



Comments of
CITIZENS FOR PENNSYLVANIA'S FUTURE (PENNFUTURE)
at the
Pennsylvania Public Utility Commission's
En Banc Hearing
on
ALTERNATIVE ENERGY, ENERGY CONSERVATION AND EFFICIENCY, AND
DEMAND SIDE RESPONSE

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By

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Good Afternoon, Chairman Cawley, Vice Chairman Christy and Commissioners of the Pennsylvania Public Utility Commission. I thank you for the opportunity to participate in this public hearing on Alternative Energy, Energy Conservation and Efficiency, and Demand Side Response. My name is Courtney Lane and I am a Policy Analyst at PennFuture's Center for Energy, Enterprise and the Environment.

PennFuture is a statewide public interest membership organization, working to enhance Pennsylvania's environment and economy, with offices in Harrisburg, West Chester, Philadelphia and Pittsburgh. PennFuture has been working to promote the development energy efficiency and demand side response through involvement in the Commission's demand side response working group, and in the legislature, advocating for the passage of now Act 129.

My goal today is to address the questions posed by the Commission regarding the implementation of Act 129 and to provide overall recommendations for the development of a robust and cost-effective portfolio of energy efficiency programs based on best practices in states across the U.S.

1. CONSERVATION SERVICE PROVIDERS

Minimum Qualifications

Given the timeframe for the development of energy efficiency and conservation plans, it is clear that Conservation Service Providers (CSPs) will be used to help implement programs. It is also evident that a goal of Act 129 is to promote competition and growth in the energy efficiency and conservation sector through the requirement that an electric distribution company's (EDC) energy efficiency and conservation plan include a contract with at least one or more CSPs to implement the plan or a portion of the plan. It is therefore important that the Commission provide some vetting when creating a list of registered CSPs but not unduly restrict new market entrants.

Texas struggled with this issue when developing protocols for its energy efficiency portfolio standard. The Texas Public Utility Commission decided that requiring energy efficiency service providers to meet excessive requirements would unduly limit the number of eligible providers and impair competition in the energy efficiency market. The state therefore decided to adopt a set of basic criteria that a provider must demonstrate: 1) evidence of financial strength and capability; 2) demonstration of professional experience; 3) proof of all necessary insurance; and 4) a performance bond.

PennFuture also advises the Commission to avoid having requirements for specific experience and qualifications in order to be listed in the registry as there will be different requirements across different types of programs. For example, in Massachusetts for one program alone they have four separate contractors: one for retailer outreach, one for marketing, one that handles rebate fulfillment and one that installs equipment. Obviously each of these contractors will have a different set of qualifications and experience based on their expertise.

In order to address this issue, PennFuture recommends that the majority of vetting for CSP experience and qualifications be left up to the EDC during their request for proposals (RFPs) and bidding process. PennFuture recommends that the Commission and EDCs look at the current

RFPs being issued by NYSEERDA (New York State Energy Research and Development Authority) as an example of what should be included in a program RFP. For each type of program, there is a list of requirements that bidders must meet to be selected to provide program implementation and development services (Attachment A contains the criteria for NYSEERDA's Small Commercial Lighting Program). The list of criteria and experience requirements varies across NYSEERDA's portfolio of energy efficiency and conservation programs. Evaluating CSPs specifically on the type of program to be implemented will provide greater quality assurance than a generalized list developed by the Commission.

Another reason to leave the majority of the vetting up to the EDC is that Act 129 requires the Commission to review all proposed contracts between EDCs and CSPs. The Commission can review contracts and make sure that the winning bidder is acceptable. To aid the Commission in this process, PennFuture recommends the development of a Peer Review Group for each EDC as is done in California.

In California, the Commission directed the utilities to identify and select a subgroup of five to six non-financially interested members with extensive energy efficiency expertise that were willing to serve as peer reviewers in their program planning and selection process. These Peer Review groups are responsible for: 1) reviewing utility overall portfolio plans; 2) their plans for competitive bids; 3) the bid evaluation criteria utilized; and 4) their application of that criteria in selecting third-party programs.

This type of system in Pennsylvania could reduce demand on Commission staff, ensure another level of review and also provide valuable expertise and advice to EDCs. This system also allows for the most vetting to occur at the EDC level ensuring that all market entrants will have the ability to compete.

2. MEASUREMENT OF MEETING STATUTORY REQUIREMENTS

In order to successfully implement the savings requirements set forth in Act 129, it is critical that the Commission create annual MWh and MW reduction goals that will ensure that EDCs are progressing towards the required reductions, and develop robust statewide measurement and verification protocols to measure those reductions to ensure that savings are occurring due to energy efficiency and conservation programs and not extraneous factors such as economic or weather conditions.

