT in the area; however, several market and cost factors may change that over time.

#### Operating Synergies

Santee Cooper's Forecast considers the opportunity to reduce both capital and operating costs by partnership with neighboring utilities. One potential partnership area is implementing a Joint Dispatch Agreement (JDA) with a neighboring utility to reduce system generation costs. A previous study performed by Santee Cooper estimates that a JDA might result in a range of projected annual savings of \$8-29M across the different years. Navigant found this estimate to be generally within the bounds of the 1-3% of generation cost savings that JDA's have generated for other utilities. We do recommend Santee perform an updated study that models specific generation assets and scenarios included in its Forecast prior to entering into a formal partnership.

Additionally, the management team requested Navigant provide insights regarding potential operational synergies that may be achieved through partnership in the areas of: corporate services, transmission and distribution asset and work management, customer operations; and generation operations. Based on experience conducting detailed analysis of each area for companies that had not conducted any meaningful improvement programs within the previous 3 – 5 years of ongoing operations, Navigant developed a range of potential savings in percentage terms. The estimates are assumed to be based on continuing operations and do not reflect any capital spending necessary to achieve the potential savings.



## 2. Renewable generation and energy storage resources

### 2.1 Solar Planning Capacity

Navigant reviewed Santee Cooper's Forecast assumptions regarding the planning capacity contribution for the additional 1500 MW of solar. The company had not initially included any capacity contribution for the winter peaking system. Navigant recognizes that the solar contribution during winter peak hours will be negligible. However, we believe there is some marginal value to summer peaking hours during which solar has a higher availability factor and therefore believe that the solar planning capacity should be increased slightly.

This analysis was conducted by looking at the 30 net peak hours (net of solar and energy efficiency) of the year and determining the capacity contribution of solar during those hours. At 1500 MW of penetration, the average effective load carrying capacity (ELCC) is 3.1%. It is also important to note that this value will trend downward as more solar is added to the system due to the covariance of solar, and the need to meet demand net of renewable resources. For example, at 500 MW of solar penetration on the Santee system, the same analysis results in an 8.4% ELCC, and at 1000 MW, the value is 5.4%. Navigant's suggestion would be to decrease the ELCC over time as more solar is added to the system and match the value provided for 1500 MW.

### 2.2 Load-following Reserve Requirements

Navigant estimated the associated load following reserves required to integrate the additional 1500 MW of solar by month and season. Navigant recommends using the values in the table below as a baseline and running sensitivities for higher and lower values if reserves cannot be changed by month or season. Additionally, the reserve requirement value below signifies the amount that would need to be carried for 1500 MW of solar, so could be looked at as the "non-firm" portion of solar.

Table 2: Estimated Reserve Requirements for 1500 MW of Solar Generation

Month	Reserve Requirement (MW)	% Firm Solar Capacity (1500MW)
1	638.9	58%
2	686.6	55%
3	633.9	59%
4	529.4	66%
5	545.6	65%
6	413.4	73%
7	341.1	78%
8	422.0	73%
9	449.1	71%
10	587.8	62%
11	434.6	72%
12	550.1	64%

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#### **Santee Cooper 2019 Business Forecast Support**



Our understanding is that Santee Cooper incorporated Navigant's load-following reserve requirements recommendation in its final modeling scenarios that informed the company's most recent Forecast.

#### Methodology

In calculating the load following reserve requirement, Navigant first took the NREL Wind and Solar Integration Data Sets and simulated draws from every hour of the year. A key aspect of these draws is that they are simulated historical operation of the assumed resources including the impacts of regional weather and geographic diversity. For Santee, we utilized 8 different geographic locations. Renewable sites were selected to be consistent with the utility's current renewable portfolio and locations where future plants are expected to be built.

NREL also provides corresponding hourly schedules for each simulated solar plant, from which the area-control-error (ACE) contribution due to renewable uncertainty can be calculated (ACE ~ Output – Schedule). The ACE contributions of individual sites are scaled appropriately based on the actual capacity assumed to be at the given location. To comply with NERC's Reliability Based Control Standard BAL-001-2, a balancing authority must operate such that its clock-minute average reporting ACE does not exceed its Balancing Authority ACE limit (BAAL) for more than 30 consecutive minutes.

Based on the utility's frequency bias and historical variability of interconnection frequency, a worst-case scenario BAAL (both for the upper and lower limit) is determined. A utility is assumed to call upon its load-following resources if violating the BAAL for 15 consecutive minutes (giving it 15 minutes to come back in compliance with quick start or spinning reserve products). For each draw of renewable operation, the load-following and regulation resources needed to prevent a NERC violation is recorded.

The BAAL used for Santee Cooper was within +/- 20MW.

## 2.3 Alternative renewable generation and energy storage resources

While the Phase 1 timeframe did not allow Navigant to conduct an analysis on the cost-competitiveness of additional renewable generation and storage as a replacement for adding thermal generation to the system, we do suggest this be further examined prior to incurring significant development costs. In particular, the study should evaluate the potential for a new gas-fired asset to be under water prior to its 30-year expected lifespan. Given the current costs for storage and storage+solar systems, this will not be economic today, however, prior to permitting and construction of the combined cycle, costs should be reassessed and a full economic study should be performed to assure the least cost most environmentally beneficial resource is selected. A long-term analysis of expected renewable penetration, scenarios around federal carbon policy, and an analysis of cost curves for storage+renewable assets that could provide the same capacity value as a thermal resource would need to be taken into account to determine the best option for future capacity on the Santee Cooper system.



## 3. Operational Synergies

Navigant identified potential benefits that may be achieved by working with surrounding utilities in corporate services; transmission and distribution asset and work management; customer operations; and generation operations and maintenance.

Key levers to achieve potential benefits include:

- Best practices exchange
- Staffing & Organizational Analysis
- Process and technology improvement
- Load sharing
- Virtual centralization (pooled resources)
- Outsourcing

Navigant finds that Santee Cooper may be able to capture additional savings opportunities through partnerships with neighboring utilities or third-party service providers. The range of options the company should consider include:

- Exchanging best practices and implementing centers of excellence
- Implementing process and technology improvements
- Load sharing
- Virtual centralization (pooled resources)
- Outsourcing corporate and back-office functions

While Navigant does not have a full understanding of Santee Coopers current cost structure versus bestin-class utilities, we provide a description and range of potential savings opportunities for various functions based on our experience working with various utilities.

## 3.1 Corporate Services

#### Definition

Combining or integrating various corporate services such as Finance & Planning, Information Technology, Supply Chain and Human Resources with a neighboring utility or service provider can generate potential savings. Savings are generally driven by increased efficiency / workload balancing, implementation of best practices and utilization of lower-cost resources. In a merger situation and depending on the appetite for change, we typically realize cost savings of 5% - 15% from labor cost reductions, combination/reductions in technology, and other overhead costs through the use of best practices

#### **Benefits**

Leveraging best practice processes and tools and creating centers of excellence ensures decisions are made that optimize the company and synergies across lines of businesses are realized. Navigant's experience has been that utilities that centralize or outsource cross-functional IT, HR and Finance & Planning functions to a leading service provider have been able to achieve savings of 5-15%. Additionally, centralizing supply chain operations can yield 5-10% O&M savings and reduce capital expenditures in the 2-5% range.

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## Santee Cooper 2019 Business Forecast Support



## Set Up

Typically requires further benchmarking and best practices analysis of existing systems, processes, staffing levels, etc. to identify potential synergies and opportunities for improvement.

#### Limitations and Risks

Dependent on potential synergies and ability to implement recommended changes.

