Recommendations to Address Barriers To Energy Efficiency

Summary Report

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The members of the Energy Efficiency Workgroup recognize that the increased adoption of energy efficiency measures is a critical component of a comprehensive energy policy for North Carolina that limits environmental impacts, stimulates job growth and economic development, promotes domestic energy security and minimizes costs to consumers. To be effective, such a comprehensive energy policy must also consider the development of renewable energy resources, low-carbon baseload power generation, clean transportation and other technologies that modernize the production, delivery, and use of energy, and it must be responsive to the needs and priorities of the diverse groups of stakeholders in North Carolina.

The following recommendations of the Energy Efficiency Workgroup are being submitted to the Energy Policy Council for further consideration and deliberation. These recommendations may not reflect the endorsement of individual policies by members of the Workgroup or their representative organizations without additional information regarding specific plans to implement the policies as part of a comprehensive set of energy policy recommendations that satisfies the needs of the respective stakeholders. These recommendations may take the form of policy, executive order or administrative directive.

INFORMATION AND EDUCATION

- ***Problem:***

  Most consumers face a lack of information or evaluation mechanisms, are misinformed or misunderstand the benefits of energy efficiency (e.g., personal impact, environmental improvements), or choose to place a lower priority on energy efficiency investments.

1. Provide consumers access to multiple forms of information to educate/engage consumers on energy consumption and energy saving behaviors and technologies

- Include a reference or link on utility bill to access information on where energy used comes from by fuel type (e.g., how much energy comes from renewable, coal-fired, and/or nuclear generation) -- the State Energy Office could host a website with this information or provide links to EPA or utility websites with this information.

- Provide information on where a user can address and/or reduce energy consumption and the associated benefits and support the development of technologies that allow customers to see what on their premises is driving their consumption (sub-metering or bill disaggregation).

- Support the development of smart energy infrastructure.
- Educate consumers on all rate schedules available and encourage them to adopt the most cost-effective rate schedule for their use patterns.
- Identify areas where both utility and non-utility involvement in education and awareness creates a recognizable benefit and allow utilities and non-utilities to earn incentives on those efforts.

2. **Adopt an energy efficiency rating system for buildings (including residential buildings), possibly to be reflected at the time of sale or signing of a lease agreement. Note - this policy option would significantly motivate homeowners to learn about energy efficiency, but would require multiple years to accumulate significant impact**

3. **Require facilities within the public sector with annual utility budget greater than $2M to have an energy consultant/manager on staff.**

4. Provide a clearinghouse where facility managers and consumers can go to review energy assessments conducted by other facilities or homes, assess their energy consumption, potentially obtain guidance or recommended measures to reduce their energy use and energy costs, and receive information on new technologies and products

5. Ensure the ability to easily and securely share customer billing data with third-party energy service providers with the permission of the customer.

FINANCING, COSTS, & RETURN ON INVESTMENTS

Problems:

- Energy efficiency investments are limited by initial and on-going financing options, scarcity of capital, and poor valuation of energy efficiency measures (e.g., resale value).
- Financial industry has yet to embrace a robust set of financing options for energy efficiency investments. They're not currently equipped to deal with the complexity of this financing because they do not yet have scalable investment models or a robust set of performance data for these loan types upon which to base terms and pricing.
- There is not a rating structure for energy efficiency investments (EE and environmental rating would provide a rational means for investment; we need a benchmark for investment)
- Consumers can be hesitant to adopt energy efficiency measures because products and services continue to evolve, enter and be tested in the market place.

1. **Allow utilities the option to provide customers to finance energy improvements through a charge on their bill. Increase the financial attractiveness to the lending community of this on-bill financing with non-pay disconnect applied and possibly capitalizing loan losses as regulatory asset on utility's balance sheet. Allows loan rate to be lowered to point that it becomes cash-flow positive for customer. [Private capital would come from banks with utilities having a non-pay disconnect.]**

2. **Funding and management of weatherization and state and public EE programs**

Programs to be Funded (prioritized list):

a. Weatherization (robust recurring funding)
b. Training and Certification Programs
c. Increase public awareness about energy efficiency benefits through K-12 curriculum development and deployment, public service advertising campaigns.
d. State and Local Public Buildings
e. Establish an energy efficiency rating system for buildings, possibly to be reflected at the time of sale or signing of a lease agreement.

f. Require State facilities within public sector with utility budget greater than $2M to have an energy consultant/manager on staff, or provide a clearinghouse where they can go to review energy assessments conducted by other facilities, assess their energy consumption, and potentially obtain guidance or recommended measures to reduce their energy use and energy costs

g. Some Low-Income Oriented Programs

h. Funding mechanism for landlords to implement EE measures.