Creating annual targets will provide EDCs with firm goals that must be reached and enable them to better craft a portfolio of programs. States like New York and Texas that have enacted percentage reduction requirements in overall electricity consumption have also forecasted out what the required reductions will be each year. In each EDCs annual report, it will provide measurement and verification data demonstrating that the implemented programs produced the required MWh and MW savings.

The Commission needs to create a rigorous statewide framework to guide the EDCs in calculating the required measurement and verification data to ensure that projected energy efficiency savings are realized, to offer accountability to ratepayers, to accurately assess progress towards reduction goals and to examine the potential need to modify programs to maximize efficiency.

Pennsylvania's Technical Reference Manual (Docket No. M-00051865) adopted as part of the Energy-Efficiency and DSM Rules for Pennsylvania's Alternative Energy Portfolio Standard is an appropriate starting point. The Technical Reference Manual provides a consistent framework for calculating deemed savings for a menu of energy efficiency measures using supported assumptions and customer data as input values in industry-accepted algorithms.

However, the Technical Reference Manual alone is not enough to ensure proper measurement and verification of savings. The deemed savings included in the manual only provide gross energy (or demand) savings that account for the change in energy consumption and/or demand resulting directly from program-promoted actions taken by participants regardless of the extent or nature of program influence on their actions. In order to determine what portion of these gross savings are actually attributable to the program and not due to other factors like the economy, the net energy savings must be calculated. It is important to examine the net savings to keep program benefits from being under or overstated.

The two factors that should be included in determining in calculating gross to net savings are free ridership and participant and non-participant spillover. Free ridership is a term for a program participant that would have taken the same action promoted by the energy efficiency or conservation program even if there were no program. Participant spillover represents those customers that participate in a program but implement additional energy efficiency measures that were not incentivized by the program. For example, a homeowner impressed by the cost savings in their electric bill resulting from participation in a lighting efficiency program decides to install a high efficiency furnace without assistance from the program. Non-participant spillover is associated with energy efficiency and conservation actions taken by a customer, but not linked with direct program participation. This spillover calculation specifically addresses the Commission's concerns raised in question 2(b) regarding how to account for independent consumer actions such as adjusting thermostats, or installing energy efficiency measures on their own accord.

The Commission should require that EDCs calculate net energy and demand savings as part of their annual reports in order to ensure that the achieved reductions are directly due to the implementation of, and customer participation in energy efficiency and conservation programs and not other factors. The Commission should establish a common set of procedures to follow in making these calculations in order to provide consistency and transparency. It is important to avoid having EDC programs evaluated with a multitude of methodologies, which would result in incompatible data and confusing results. We also advise that the deemed savings in the Technical Reference Manual be updated and reviewed periodically as technology and savings estimates may change.

The Commission need not reinvent the wheel when drafting these measurement and verification protocols. Many states in the region have decades worth of experience in measuring and evaluating their energy efficiency and conservation programs that the Commission can learn from. In addition, PennFuture recommends that the Commission join the Northeast Evaluation, Measurement and Verification Forum sponsored by Northeast Energy Efficiency Partnerships (NEEP). The forum will consist of policymakers, regulators, utilities, efficiency program administrators, and service and technology providers from New England and the Mid-Atlantic, working to develop a best-in-class framework for measurement and verification. This

would be a truly valuable resource to the Commission in further developing its energy efficiency and conservation program.

3. EVALUATION

Cost-Effectiveness Tests

In addition to developing standardized measurement and verification protocols, the Commission should also establish a standardized total resource cost manual.

There are several states that have documents that dictate the appropriate definitions and parameters for what costs, benefits, and program participant benefits to include as well as what discount rate to apply. The Commission should look at the *California Standard Practices Manual* and also Massachusetts Department of Telecommunication and Energy Order 98-100 as examples.

The Total Resource Cost (TRC) test is appropriate for most single-measure energy efficiency and conservation programs such as lighting retrofits, heating and air-conditioning or appliance upgrades. However, programs that go after whole house improvements including Home Performance with ENERGY STAR and ENERGY STAR Homes often have difficulty passing traditional cost-effectiveness tests where non-energy benefits are not taken into account.

The Commission should consider expanding the TRC test in the future to incorporate health, safety and other non-energy benefits as states like Michigan and Massachusetts have done in order to promote these effective programs.

Ensuring Independent Evaluators are Free from EDC Coercion

Act 129 requires an annual independent evaluation of cost effectiveness of an EDC's energy efficiency and conservation plan. To ensure that such independent, third parties are free of coercion from the EDCs they evaluate, PennFuture recommends that the Commission, not the EDC select the appropriate evaluation consultant.