## 3.2 Transmission and Distribution Asset and Work Management

## **Definition**

Includes capital program management along with inspection and maintenance programs. Capital programs include long-term asset management planning for asset replacements as well as new design and construction. Inspection and maintenance include both line work and vegetation management. Joint operations can take advantage of improved asset planning, optimization of field resources, and enhanced purchasing leverage through larger-scale purchases.

Optimization of capital programs through effective design-build contracting minimizes downtime for "excess" in-house resources. O&M savings can be achieved through better maintenance planning, better crew deployment through work management tools, optimized crew sizes and structures, and better material and fleet support.

#### Benefits

Navigant's experience is that centralizing T&D Asset Management and outsourcing of parts of Engineering & Construction Management and Field Operations can yield 2-5% O&M savings and 1-4% Capex Savings. Centralizing the planning activities avoids sub-optimization by operating as multiple independent regions.

## Set Up

Appropriate work management and asset management planning tools are necessary. To the extent that a partner organization is found, the better systems can be applied across a larger array of assets. That will require conversion of the systems for at least one of the participants, and time for training. Understanding of recent major maintenance programs (e.g. pole treatment or replacement, vegetation management, substation refurbishment) is needed to truly assess opportunities.

## Limitations and Risks

Depending on recent asset sustaining investment activities (e.g. minimum pole replacement/treatment in recent years), savings may be difficult to achieve

## 3.3 Customer Operations

#### Definition

For this purpose, Customer Operations is defined as delivery of customer care services including call center, local offices, field service, meter reading, billing, payment processing, credit & collections, revenue protection, and related IT support services. Changes might include sharing the delivery of these services with another utility or outsourcing one or more of the services to a vendor. Internal improvements could include implementation of improved operating practices, choosing to modify service level targets, and full AMI implementation can enable reductions in multiple areas of operating costs.

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## Santee Cooper 2019 Business Forecast Support



## Benefits

Utilizing AMI infrastructure reduces field work costs in meter reading and field service while enabling faster field service, more accurate billing, and more effective revenue protection activities.

Front-office operations (call centers, local offices) benefit from larger scale created either through consolidating/sharing centers or outsourcing to larger more efficient operators, along with an intense focus on volume reduction through better first-time service.

Back-office operations (billing, payments, credit) benefit from better use of analytic tools to reduce billing exceptions and improve credit decision-making and policy execution.

## Set Up

AMI implementation requires significant capital investment. Other forms of improvement in Customer Operations would require very limited capital investment.

## Limitations and Risks

Consolidation of call centers requires conversion to a common CIS. Failure in that conversion can create significant service problems.

AMI metering has great benefits, but also significant capital costs, and takes multiple years to plan and execute.

## 3.4 Generation

## Definition

For this purpose, Generation is defined as operations and maintenance of existing fossil power plants. This includes plant operations, training, routine maintenance, outages (planned and unplanned) outage management and general plant support services specific to generation. For joint operations changes might include use of a single MMS, sharing of maintenance staff and contractors, joint warehouse operations and spares, etc. Internal improvements could include implementation of improved operating, maintenance and outage management practices, modification of operating KPI's, adjustments to current staffing levels, etc. Development of appropriate shutdown plans for existing plants may also reveal opportunities for savings.

## **Benefits**

Joint operations of an MMS would reduce programming and license fee costs, improved maintenance synergies and savings from economies of scale. Internal improvement may include conducting a staffing analysis, cost and performance benchmarking to identify areas for potential improvement/cost savings and potential improvement in current processes.

## Set Up

Potential investment/costs for joint MMS systems and/or implementation of improved MMS operations. Costs to conduct detailed best practices, staffing analysis and cost and performance benchmarking.

## Limitations and Risks

Consolidation of MMS systems, impact of potential staffing adjustments.

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## 3.5 Joint Dispatch Agreement (JDA)

## **Definition**

A JDA is an agreement between utilities to jointly dispatch assets with the goal of making overall operation of the system more efficient. It is different from a market structure in the sense that the participating utilities are not maximizing their profit but instead cooperating to minimize system costs. Resulting changes in generation and benefits from the JDA are generally calculated after-the-fact and the participating utilities share in the benefits. Navigant identified potential annual savings in the range of 1% to 3% from entering a joint dispatch agreement (JDA) with neighboring utility This is based on our experience working with utilities on designing and reviewing JDA for other utilities.

#### **Benefits**

A JDA allows the combined fleets of participating utilities to be dispatched more efficiently with lower cost generation from one fleet replacing higher cost generation from other fleets. The advantage over bilateral trading is that with the removal of profit maximization by market traders, there is less economic friction that limits the efficiency benefits.

## Set Up

A JDA requires a negotiated agreement between utilities and balancing areas and a clearing house for the dispatch that can also calculate and share out the benefits. There are set up costs for negotiating the JDA and installing the necessary tools to operate jointly. This is usually much cheaper than market options.

## Limitations and Risks

In practice, JDAs between companies have had relatively small benefits. The issue is that each company can operate their system entirely independently and the JDA is purely voluntary. This has led to JDAs being fairly moribund. The challenge is that utility operators often are not willing to make too many significant operational changes under a JDA.

A previous study performed by Santee Cooper estimates that a JDA might result in a range of projected annual savings of \$8-29M across the different years. Navigant found this estimate to be generally within the bounds of the 1-3% of generation cost savings that JDA's have generated for other utilities. Realized savings will be dependent the terms of the JDA and the relative increased efficiency of the partner's generation. We do recommend Santee perform an updated study that models specific generation assets and scenarios included in its Forecast prior to entering into a formal partnership.



## 3.6 Summary of Operational Synergies

The savings shown in Table 1 below provide a summary of the estimated range of potential savings that could be realized by working with adjacent utilities. These estimates are not based on any detailed review of the current position of related services within the Santee Cooper organization, but are based on our experience is conducting detailed analysis of each area for companies that had not conducted any meaningful improvement programs within the previous 3 – 5 years of ongoing operations. The estimates are assumed to be based on continuing operations and do not reflect any capital spending necessary to achieve the potential savings.

Table 3: Summary of Potential Savings

Area	Estimated Savings	Comments
Corporate Services	5% - 15%	Savings achieved through the elimination of duplicate functions, systems, and facilities and the deployment of common (and improved) processes, tools, and management.
T&D	2-5%	Savings achieved through centralized planning and local execution of construction and maintenance work, supported by optimized work management and project management tools.
Customer Operations	2-7%	Operational savings achieved with capital investment in AMI infrastructure, reducing field costs (meter reading, field service) and enabling service improvements. Call center savings through larger-scale operations created by consolidating centers.
Generation	2% – 6%	Typical savings achieved through application of best practices and related staffing and process adjustments.
Joint Dispatch Agreement	1 – 3%	Operational savings achieved through centralized dispatch of generation across two organizations.



**8.9.2 Economic Impact Consultant's Report** 

## THE ECONOMIC IMPACT OF SANTEE COOPER ON SOUTH CAROLINA

## **MEMORANDUM**

DATE: November 19, 2019 TO: Santee Cooper FROM: Joseph Von Nessen, Ph.D.

