

December 18, 2013
State Regulation of Public Utilities Review Committee
Energy Advisory Council (EAC)
Room 110, Blatt Building.

1.866.522.SACE
www.cleanenergy.org

P.O. Box 1842
Knoxville, TN 37901
865.637.6055

34 Wall Street, Suite 607
Asheville, NC 28801
828.254.6776

250 Arizona Avenue, NE
Atlanta, GA 30307
404.373.5832

11 W. Park Avenue
Savannah, GA 31401
912.201.0354

P.O. Box 1833
Pittsboro, NC 27312
919.360.2492

P.O. Box 50451
Jacksonville, FL 32240
904.469.7126

P.O. Box 13673
Charleston, SC 29422
843.225.2371

The Southern Alliance for Clean Energy (SACE) appreciates the opportunity to provide written comments regarding the Distributed Energy Resources Initial Draft Report. As a regional entity with over 25 years of experience in clean energy advocacy, SACE provides a unique perspective in evaluating the strengths and weaknesses of clean energy policies and regulations. We work on a range of issues throughout the southeast and are excited for the increasing interest and attention being given to distributed energy resources in South Carolina.

We applaud the Energy Advisory Committee (EAC) for the time and effort that has gone into the Draft Report. Solar and other distributed technologies are a booming industry across the country due to rapid price reductions, business innovation, and consumer and political interests. The report will be a valuable resource for regulators, legislators, and citizens in developing informed perspectives on distributed energy in South Carolina. In particular, the recognition for the need to better understand the benefits and costs of distributed generation is a critical component of the report and a vital step for South Carolina. SACE is encouraged by the emphasis on this fact, and we'd like to reiterate the importance of conducting these analyses in an open and transparent process.

That said, SACE does have several recommendations – outlined below - that revolve around the need for greater context on key subjects, including: penetration levels; net metering and interconnection standards; and third-party financing.

Context for Penetration Levels

As stated prominently at the beginning of the “How to Use this Report” section, considerations for distributed generation penetration levels weigh heavily on just about every section in the report. The reader is told that “lower penetration” levels will – for the most part - work within the utilities current operations and electric rate structures. The transition point, to “higher penetration” levels, is where operational challenges and cost shifts become so high that major technical and business model changes are required. The report goes on to say that these transition points are subjective to the different utility systems and without utility-specific studies it's impossible to identify where those points will occur with any “precision.”

SACE agrees that additional research is needed in this area, but readers should be given greater context as to where South Carolina and its incumbent utilities currently fall on a general penetration “continuum.” The report only provides a few statistics on national solar capacity and projections, and also an example of a “higher” penetration level in Kauai, where 6% of current annual electricity needs are met with solar and the goal is to have 20% by 2023. Where does South Carolina stand in comparison to this?

At the end of 2012, South Carolina had about 4.6 MW of installed PV capacity.¹ It would be helpful to know the capacity and percentage of peak demand that PV currently accounts for within each South Carolinian investor-owned utility and rural cooperative (aggregated) territory. Further, the reader should know whether these utilities have experienced any notable challenges – budgetary or operationally – with those capacity levels to date. For example, PG&E (California) has over 800 MW of distributed PV on their system, with several circuit feeders having over 10% PV penetration – and at least one over 60%.² As PG&E states for their system overall, “currently, DG penetration is low at about 5% of system peak,” and “system impacts are manageable.”

To further this point, the authors should consider including a comparison and evaluation of surrounding states, and their experience and penetration levels with distributed generation. North Carolina has over 300 MW of PV capacity installed today³, Florida has about 125 MW⁴, the Tennessee Valley Authority (TVA) has 124 MW (operating or committed)⁵, and Georgia is on track to have nearly 800 MW over the next several years.^{6,7} These levels are considered “low penetration,” despite being an order of magnitude larger than South Carolina’s capacity.

In summary, a snapshot is provided on numerous aspects of distributed generation with the exception of South Carolina’s current status. Understanding where South Carolina’s market currently is, if (and how) its presented any challenges for utilities, and a comparison to markets with more experience, would give the reader substantially more perspective in assessing the urgency of what’s needed and when.

Context for Net Metering and Interconnection Standards

Net Metering

There is a fair amount of discussion on net metering in the report, and the potential issues it raise under the current utility business model. There is also a discussion of its pros and cons, and a chart that compares some of the basic features between South Carolina utilities. However, the report limits the reader’s perspective by not providing a comparison to other states, particularly those that have larger solar markets. The U.S. Energy Information Administration (EIA) reports that South Carolina currently has about 1.2 MW of net-metered PV capacity, ranking it 42nd in the country.⁸ This statistic signals that there are market barriers in South Carolina, rather than enablers, relative to some other states with net metering. Such a comparison is warranted, given net metering is a policy intended to promote solar development.