Another option is to follow states like Connecticut, New York and Massachusetts that have boards and/or consultants representing the collective interest of various stakeholder groups. These groups work with utilities on selecting evaluation consultants, scoping studies, reviewing results, and planning evaluations.

Additionally, California has a firewall rule in place where contractors involved in any aspect of implementing a utility's program cannot be involved in conducting the evaluation.

5. PROGRAM DESIGN

Selecting Programs for EDC Service Territories

Ideally, in order to determine what programs are best implemented in each service territory a technical potential study would be conducted. Such a study would provide a quantitative analysis of the amount of energy savings that exists, is cost-effective, or could be realized through

efficiency programs and policies. The results of this study would help the EDC to develop its portfolio of programs and how to allocate its budget.

However, given the short timeframe in which EDCs have to submit plans this might not be feasible. To address this issue, PennFuture recommends that EDCs look to what programs have been implemented in other states. After more than thirty years of experience with energy efficiency and conservation programs throughout the U.S., the most successful programs are now well known. EDCs should create a broad portfolio of programs based on some of the top recommended programs listed below:

Residential:

1. New construction
2. Whole house retrofit
3. Lighting
4. Upstream marketing to promote more efficient product availability
5. High-efficiency HVAC, proper sizing and installation

Small Commercial and Industrial:

1. Lighting and controls
2. Operations and maintenance training
3. HVAC replacement
4. High-efficiency coolers/refrigeration

Large Commercial and Industrial:

1. New construction
2. Prescriptive retrofit
3. Operations and maintenance training
4. Lighting and controls
5. HVAC replacement
6. Benchmarking and commissioning programs

Low-Income:

1. New construction
2. Multi and single family homes retrofit

Further detail on each of these programs is posted on the Pennsylvania Public Utility Commission's website as part of its Demand Side Response Working Group. We also recommend that EDCs examine the American Council for an Energy Efficient Economy (ACEEE) report *Compendium of Champions: Chronicling Exemplary Energy Efficiency Programs from Across the U.S.* (February, 2008) which highlights the best-in-class programs under all the above program categories.

PennFuture also recommends that the Commission review EDCs' programs after two years in order to assess which programs are the most effective. EDCs that have programs that are lacking should revise their energy efficiency and conservation plans.

EDC Coordination in Developing Programs

Based on discussions with program administrators in other states, representatives from the California Public Utility Commission, ACEEE and Northeast Energy Efficiency Partnerships, it is clear that energy efficiency and conservation initiatives benefit from consistency across EDC programs. Collaboration between EDCs in developing programs is beneficial in that it reduces program costs for energy efficiency through economies of scale, avoids unnecessary program overlap that may cause confusion among customers and contractors, improves transparency, and increases the effectiveness of marketing and branding.

For example, statewide and regional campaigns including “Flex Your Power” in California, “Cool Choice” in New England and New Jersey, and “Change a Light” at the national level have been successful in part due to their consistent messaging and branding.

PennFuture is aware that due to differences in demographics and building stock between certain EDCs, the same set of programs may not be appropriate in every service territory. However, where there are common programs between EDCs it is important that these programs share standardized eligibility thresholds (e.g. SEER 15 for AC) and incentive levels statewide. This type of standardization makes it easier for equipment providers and retailers work with their distribution chains to supply energy efficiency equipment used in programs if there is one statewide program and one set of requirements.

California provides an example of what can occur when EDCs do not collaborate and develop standardized programs. When California originally mandated its energy conservation programs, the utilities were required to plan and implement their portfolio of programs and did not collaborate with one another. Within a short time, certain customer segments (e.g. business, industry) and those that provide certain energy efficiency technologies and services (e.g. manufacturers, distributors, builders) started asking for common program features statewide to make it easier to play in the market and programs had to be amended to create a group of core programs.

Massachusetts and Connecticut are other examples of states that have largely standardized programs, even though there are multiple utilities. In addition, states like Oregon, Vermont and Wisconsin have a single statewide program administrator and therefore also have standardized programs.

In Massachusetts, National Grid collaborates with NSTAR, Northeast Utilities and Western Massachusetts Electric for many of its programs. Depending on the program these utilities either submit a joint RFP and contract with a single service provider or each will submit its own RFP and bid out for conservation service providers separately, but will make sure that branding and incentive levels are coordinated.

Recommended Statewide Programs

While we recommend that where feasible programs should share standardized incentive levels and equipment eligibility levels, there are several programs that benefit from statewide branding and implementation.