#### **EXECUTIVE SUMMARY**

As one of the largest power providers in South Carolina, Santee Cooper maintains a sizable economic presence in the Palmetto State. Serving more than 180,000 retail customers, Santee Cooper's impact spans all 46 counties and is especially strong in the coastal regions of the state where the majority of its customer base resides. Santee Cooper's ongoing operations support a sizable workforce as well as an extensive supply chain network that generates economic ripple effects across many industries statewide. The primary economic impacts of Santee Cooper can be summarized as follows:

- The total economic impact resulting from all activities associated with Santee Cooper on the state of South Carolina is estimated to be approximately \$2.0 billion. This figure reflects the dollar value of all final goods and services in South Carolina that can be attributed (either directly or indirectly) to Santee Cooper. This impact corresponds to 4,436 jobs and roughly \$271 million in labor income for South Carolinians.
- Roughly 54 percent or \$1.1 billion of this total economic activity is concentrated within the Charleston tri-county region. This level of activity supports 2,410 jobs and \$147 million in labor income for Charleston area residents.
- Santee Cooper also contributes to a high-quality workforce as measured by wage levels. The average annual wage across all jobs supported by Santee Cooper is estimated to be \$60,993, which is 35 percent higher than the average job in South Carolina.
- Santee Cooper's economic impact extends to every county in the state. The highest impacts occur in the counties of Berkeley (\$870.7 million), Horry (\$370.3 million), Georgetown (\$188.7 million), Dorchester (\$114.7 million), and Charleston (\$84.8 million).
- The 2019 Santee Cooper Business Forecast currently projects that within fourteen years virtually all of Santee Cooper's power supply will come from power generation at its own facilities. Such a scenario would likely increase Santee Cooper's statewide annual economic impact by about 17 percent to a total of \$2.3 billion annually by the year 2033. This would be the direct result of Santee Cooper increasing its volume of in-state power generation and thus relying less on purchased power from out-of-state suppliers.

• This projected \$2.3 billion annual economic impact of Santee Cooper in 2033 could be reduced by over forty percent under the "worst case" scenarios outlined in the 2019 ICF Report. Specifically, an acquisition of Santee Cooper generating direct job losses of 500 personnel, no net savings to ratepayers, and no increase in in-state power generation over the next fourteen years would likely reduce Santee Cooper's total annual economic impact by approximately \$947 million, which translates into roughly 1,749 total job losses statewide.

## **METHODOLOGY**

## General Overview

The economic impact of each of the factors examined in this analysis can be broken down into direct, indirect, and induced effects. The direct effects in this analysis specifically refer to increases in total economic activity arising directly from spending activity on the part of Santee Cooper – including both labor and non-labor expenditures in South Carolina. For example, consider a South Carolina-based construction company hired by Santee Cooper to perform routine building maintenance. This construction company, as a result of the direct expenditures made by Santee Cooper, will experience an increase in demand. Similarly, Santee Cooper also directly supports a sizable number of jobs and the associated wages and salaries that represent new economic activity for regions in which these employees live and work.

The indirect and induced effects refer to all of the additional rounds of spending activity that occur within the South Carolina economy that are the result of these initial direct effects. Indirect effects refer to additional rounds of spending occurring within business supply chains, while induced effects refer to additional rounds of spending occurring as a result of additional labor income. For example, if a portion of the dollars spent by Santee Cooper with the construction company outlined above is, in turn, used by the construction company to purchase machine equipment from an in-state vendor, this equipment vendor experiences an increase in demand as a result. This vendor must then purchase additional materials from its own set of suppliers, and so on. All of these subsequent rounds of "supplier spending" are known as indirect effects. In a similar fashion, the machine equipment vendor may also have to hire additional workers to fill the new demand created by the direct effect. When workers are hired and paid additional wages, they spend part of these wages in the local economy with various local businesses, which also creates additional rounds of spending activity. These additional rounds of spending due to increases in wages are known as induced effects.

The successive rounds of indirect and induced spending do not go on forever, which is why a specific value can be calculated for each of them. In each round, money is "leaked out" for a variety of reasons. For example, firms may purchase some of their supplies from vendors located outside of the local area. In addition, employees will save part of their income or spend part of it with firms located outside of South Carolina. In order to determine the total economic impact that will result from an

initial direct impact, economic multipliers are used. An economic multiplier can be used to determine the total impact (direct, indirect, and induced) that results from an initial change in economic activity (the direct impact). Multipliers are different in each sector of the economy and are largely determined by the size of the local supplier network as well as the particular region being examined. In addition, economic multipliers are available to calculate not just the total impact, but also the total employment and income levels associated with the total impact.

To generate the economic impact estimates in this analysis, a detailed structural model (known as an input-output model) of South Carolina that contains specific information on economic linkages between all industries within the state was used. Specific input-output models were also created for each of the 46 county regions within South Carolina such that the county-level estimates of Santee Cooper's economic impact could also be determined. The input-output modeling software *IMPLAN* was used to calculate all estimates.

Current Economic Impact of Santee Cooper on South Carolina
As of October 31, 2019, Santee Cooper employed a workforce of 1,649 in South
Carolina accompanied by annual non-labor in-state expenditures totaling
approximately \$227 million during the twelve-month period between August 2018
and July 2019. These non-labor expenditures include capital equipment purchases,
professional services, construction/remodeling efforts, and other general operating
expenses associated with the ongoing business activities of Santee Cooper.<sup>1</sup>

The structural input-output models used in this analysis estimate economic impacts in three specific measures: economic output, employment, and labor income. Economic output is simply defined as the dollar value of the final goods and services purchased that can be attributed (directly or indirectly) to all ongoing operations associated with Santee Cooper. It can also be thought of as an aggregate measure of total spending resulting from an initial direct expenditure. Because it includes all spending by consumers and businesses on both goods and services, it is an all-inclusive measure of the impact of total economic activity. Employment measures the total impact on jobs. Labor income represents total employee compensation, including wages, salaries, and benefits.

As described above, Santee Cooper currently employs 1,649 workers with an accompanying \$227 million in non-labor expenditures. These direct economic impacts also lead to indirect and induced impacts through increases in demand for goods and services in other related industries and through increases in household spending activity – all of which are estimated using economic multipliers. These impacts are shown in Table 1, along with the accompanying totals. These totals represent the overall impact of Santee Cooper on South Carolina.

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All raw employment and expenditure data were provided by Santee Cooper.

Table 1 - Economic Impact of Santee Cooper on South Carolina

	Employment	Labor Income	Total Impact
Direct Effect	1,649	\$149,881,482	\$1,614,000,758
Multiplier Effect	2,787	\$120,685,003	\$367,323,021
Total Impact	4,436	\$270,566,485	\$1,981,323,779

Hypothetical Future Impacts of Santee Cooper on South Carolina Approximately 79 percent of Santee Cooper's power supply currently comes from instate power generation, while the remaining 21 percent comes from power purchased from suppliers located primarily outside of South Carolina. A vast majority of the current in-state power generation originates from hydro, coal, nuclear, and natural gas & oil.<sup>2</sup>

In the year 2033, Santee Cooper projects that virtually 100 percent of its power supply will come from in-state power generation.<sup>3</sup> Under such a scenario, Santee Cooper would likely expand its economic footprint by 17 percent – or from its current total impact of \$2.0 billion to \$2.3 billion. This would be the result of a net increase in statewide economic output arising from all new business activity associated with Santee Cooper's expanded power generation.<sup>4</sup> By contrast, an acquisition of Santee Cooper that generates direct losses of 500 personnel, no net savings to ratepayers, and no increase in in-state power generation would likely reduce this projected \$2.3 billion impact in 2033 by approximately \$947 million – which would be accompanied by job losses (direct and indirect) of 1,749 statewide.<sup>5</sup> Table 2 highlights the employment, labor income, and total impact figures associated with both scenarios. *Note that assessing the likelihood that either of these specific hypothetical scenarios will occur is beyond the scope of this analysis.* 

Table 2 - Total Economic Impacts of Santee Cooper on S.C.: Current and Projected

Description	Employment	Labor Income	Total Impact
Current Impact	4,436	\$270,566,485	\$1,981,323,779
w/ 100% In-State Power Generation	4,839	\$288,805,966	\$2,327,913,884
w/ Acquisition	3,090	\$188,609,504	\$1,380,558,534

<sup>&</sup>lt;sup>2</sup> Source: 2018 Fingertip Facts; <a href="https://santeecooper.com/About/Publications/index.aspx">https://santeecooper.com/About/Publications/index.aspx</a>. Note that all impact estimates were modeled using NAICS codes 221111, 221112, 221113, and 221121. County-level impact estimates provided in the Executive Summary assume that the various sources of Santee Cooper's power supply at the state level (e.g., hydro, coal, etc...) follows the same distribution at the county level.