¹ Interstate Renewable Energy Council, *U.S. Solar Market Trends 2012*. July 2013. Found at: <http://www.irecusa.org/wp-content/uploads/2013/07/Solar-Report-Final-July-2013-1.pdf>

² Yip, Andrew. Pacific Gas and Electric Company (PG&E). *PG&E High Penetration Solar PV: Current Status and Research*. Presentation found at:

http://www1.eere.energy.gov/solar/pdfs/highpenforum2013_1_5_pge.pdf

³ Solar Energy Industries Association (SEIA). North Carolina Solar page. Found at:

<http://www.seia.org/state-solar-policy/north-carolina>

⁴ SEIA. Florida Solar page. Found at: <http://www.seia.org/state-solar-policy/florida>

⁵ Tennessee Valley Authority. Fact Sheet: TVA Solar Growth. Found at:

<http://www.tva.com/news/releases/julsep13/Fact%20Sheet%20-%20TVA%20Solar%20Programs.pdf>

⁶ WSJ. Found at: <http://online.wsj.com/article/PR-CO-20130918-909250.html>

⁷ It should be noted that not all of these capacity amounts are or will be connected at the distribution level.

⁸ U.S. Energy Information Administration. Form EIA-826 Detailed Data. Monthly release, November 2013, for September 2013 data. Found at: <http://www.eia.gov/electricity/data/eia826/>

Interconnection

The report highlights the importance of “managing the integration of solar systems into the utility grid in a way that adequately addresses the needs of all parties involved,” yet there is very little discussion on South Carolina’s current interconnection standards, and/or how these compare to other states or federal guidelines. The interconnection of distributed generation resources is an important element in the current electricity system, and will be critical to the “future paradigm” described in the report. It represents cost and safety considerations that should not be overlooked. As such, the reader should be given greater detail into South Carolina’s current interconnection standards as they relate to distributed generation, including how (or whether) they differ by utility. In addition, it would be helpful to see a comparison of South Carolina’s standards relative to neighboring states as well as national leaders in distributed generation development. Finally, there should be a focus on the Federal Energy Regulatory Commission’s (FERC) recently published Small Generator Interconnection Procedures and Agreements (SGIPs and SGIAs)⁹ and how those compare to South Carolina.

Context for Third-Party Financing

As with the above discussions, the report would benefit from a greater national look at third-party financing. This form of financing – allowed in at least 22 states and Washington, DC - has accelerated solar development across market sectors.¹⁰

- In the residential sector, third party ownership financing accounted for over 50% of all new residential solar installations in most major U.S. residential markets 2012.¹¹ By reducing or eliminating upfront costs while also removing the complexities and burdens of ownership, third party financing is expanding solar adoption to younger, less affluent and less educated populations.¹²
- For years it has been a financing vehicle for large and small commercial businesses that have increased interest in incorporating solar systems (and other renewable systems) at their retail centers, warehouses, and manufacturing facilities. As of mid-2013, cumulative commercial deployment totaled 3,380 MW at over 32,800 facilities throughout the country, an increase of more than 40% over last year.¹³
- Finally, entities that are unable to monetize tax credits, such as Federal, state and local governments, as well as churches and non-profits, have leveraged third-party financing to improve the economics of generating solar energy. Military institutions in particular, which have aggressive renewable energy

⁹ Federal Energy Regulatory Commission. Generator Interconnection. Found at:

<http://www.ferc.gov/industries/electric/indus-act/gi.asp>

¹⁰ Database for State Incentives for Renewables and Efficiency (DSIRE). 3rd Party Solar PV Power Purchase Agreements. February 2013. Found at:

http://www.dsireusa.org/documents/summarymaps/3rd_Party_PPA_map.pdf

¹¹ Solar Energy Industries Association (SEIA) and GTM Research, “U.S. Solar Market Insight 2012 Year in Review,” at: <http://www.seia.org/research-resources/us-solar-market-insight-2012-year-review>

¹² Drury, E., et al. “The Transformation of Southern California’s Residential Photovoltaics Market Through Third-Party Ownership.” January, 2012.

¹³ SEIA and Vote Solar. Solar Means Business 2013. Found at: <http://www.seia.org/research-resources/solar-means-business-2013-top-us-commercial-solar-users>

mandates and currently over 130 MW of PV on domestic bases, have a strong interest in utilizing third party financing.¹⁴

In summary, SACE is grateful for the opportunity to participate in this public process and recommends the report would benefit from including a greater level of context around key issues, including: penetration levels; net metering and interconnection standards; and third-party financing.

Thank you,

Charlie Coggeshall
Renewable Energy Manager
Southern Alliance for Clean Energy

¹⁴ SEIA. Enlisting the Sun. Powering the U.S. Military with Solar Energy. May 2013. Found at: <http://www.seia.org/sites/default/files/resources/FINAL%20Enlisting%20the%20Sun%20Fact%20Sheet%20-%205.15.13.pdf>