Two programs that have shown to benefit from statewide implementation are residential new construction and residential retrofit programs. These programs engage builders, developers, architects, contractors, and trade allies that work in multiple service territories and even in multiple states. Marketing these programs occurs at the national, state, local, and individual levels. When delivering these programs, it is important that they have consistent standards and consumer information. Marketing to the building community tends to occur at home/trade shows and builder conferences that are often attended by multiple regions of the state. Consumer marketing is by market regions that transcend utility service regions. Having inconsistent or multiple new construction and residential retrofit programs across the state would prove ineffective and confuse the marketplace. A single primary program contractor greatly eases coordination and delivery of services and facilitates development of strong relationships with builders.

For this reason PennFuture recommends that PA Home Energy serve as the brand for Pennsylvania's statewide residential new construction program and residential retrofit program. PA Home Energy is an established program currently serving the new homes market through ENERGY STAR Qualified New Homes and the existing homes market through Home Performance with ENERGY STAR program. PA Home Energy is building the necessary infrastructure throughout the state to enable the program to be delivered in a cost-effective manner. Over the last 18 months, PA Home Energy has worked closely with the national ENERGY STAR program to ensure that consistent standards and marketing themes would meet or exceed similar programs across the nation.

Instead of creating overlap, or taking time to establish separate programs in the other service territories it makes sense for both economic and marketing reasons for EDCs to work with one another to become partners in this program.

PA Home Energy is already providing training and incentives to encourage contactors and consultants to obtain RESNET and BPI certification. These trainings are occurring throughout the state. It is important to recognize that PA Home Energy is a fully integrated program that includes training, field support, and marketing to deliver the program to ratepayers and also the necessary quality assurance and energy saving reporting to maintain program integrity. PA Home Energy is the only program in the state that delivers these integrated services.

This would mirror what is done in Massachusetts where there is a successful new construction program called: Massachusetts New Homes with ENERGY STAR. Each utility in the state contributes funds to the program and ICF International won the bid to administer the program on behalf of the utilities. This joint partnership enables customers across the state to visit one site to gain information on the program and download applications.

Mr. Chairman and members of the Commission, I very much appreciate your willingness to allow me to present today. I am happy to answer any questions that you may have.

Attachment A

Experience Criteria in NYS DERDA's Small Commercial Lighting Program RFP

- Knowledge of and experience with effective, energy-efficient lighting, particularly for small commercial/industrial spaces. Proposers should be familiar with the benefits of effective, energy-efficient lighting, including health, safety, comfort and other non-energy benefits. Proposers should indicate familiarity and experience with effective, energy-efficient lighting principles and products. Including team members with the National Council for Qualifications of the Lighting Professions "Lighting Certified" ("LC") credential is considered a plus.
- Knowledge of and experience with market transformation or energy-efficiency programs promoting effective, energy-efficient lighting solutions. Proposers should identify experience, demonstrated familiarity, or equivalent expertise with implementing market transformation programs and evaluation of such programs. Describe experience related to all aspects of implementation activities, including outreach, assistance and training, awards and recognition, marketing, incentives and administration, program tracking, and reporting.
- Experience with tasks designed to influence markets, such as energy efficiency marketing initiatives and providing information to market participants. Ability and experience in developing and implementing marketing initiatives and strategies, including consumer outreach efforts. Experience related to small commercial and industrial audiences or the lighting market should be indicated. Experience with web-based training, education, and marketing strategies or any innovative market transformation strategies should be indicated. Proposers should indicate how current market structure and services will be used to build awareness about effective, energy-efficiency lighting design and present strategies to reach target audiences.
- Understanding of the markets and market dynamics for effective, energy-efficient lighting products and services, including market participants. Proposals should demonstrate how market knowledge will be used to enhance the program. Proposals also should describe experience and qualifications related to market assessment and evaluation activities. Experience with developing methodologies, and administering surveys, interviews, or focus groups should be indicated.
- Thorough understanding of the goals and objectives of this RFP. Ability to design, implement, and manage energy-efficiency programs. Proposers must have strong organizational skills and the ability to develop new relationships and interact with market participants. Proposers should have experience with the networks/infrastructure involved in providing effective, energy-efficient lighting. Proposers must be prepared to work closely with NYSERDA's Energy Efficiency Services Program staff and other organizations involved in similar lighting initiatives. Proposers must be responsive to feedback or additional input from NYSERDA.
- Experience with collecting, managing, and analyzing data (including market assessment and program data) and reporting results.
- Financial resources to perform the proposed work; technical experience and facilities or the ability to get them; a good performance record; and qualifications to receive a contract award under applicable laws and regulations.
- Ability to comply with the proposed or required time of delivery or performance schedule.