Source: 2019 Business Forecast; <a href="https://santeecooper.com/About/Business-Forecast/Index.aspx">https://santeecooper.com/About/Business-Forecast/Index.aspx</a>
This increased business activity would be the result of higher multiplier effects associated with the same

This increased business activity would be the result of higher multiplier effects associated with the same levels of direct employment and expenditures.

A possible scenario in which an acquisition of Santee Cooper would lead to direct job losses of 500 was outlined in the 2019 ICF Report.

## **Author Profile**



Dr. Joseph C. Von Nessen

Dr. Joseph Von Nessen is a Research Economist in the Division of Research at the Darla Moore School of Business where he specializes in regional economics, regional and national economic forecasting, and housing economics. He earned his Ph.D. in economics at the University of South Carolina in 2009. **Dr. Von Nessen regularly conducts a wide variety of economic impact analyses, feasibility studies, survey research, and market research projects.** He also frequently develops customized industry-level forecasting models for clients in both the private and public sector.

Dr. Von Nessen engages in industry-level and regional economic forecasting for organizations at the state, national, and international level. He has served as lead researcher on impact studies and forecasting projects for clients as diverse as Sonoco, BlueCross BlueShield, Michelin, Boeing, and the Savannah River National Lab, among others. He has also been the recipient of many grants from both local and national sources, including the U.S. Department of Energy and the U.S. Department of Defense.

Dr. Von Nessen is responsible for the preparation and presentation of the University of South Carolina's annual statewide economic forecast. He serves on the advisory committee of the South Carolina Board of Economic Advisors, and is regularly invited to brief the Federal Reserve Bank of Richmond on economic conditions in South Carolina and the Southeastern United States. He frequently appears on programs at national conventions, including the International Builders Show, the 21st Century Building Expo, the Association for University Business and Economic Research (AUBER), and the North American Regional Science Council and its subsidiaries.

Dr. Von Nessen is a frequent speaker for business and government leaders throughout the Southeast, providing information and consultation about business, housing markets, and local economies. He also makes frequent media appearances to discuss various local economic topics of interest. In 2018, Dr. Von Nessen was named as one of Columbia's "50 Most Influential" by Columbia Business Monthly for contributions to the Midlands community of South Carolina.

Dan J. Ray Acting Chairman Board of Directors

January 3, 2020

Members of the General Assembly:

On behalf of the Board of Directors of Santee Cooper, we are grateful for the opportunity to provide amendments to the original Reform Plan submitted to the Department of Administration on November 25, 2019.

These amendments are based on input from the Department and its advisors after review of Santee Cooper's original submission. We are thankful for the constructive feedback.

Because the Department's comments only pertained to two sections of Santee Cooper's Reform Plan (Relationship with Central Electric Cooperative and Governance/Oversight), this subsequent submission is in the form of an additional amendment, to be reviewed in combination with the other sections of the Reform Plan previously submitted.

We continue to be hopeful that the financial benefits unique to Santee Cooper, and the transparency and focus that are the themes of the Reform Plan and these amendments, may stay in the hands of South Carolinians. Thank you again for the opportunity to participate in the Act 95 process.

Sincerely,

Dan J. Ray

## **INTRODUCTION**

Since the original submission of its Reform Plan to the General Assembly on November 15, 2019, Santee Cooper has received significant response, feedback and input from the Department of Administration (DOA) and its advisors. We are grateful for this constructive dialogue. After the opportunity to consider and reflect further, as well as perform appropriate business analyses, Santee Cooper is pleased to offer responsive changes to the original Reform Plan submission.

The proposed changes focus on two areas of the Reform Plan: (1) Governance and Regulatory oversight, and (2) the Central Electric Power Cooperative business relationship. While the other sections of the Reform Plan were accepted without comment, these two issues were raised by the DOA as critical to General Assembly review.

Concerning Santee Cooper's governance and regulatory oversight going forward, the following additional amendments (Attachment 1) are offered:

- 1. Establishing ORS and PSC oversight for major capital projects
- 2. Limiting Board member terms
- 3. Requiring Board member qualifications consistent with the PSC
- 4. Requiring designated technical advisory experts

These additional changes, to be taken together with those originally proposed in the initial Reform Plan submission, provide very robust enhancements to accountability and transparency at Santee Cooper.

With respect to the Central-Santee Cooper business relationship, this revised submission (Attachment 2) impacts the following areas of interest, in addition to the obvious economic benefits:

- 1. Reducing the term of the Coordination Agreement
- 2. Increased provisions for solar and other distributed energy resources
- 3. Further analysis of transmission asset ownership
- 4. Greater resource planning cooperation
- 5. Improved communications and energy resource management

As Santee Cooper and Central stood together when V.C. Summer Units 2 and 3 were started and subsequently shut down, we are committed to working with Central for a brighter future for all South Carolinians.

We have taken the opportunity to create and include a "bullet" summary of major provisions in the Reform Plan, included as Attachment 3.

## **NOTE**

The Power Supply Roadmap included in the Reform Plan (Section 1.1) yields many economic and environmental benefits for all customers, as set forth in the Plan and summarized in Attachment 3 hereto. That roadmap is built on an assumed load forecast, however, which is the sum of Santee Cooper's forecast for its "native load" and the load forecast supplied by Central from its customers. While it is appropriate to compare all Act 95 submissions on the basis of the same unified load forecast, it is critically important to note that per the terms of the Coordination Agreement, Central may subsequently opt out of participating in new resources to serve this projected load forecast in the event Santee Cooper's Reform Plan is selected by the General Assembly. Stated differently, if Central employs its partial opt out rights for new generation resources contained in the Reform Plan, and thus this presumed load forecast is not fully nominated to Santee Cooper, then the unified load forecast, economies of scale related thereto, and the Power Supply Roadmap and its positive results will change. So we hope they don't do that. Having no insights into Central's intentions in this regard, we are unable to predict how the Power Supply Roadmap and its results might change should Central change the load forecast by moving load from the system, but clearly the result will be less economically efficient.

## 1. GOVERNANCE & OVERSIGHT

## (Please note: highlights indicate new content)

## **Introduction**

Within the public power business model, two primary efforts drive ultimate costs to customers:

- **Resource Planning Principles:** the planning and development of a robust and diverse generation mix analytically driven by sound "Resource Planning Principles"
- **Pricing Principles:** a combination of revenue requirements, cost allocation, and pricing design driven by economically equitable and purposeful "Pricing Principles"

In offering a new governance and oversight structure for Santee Cooper, we focus on the development, adoption and ongoing compliance with appropriate Resource Planning and Pricing Principles that are statutorily mandated, customer informed, critically important and fully transparent to stakeholders and regulators. When coupled with Board structural changes also outlined herein, and additional regulatory oversight as recommended herein, Santee Cooper is well positioned to be responsive to future challenges within the utility industry.

We believe our proposed changes in governance and oversight are proactive and allow not only for more transparency and accountability, but also include new measures to ensure Santee Cooper is doing what is best for our customers and the State. We recommend greater emphasis on resource planning in particular as that ultimately drives pricing for an electric utility.