Funding Mechanisms:

- Federal Grants
- Tax
- Public Benefits Charge
- Performance Contracting
- Bond Referendum
- White Tags
- Tax Credits

Administration:

- Combination of third-party and utility-managed
- Utility-Managed
- Third-Party

3. Enact energy efficiency tax credit similar to federal energy efficiency tax credit.

4. No state income taxes on incentives that utilities receive for energy efficiency so that no tax gross-up is required for collections from customers to fund those incentives.

5. Designers should get tax credit on energy efficiency and have ability to pass credit along to public sector owner.

LAW & REGULATION

Problems:

Investor-owned utilities are compensated based on investments in infrastructure and revenue is generated from retail sale of energy; efficiency incentive models have been approved, however they are in their infancy. Additionally, their effectiveness is still in question among some North Carolina stakeholders due to ongoing litigation of programs and cost recovery, and the potential reopening of incentive components after dollars have been spent.

State regulation and approval processes can be time consuming and do not allow utilities and other players to optimally forge partnerships, explore fuel-switching, and bring energy efficiency products and services to market quickly.

Because there is no holistic vision of where policy makers want the state to go on energy efficiency, North Carolina risks a patchwork of policies with no overarching goals.

Limited resources can lead to suboptimal enforcement of building energy codes.

1. Create a separate energy efficiency resource standard (EERS) with the following characteristics:

•The EERS is separate from the NC REPS; although electric cooperatives and municipal service providers may continue to meet renewable energy requirements through energy efficiency measures

•A regular review - and possible revisions - of the energy efficiency target (e.g. 3-5 years) based on actions taken by the state or policies adopted by the state (e.g., building codes, appliance standards)

•The EERS may be met through energy efficiency measures from electric and natural gas utilities and other stakeholders (e.g. third-party stakeholders)

•Utility rewards to be increased to reflect higher degree of risk and accountability associated with meeting targets, as well as responsibility of maintaining reliability or alternative compensation models

•Determine method for compensating a different utility, i.e. gas, or electric, for lost revenue when an EE program from one utility causes the other to lose revenue. (energy efficiency crossover)

•Create a regulatory environment where utilities (i) revenue is not solely linked to retail sales, (ii) are compensated for revenue lost through energy efficiency measures, (iii) have energy efficiency performance targets and receive performance incentives, and (iv) have the incentive to maximize energy efficiency before they build new infrastructure.

•Set statutory time limits for review and approvals by Commission and Public Staff and provide adequate resources to the Commission and Staff to meet statutory time limits.

2. Expedite the approval of energy efficiency in state government:

• Allow high level approval of an energy efficiency portfolio as opposed to program-by-program approval and back-end verification at portfolio level of achieved savings
• Streamline or expedite approval for performance contracting in NC.
• Provide fast-track permit process for buildings built to high-performance standard in commercial or residential sectors

3. Adopt state laws and regulations that promote energy efficiency:

• Increase building energy code by 30% by 2012; enhance code enforcement and compliance to reach 90% compliance by 2015. For example, combine private market efforts with public inspections to address limited enforcement of building codes and adequately fund and train building inspectors to enforce building energy codes.

• Revise state emissions standards to be based on energy efficiency (e.g. output-based standards) as opposed to emissions standards based on unit of fuel consumed.

• Policy for Adopting Full-Fuel-Cycle Analyses Into Energy Conservation Standards Programs

4. Further incentivize the purchase of efficient appliances.

5. Similar to the University Savings and Reinvestment Act, if a public entity/institute saves energy, they retain the savings (funds) and must reinvest those monies in additional energy efficiency measures.

6. Structure capital projects (state government projects) to cover maintenance on major equipment to assure continued efficient operation.