Resource Planning PrinciplesPricing Principles

Transparency

As described in more detail below, Santee Cooper recommends key changes in these critical areas:

## Resource Planning

- Adoption by Santee Cooper of and adherence to Resource Planning Principles designed to reduce cost, manage risk, create flexibility, ensure reliability, and promote environmental stewardship
- Creation of an Integrated Resource Planning Group (IRP Group), including General Assembly representation, to ensure Santee Cooper's resource plans reflect customer, general public, and legislative oversight

## Pricing

- Adoption of Pricing Principles and metrics
- Initiation of new annual pricing compliance review by the Office of Regulatory Staff (ORS) and other stakeholders

#### Transparency

- Adoption of a public hearing protocol for consideration of major generation and transmission projects
- Codification of Santee Cooper's public engagement process for setting electricity prices and Board transparency practices

We have reviewed these items with external bond counsel and financial advisors and determined that the recommendations comply with our bond covenants and would not adversely impact our credit rating

metrics or utility operations. While we can and will implement some of the recommendations immediately (adopting Resource Planning and Pricing Principles and board meeting transparency practices), others will require endorsement and authorization by the General Assembly.

## A. Resource Planning Principles and Directions

A sound resource roadmap is built on three foundational aspects: (i) a broad view about the future of key assumptions such as fuel costs and customer loads, (ii) analyzing resource options both existing and new, and (iii) evaluating a large number of different resource portfolios against specific metrics. Santee Cooper's goal in this process is to appropriately balance all the important metrics that guide decision making during the planning process. These core Resource Planning Principles for Santee Cooper, adopted as part of the Reform Plan, are as follows:

- Customer Focus: Provide safe, reliable and affordable power, and respond to changing customer
  expectations by providing new options sought by customers such as more control over the source
  and use of their power
- **Cost Management**: Deliver resource value by keeping prices low through effective cost management over the long-term
- **Ensuring Reliability**: Reliability is the number one product of any utility, not electricity. Reliability enables a robust economy
- **Environmental Stewardship**: Responsibly manage the environmental impact of Santee Cooper's operations
- **Taking a Long-Term View**: Develop a long-term resource strategy to ensure an optionality over a wide range of possible future assumptions
- Reducing Financial and Planning Risk: Add generation in smaller increments, more closely matching resource needs
- **Embracing Innovation**: The accelerating development of new technology is transforming generation, transmission, and distribution. On the customer side of the meter, new technologies are improving energy efficiency and conservation and increasing information options. Santee Cooper will embrace such innovations and will incorporate them into our plans.
- **Transparency**: Engage customers, stakeholders, Board Members and elected officials in a transparent resource planning process that is responsive to questions and input

Santee Cooper adhered to these principles in developing Power Supply Roadmap in this Reform Plan. The application of these principles resulted in the following resource planning directions:

- Reduction in coal
- Substantially increase sustainable resources
- Incorporate more advanced technology
- Ensure system reliability in a manner that intentionally seeks to moderate transmission investment
- Increase customer programs to reduce load
- Increase natural gas resources
- Maximize benefits of energy purchases and increase natural gas and purchase power hedging
- Pursue the advantages of larger scale through partnerships

#### B. Integrated Resource Planning Group and Annual Compliance Review

To engender transparency, foster accountability and encourage stakeholder engagement in the pivotal process of resource planning, Santee Cooper proposes to create an IRP Group. Resource planning has significant long-term impacts on many stakeholders, and a planning board would give stakeholders direct input to and in-depth knowledge of Santee Cooper's resource planning principles and directions.

Santee Cooper proposes to create this group through statutory authorization and require that it interact directly with the Santee Cooper Board of Directors. The IRP Group members would serve terms equal to that of the Board of Directors and meet with staff and consultants as needed, with its activities funded by Santee Cooper. In addition, the IRP Group would meet at least annually with the Santee Cooper Board. The IRP Group meetings would be public and follow South Carolina's Freedom of Information Act laws to include public notice.

The IRP Group would advise Santee Cooper on resource planning principles and strategic direction. The IRP Group would be composed of the following 12 members, appointed by the chairperson of the Santee Cooper Board of Directors:

- 1 member from the Santee Cooper Board of Directors
- The requested membership of 2 members of the General Assembly, with 1 Senator recommended by the President of the Senate and 1 House Member recommended by the Speaker of the House
- 1 member representing residential customers recommended by the Santee Cooper Customer Advisory Council
- 1 member representing commercial customers recommended by the Santee Cooper Customer
   Advisory Council
- 1 member representing industrial customers recommended by our industrial customer association
- 1 member representing Central Electric Power Cooperative recommended by Central
- 1 member from the environmental community
- 1 member from economic development community
- 1 member representing municipal customers
- 1 member representing customers living below federal poverty guidelines
- 1 public member appointed to serve as chair, with significant utility industry background

Appointments shall be made in a way that assures the IRP Group is representative of all citizens of the State of South Carolina.

The IRP Group should consider whether Santee Cooper's resource plans adhere to the adopted planning principles and directions. At least every two years, the IRP Group would publish a publicly available report with a review and evaluation of said principles and directions with recommendations as appropriate to the Santee Cooper Board of Directors.

## C. Hearings for Major Construction Projects

Santee Cooper supports having greater transparency, accountability and public participation required in the process for approval of major generation and transmission resource projects. As such, it is proposed that Santee Cooper Board of Directors require management to conduct one or more public hearings for major capital projects involving generation of 125 MW or more or transmission at or above the 125 kV level. To align Santee Cooper with the requirements of the investor-owned utilities in the State who

undertake major construction projects, and recognizing technology advances resulting in reduced construction costs, it is recommended that these same thresholds be applied to investor-owned utilities.

The hearing must consider at least:

- · The need for the facility
- The location of the facility
- Any environmental impacts
- Conformity with state and local laws
- The interest of system economy and reliability
- Project timeline and costs

The hearing process would include provisions for public and customer notice similar to the notice provisions required in Section F below. Notice would also be provided to the ORS, and when considered appropriate by the Executive Director of the ORS. The ORS would have standing to intervene in the process for the purpose of providing input to the Board of Directors with respect to the proposed construction. The Board of Directors must provide a response to any input received and an explanation of their ultimate decision.

After the public hearing process is completed, if the Board of Directors has reached a decision by Resolution to construct a major capital project as defined above, that decision of the Board shall be transmitted within seven (7) days to ORS for review of project siting requirements with respect to customer impact and protection in ORS's consumer advocacy role. If no ORS objection is raised within 30 days after submission, the Board plan becomes final; however, if there is objection and recommendation by ORS within 30 days, the plan is returned to the Board for a public hearing. If the public hearing results in compliance with the ORS recommendation, the Board plan becomes final. If the public hearing results in non-compliance with the ORS recommendation, the specific ORS objection and recommendation with respect to siting requirements is referred to the PSC for consideration and decision; however, in that case the PSC would have plenary authority if it so chose to review the entire plan.

In summary, Santee Cooper understands the need for greater public input to and review of specific resource decisions and welcomes it.

## D. Pricing Principles and Metrics

Consumers generally focus on the total cost of their monthly bill, but a close review of any utility bill reveals a series of charges for various components of generating and delivering reliable electricity to a customer's meter. These various costs need to be allocated to customer loads according to economically sound and responsible principles.

To better inform customers going forward, Santee Cooper recommends that its Board of Directors follow a process to adopt and adhere to a set of Pricing Principles, subject to an annual compliance review by the ORS as outlined in Section E below.

The core Pricing Principles for Santee Cooper, adopted as part of this Reform Plan, are listed below:

- **Mission**: Limit price increases to less than inflation (10-year rolling system average price, normalized for customer mix), and maintain prices that are competitive in the region
- **Equity**: Allocate costs to specific customer classes in a reasonable, equitable and defensible manner (i.e. customer class returns should be nearly equal)
- Efficiency: Design prices so that conservation savings are shared with the customers
- **Financial Adequacy**: Provide sufficient revenue to preserve the financial integrity of Santee Cooper (long-term 'A category' or above) and comply with commitments to bondholders
- Notice: Ensure customer notice and engagement in rate proceedings (see Section F below)
- Protection: Allow reasonable relief mechanisms for financially distressed customers
- Transparency: Require openness in annual review of compliance with Pricing Principles

The Board shall engage a nationally recognized pricing consultant, reporting to the Board to assist it in this regard.

## E. Board Structural Changes

An experienced, subject-matter knowledgeable, and well-informed Board is critical to providing appropriate guidance and leadership to Santee Cooper. To ensure the application of multiple perspectives in critical decision-making, assure appropriate turnover, as well as engender diversity of background, the following Board structural changes are recommended:

- **Term Limitations:** Board members may serve no more than two full consecutive terms, applied prospectively to current members.
- Increased Qualifications: Consistent with legislative requirements for PSC members, members elected after conclusion of the Act 95 process must have a baccalaureate or more advanced degree from: (a) a recognized institution of higher learning requiring face-to-face contact between its students and instructors prior to completion of the academic program; (b) an institution of higher learning that has been accredited by a regional or national accrediting body; or (c) an institution of higher learning chartered before 1962. Further, members must possess a background of substantial duration and an expertise in at least one of the following: (a) energy issues; (b) consumer protection and advocacy issues; (c) water and wastewater issues; (d) finance, economics, and statistics; (e) accounting; (f) engineering; or, (g) law. Candidates remain subject to PURC review and approval.
- Require Designated Technical Advisory Experts: The Board will be required to annually retain nationally recognized experts in the following technical areas: (a) resource planning; (b) pricing; and, (c) finance. Prior to approving any general customer rate increase in excess of the annual rate of inflation, on a rolling multi-year system average basis, normalized for customer mix, the Board must obtain written affirmation from each of the designated experts that such decision is consistent with industry best practices and both appropriate and reasonable in light of existing circumstances.

## F. Annual Report to, and Review by, the Office of Regulatory Staff on Adopted Pricing Principles and Metrics

The ORS has unique expertise and skills to analyze, review, and comment upon Santee Cooper's pricing framework. To provide greater transparency and an annual opportunity for all stakeholders to better understand Santee Cooper's pricing, Santee Cooper recommends that it provide a "Pricing Principles

Compliance Report" each year to the ORS. After its review, the ORS shall be asked to publicly issue its review and comment on Santee Cooper's compliance report.

#### **G.** Codification of Pricing Process

In addition to consistently delivering reliable, efficient, and low-cost power, Santee Cooper desires to provide transparency in its rate-setting process. Santee Cooper recommends that the General Assembly codify a detailed public retail rate process that must be followed prior to increasing rates. Though Section 58-31-360 of the South Carolina Code, as amended, currently requires Santee Cooper to give all customers affected by a retail rate increase at least sixty (60) days' notice of such increase, the new statutory-based procedure will offer certainty, engagement, and participation in the decision-making process for Santee Cooper customers, legislators, and key stakeholders on matters that affect the quality, cost, and competitiveness of Santee Cooper's services.

This pricing process will also include provisions for a public hearing before the Board of Directors for ultimate approval or rejection of the proposed prices. Notice will also be provided to the ORS, and when considered necessary by the Executive Director of ORS and in the public interest, ORS shall have standing to intervene in the process for the purpose of providing input to the Board of Directors with respect to the proposed prices.

## **H.** Codification of Transparency Practices

Santee Cooper has already been livestreaming our Board of Directors and Board Committee meetings pursuant to budget provisos that will expire. We plan to continue that practice, and we propose that the General Assembly codify the requirements to guarantee increased transparency of committee and Board discussions and decisions. Santee Cooper has found that this requirement is helpful to those who may not be able to travel to meetings or have conflicted schedules and need to watch the proceeding later.

As part our Reform Plan, Santee Cooper will make agendas, livestreams and recorded videos of the meetings available on Santee Cooper's website. When Board members appear telephonically or electronically at special-called Board meetings, audio only will be presented if no Board members are physically present at the meeting.

We also propose including on the website documents scheduled to be presented at Board meetings. These documents will be uploaded prior to each meeting and continue to be made available after each meeting.

Codifying these actions will ensure Board committee and Board meeting materials, including archived videos and materials, are readily available to the public, without the public having to request them.

In addition, per Freedom of Information Act requirements, Santee Cooper will continue to make committee and Board agendas available on our website and upon request at least 24 hours before each meeting.

#### Summary

These proposed changes to our governance and oversight structure reflect our commitment to increased transparency and accountability while ensuring we do what is in the best interests of customers and the State. Santee Cooper's focus on strengthening its resource planning function will allow us to maintain

competitive pricing and remain the most reliable electricity provider in South Carolina. The Resource Planning and Pricing Principles have been adopted by our Board as a first step in creating the framework described herein. We recommend the General Assembly adopt legislation to codify and formalize the following to further implement our recommendations:

- The Resource Planning and Pricing Principles adoption processes
- Creation of the IRP Group, with legislative representation
- The Annual ORS Review of Santee Cooper's Pricing Principles Compliance Report
- Santee Cooper electric prices review process
- Board meeting transparency practices
- Board structural changes
- PSC review of major resource siting decisions

We stand ready to assist the General Assembly with drafting legislation as requested.

## 2. Updated Santee Cooper Proposals for CA Amendments

We greatly appreciate the opportunity presented by Act 95 to reform Santee Cooper and to improve the contractual and business relationship with Central. Santee Cooper has taken this unique process seriously, and we are committed to continue seeking solutions that meet the intended goals for all electric customers served by Central, Central's Members, and Santee Cooper while advancing State priorities.

The Santee Cooper Reform Plan in its entirety offers substantial benefits to the State, Central, and our retail customers. The Plan offers \$2.7 billion (present value) in operating and capital savings from a new Power Supply Roadmap, includes \$1.6 billion (present value) in debt service reduction over the "ICF business as usual" case, and provides a projected 12-13 years of price stability to our customers, while advancing State clean energy initiatives.

These financial savings are captured without impacting reliability, economic development, or the numerous benefits of the Coordination Agreement (CA). In fact, the Plan leverages the public power business model, and the aligned missions of Central, Central's Members, and Santee Cooper to achieve the improvements, for the benefit of all.

In addition to the projected financial savings, Santee Cooper has proposed changes to the CA which are contemplated to improve our relationship and bring about even more meaningful changes. One such proposal revamps the committee and planning structures to align the CA with the provisions of the IRP process included in Act 62. These proposed changes provide Central with ongoing involvement in the process and give Central the ability to influence decisions as the Reform Plan is reviewed, modified and implemented in the future, and they provide the State and public with the opportunity for greater input in a more transparent process.

However, our discussions with Central and your written proposals over the past few weeks indicate a desire from Central and/or your Members to have more optionality moving forward. As shown by the attachment to this proposal, we have made good faith proposals to attempt to provide the requested flexibility while preserving the benefits of the current business relationship. We offer the following potential amendments to our prior responses. The terms proposed in this supplement are subject to a definitive written agreement, following appropriate vetting with Central and its Members, and Board approvals.

## **Term** Updated Santee Cooper Proposal for Consideration:

Santee Cooper proposes to shorten the deferral of the earliest effective termination date by five years to December 31, 2053. (There may be minor implications for prices. See paragraph 4 of this section.) Santee Cooper also proposes to work with Central to achieve conditions that enable us to further shorten the deferral to December 31, 2048 in the future.

Our proposed approach balances (a) Central's desire to be able to terminate the Coordination Agreement as early as December 31, 2048, (b) potential impacts on Santee Cooper's ratings and cost of capital and (c) the risk of inequitable cost shifts to our retail customers.

Approximately \$1.5 billion of Santee Cooper's existing debt matures beyond 2048. If Santee Cooper does not restructure or pay-off this debt, and if market conditions are unfavorable, it is possible Santee Cooper's retail customers could be subjected to a 20% rate increase following 2048, associated with assuming Central's share of the debt service. Restructuring (front-loading) this amount of debt prior to 2048 in an unfavorable interest rate environment would be possible, however it could incrementally raise all customers' rates (including Central's) by over 10%. Santee Cooper cannot willingly transfer this magnitude of risk to any of our customers.

Our proposed 2053 termination date significantly reduces the amount of debt that would need to be restructured. Santee Cooper feels reasonably confident that it can restructure this debt to amortize before the proposed 2053 termination without outsized impact on any of our customers (including Central and retail) and this would also significantly mitigate the risk of an adverse credit rating outcome. In our earlier proposal we had requested that we work collaboratively, through the reconstituted Joint Planning Committee (JPC), to determine the appropriate timing and interest rate conditions for the financing. We still propose and hope for this collaboration but are willing to reduce the termination deferral to 2053 immediately, even though there may be minor price implications.

We will also agree to shorten the deferral to December 31, 2048 provided we have successfully restructured the existing debt to mature before 2048, or if Central commits to a debt buy-out payment equal to its current load ratio share of the applicable debt (and associated buyout and escrow costs) and provides adequate assurance of performance. Debt refinancing to shorten the term and a debt buyout payment can work in tandem. Additionally, based on market conditions and economics, Central may choose a date between December 31, 2048 and December 31, 2053, subject to satisfying the conditions. The debt buyout approach will have to be carefully designed and implemented to ensure fair allocation in the context of the CA and for favorable rating agency treatment. This proposal would not change the 10-year notice period required for termination under the Coordination Agreement.

We believe through collaboration with Central, we can opportunistically refinance debt to shorten its maturity and provide Central the shorter deferral of termination it seeks. In our December 19, 2019 response we offered to tailor hedging strategies to the different load profiles and risk tolerances of individual Member Cooperatives. Santee Cooper is similarly willing to tailor the CA term by individual Member Cooperative.

You have accurately pointed out that we have recently had debt extending beyond the term of the CA. However, unlike the past circumstances, the current debt associated with the Combined System was rated and issued with a final maturity that was within the term of the CA. Based on input from our financial advisors, Santee Cooper cannot prudently agree to further shortening of the termination deferral without satisfying these conditions because of the potential impacts on our credit ratings, investor relations, and the cost of capital both Central and Santee Cooper retail customers would be required to pay.

Associated with shortening the term to 2053 or 2048, any limitation on Santee Cooper serving municipal or other load would be eliminated.

## Distributed Energy Resources

## Updated Santee Cooper Proposal for Consideration:

We agree with Central in that "the energy landscape is rapidly evolving" and also agree that the terms of the CA should be modified to allow for flexibility to all customers. Central's original and latest proposal is to unilaterally increase the cap for Central's Distributed Energy Resources (DER) to 10% of Central's peak demand, subject to an annual incremental limit of 2% to allow for planning.

Our latest offer was to double the caps for both Central (3% of monthly coincident peak demand) and Santee Cooper's alternative purchases (to 20 MW). This offer was not to constrain the development of DER, but to ensure there were no unintended cost shifts while freeing up significant space for the development of DER.

Santee Cooper is agreeable to removing the caps, and simply relying on the avoidance of cost shifts to allow for prudent development of DER. The removal of the caps will require both Parties to, through the reconstituted

JPC, jointly develop reasonable guidelines and programs which recognize the benefits and costs to the systems of DER. This will require the Parties to develop protocols, agree on siting of distributed resources to ensure reliability, and finalize rate treatments to ensure there are no cost shifts. These issues must be addressed in advance of significant proliferation of DER.

#### **Transmission Assets**

## <u>Updated Santee Cooper Proposal for Consideration:</u>

As we have previously stated, Santee Cooper is willing to analyze transmission ownership options and associated impacts on customer costs with Central within a reasonable time following the resolution of the Act 95 process if the Santee Cooper Reform Plan is selected.

However, it is not feasible to undertake such a detailed analysis in the time frame afforded by Act 95. The potential sale of the transmission system is not allowed under current State legislation and would require significant analysis to understand the potential for, and impacts of, surrendering the grandfathered FERC status of serving the Combined System under the CA, new OATT processes and services applicable to both Central and Santee Cooper, new and potentially changing rates and rate calculation methodologies, implications under the Bond covenants, potential changes in the terms of services, changes in management of the proposed interconnections to the combined system, operations and maintenance of the system and all implications related to compliance with NERC Reliability Standards. In other words, while we are willing to address this issue in the future it is by no means a simple one and great care should be taken by both Parties in doing so.

# Reform Plan Resources

## <u>Updated Santee Cooper Proposal for Consideration:</u>

Santee Cooper's Reform Plan and subsequent proposals to Central have been driven by the expectation that it would be in the best interests of retail customers served from the Combined System and the State for Santee Cooper and Central to collaborate in refining and implementing the Reform Plan. To that end, Santee Cooper proposed a future in which Central and Santee Cooper would jointly prepare future IRPs through the JPC and the Planning Coordination Group, make decisions together as to implementing all future resources, and jointly participate in the new State oversight processes. We have already taken the initial step of announcing the planned retirement of our Winyah Generating Station and the Parties need to start working together on implementing the roadmap as soon as the Act 95 process allows.

In order to initiate the retirement of Winyah, which is consistent with Central's stated desires, the addition of two 50 MW combustion turbines is required in the area to ensure reliability. Therefore, we propose combustion turbines be treated either as Shared Resources or Pooled Non-Shared Resources under the CA. Planning for the future resources necessary to replace Winyah and to meet additional customer needs would be the responsibility of the reconstituted JPC and designed to achieve economies of scale and a least cost structure for the Combined System and, therefore, all customers.

The proposed structure of the JPC and the associated coordinated planning included in the Santee Cooper Reform Plan aligns the process under the CA with the requirements of Act 62. Santee Cooper is not proposing that Central waive its "opt-out" rights but that such rights are enhanced through a reconstituted JPC and through alignment with the Act 62 IRP process that we would jointly conduct. Central's rights under the CA to identify Designated Delivery Points to move load to another BA would also fall under this reconstituted JPC and associated Act 62 public process. While energy only resources such as solar don't trigger "opt-out" rights, it is critically important that such resources are coordinated through the JPC to maximize the benefits for all.

The overarching goal of these changes is to fulfill the missions of Central and Santee Cooper to benefit our customers and the State. We view these coordinated planning functions, with significant contributions by Central staff, to be steps towards, not away from, rebuilding trust.

The Act 95 process also contemplates stipulated Central load, and all bids should be compared using this load forecast. Notwithstanding that basis for proposals, Santee Cooper has attempted to devise a way to preserve both Central's "opt-out" rights and the economies of scale reflected in the Reform Plan.

Improved Communications/ Energy Risk Management

## Restated Santee Cooper Proposal for Consideration:

Our December 19 offer included the request for a regular cadence of meetings between Central, Central's Members, and Santee Cooper. The intent of these meetings is to re-establish and maintain a meaningful and effective relationship. We again seek the reinstitution of quarterly Partnering

Meetings with Central and the Member Cooperatives, as well as monthly executive level meetings with Central Staff. We request the initial Partnering Meeting be scheduled immediately following submittal to the General Assembly to allow for meaningful discussion of the Reform Plan.

Furthermore, we request the ability to attend appropriate portions of Board of Trustee Meetings to better understand the challenges facing Central and your Members.

Our December 19 response also included the topic of energy risk management to further support Central and its Member Cooperatives. We believe this could be a valuable service and continue to offer it as part of our Reform Plan.

# **Summary of Communications Between Central and Santee Cooper**

**Act 95 Process** 

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	Central Proposal Santee Cooper Proposal Santee Cooper Proposal			Central Proposal
	December 4	December 6	December 19	December 23
TERM	- Request for consideration and proposed term reduction from S/C	<ul> <li>Proposed structure for term reduction</li> <li>Collaborate to restructure debt to match term reduction, or</li> <li>Central assumes portion of debt beyond such date</li> </ul>	<ul> <li>Outright reduction of 2 years</li> <li>Shorten additional 3 years by restructuring debt</li> <li>Restructuring would mitigate significant cost shift to retail customers and adverse credit rating action</li> </ul>	- Outright reduction of 10 years
DISTRIBUTED ENERGY RESOURCES	<ul><li>10% cap in CA (increased from 1.5%)</li><li>2% annual incremental limit</li></ul>	<ul> <li>New JPC is appropriate venue to work together to implement DER and accurately capture benefits</li> <li>Nominated load under Act 95 process is foundation</li> <li>Load changes resulting from</li> </ul>	<ul> <li>Doubled cap for Central to 3%</li> <li>Doubled cap for Santee         Cooper to 20 MW     </li> <li>Work together through JPC to develop rate treatments to capture benefits</li> </ul>	<ul> <li>10% cap in CA (increased from 1.5%)</li> <li>2% annual incremental limit</li> </ul>
		DER should impact all proposals similarly		
TRANSMISSION ASSETS	- Requested S/C study sale of transmission system to lower debt and resolve other liabilities	<ul> <li>Benefits not seen in initial consideration</li> <li>Precluded from selling as all bids submitted</li> <li>Agree to evaluate following Act 95 process to benefit all customers</li> </ul>	<ul> <li>Studying not feasible under Act 95 schedule</li> <li>Commit to analyze options and impacts following Act 95 if Reform Plan is chosen</li> </ul>	<ul> <li>Seeking stronger level of commitment</li> <li>Requests preliminary analysis of costs and benefits</li> </ul>
ACT 62 OVERSIGHT			<ul> <li>Work together to file IRP required by Act 62</li> <li>By JPC through Resource Planning Group</li> <li>Public process</li> <li>Support legislation for SEO review and comment</li> <li>SEO comments received to be implemented by JPC</li> </ul>	

<sup>\*</sup> The descriptions outlined above are not intended to capture every aspect of the proposals, but are consolidated to capture the highlights of the proposals

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# Summary of Communications Between Central and Santee Cooper

Act 95 Process

	Central Proposal December 4	Santee Cooper Proposal December 6	Santee Cooper Proposal December 19	Central Proposal December 23
REFORM PLAN RESOURCES			<ul> <li>Treat combustion turbines as Shared Resources</li> <li>Treat combined cycle resources as Shared Resources or Pooled, Non- Shared Resources</li> <li>Treat solar and storage resources as Shared Resources or Pooled, Non- Shared Resources</li> <li>Siting of solar and energy storage collaboratively</li> </ul>	- Unwilling to waive previously negotiated opt out rights
ENERGY RISK MANAGEMENT			<ul> <li>Refine natural gas and purchase power hedging strategies</li> <li>Tailor to individual Member Cooperatives</li> <li>Could be aggregated to Central for allocation</li> </ul>	
COMMUNICATION			<ul> <li>Quarterly meetings with Member Cooperatives</li> <li>Monthly executive level meetings with Central</li> <li>Attendance of appropriate portions of Board of Trustee meetings</li> </ul>	
GENERAL REFORM PLAN	<ul> <li>Central expressed general favorable review of the Santee Cooper Reform Plan during the December 3 meeting</li> </ul>			

<sup>\*</sup> The descriptions outlined above are not intended to capture every aspect of the proposals, but are consolidated to capture the highlights of the proposals

## 3. SANTEE COOPER'S BOARD APPROVED REFORM PLAN HIGHLIGHTS

## **RESOURCE AND ECONOMIC FACTORS**

- 1. 7% projected average system rate increase withdrawn, replaced by 7 years of rate stability
- 2. 10% staff reduction from 2017 level
- 3. Principal debt reduction of \$1 billion (average) every 5 years for the next 20 years
- 4. 1500 MW increase in solar energy, addition of 200 MW battery storage
- 5. Substantial reduction in coal generation with closure of Winyah station by 2027
- 6. At least 150 MW of demand-side conservation programs by 2027
- 7. 43% reduction in carbon emissions from 2005 levels
- 8. \$2.7 billion present value reduction in costs over next 20 years
- 9. \$1.6 billion reduced debt service costs over ICF "business as usual" case
- 10. Debt leverage ratio reduced to 68% by 2026, lowest in 40 years

## **ACCOUNTABILITY AND TRANSPARENCY REFORMS**

- 11. Establishes an Integrated Resource Planning (IRP) Group with legislative representation
- 12. Adoption of Resource Planning Principles publicly reviewed by the IRP
- 13. Expanded public hearing process for siting of major generation (125 MW) and transmission (125 KV) capital projects, backstopped by ORS review and PSC oversight
- 14. Adoption of Pricing Principles to govern rate setting and ensure equity
- 15. Annual Pricing Principles compliance review by ORS
- 16. Codification of pricing process consumer protections
- 17. Codification of Board transparency in open meetings with livestreaming and archiving
- 18. Prospective 2 full term limitation for Board members
- 19. Increased Board member qualifications commensurate with PSC
- 20. Requiring designated advisory technical experts in resource planning, pricing, and finance with expert affirmation for price increase above rate of inflation

## **CENTRAL BENEFITS AND PROVISIONS**

- 21. 12 years of price stability beginning 2015
- 22. Immediate 5-year reduction in term (there may be minor price implications) of Coordination Agreement (CA) with potential for additional 5-year reduction after debt buyout or restructure and removal of municipal service limitation
- 23. Ability to tailor services directly to individual Cooperatives, including hedging strategy
- 24. Agreement to remove all caps in the CA for solar energy in a manner avoiding cost shifts
- 25. Willingness to further analyze transmission ownership. Under the CA, Central's right of first refusal to purchase a portion of transmission upon system sale already exists.
- 26. Ensuring reliability by treating two proposed 50 MW combustion turbines as Shared Resources or Pooled Non-Shared Resources for benefit of the entire system
- 27. Reconstitute the CA Joint Planning Committee to work collaboratively in implementing the Power Supply Roadmap, aligning this process to jointly meet the requirement of Act 62 to produce a public Integrated Resource Plan
- 28. Continue the many benefits Central enjoys under existing CA (private letter ruling for tax exempt treatment, grandfathered transmission under FERC, trunked radio system, etc.)

- 29. Improved Communications by reinstituting quarterly Partnering meetings immediately following Reform Plan submittal to General Assembly; establishing monthly executive level meetings between staffs; and ability to attend each other's Board meetings.
- 30. Santee Cooper requests the immediate opportunity to present the Reform Plan to Central's members

## **CONCLUSION**

We deeply appreciate, and have embraced, the opportunity offered by the General Assembly to undertake a critical self-examination. Santee Cooper shoulders its share of blame for the V.C. Summer Units 2 and 3 mess, apologizes therefor and thus humbly submits the Governance reforms contained herein. With that being said, there is tremendous value to South Carolina in Santee Cooper's operations. We have new management, a new and dramatically improved direction, an award-winning group of employees who had nothing to do with V.C. Summer Units 2 and 3, fine community support, reliability, and economic development records, low-cost, bulk service to the Cooperatives, water supply and management operations that strongly benefit the state, and physical assets that extend into all 46 counties in South Carolina. There are many dividends received by the public from the operations of this enterprise. A reformed Santee Cooper stands ready, prepared to bring an even brighter future to the people of South Carolina.