

Testimony of John Hanger
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Pennsylvania Department of Environmental Protection

Docket No. No. M-00061984
Investigation of Conservation, Energy Efficiency
Activities, & DSR by Energy Utilities & Rate-making Mechanisms to
Promote Such Efforts

Before delving into the questions provided for comment by the Commission, the most important question pertaining to Act 129 must be addressed. This question is, how does an EDC demonstrate compliance with Act 129? The Department believes that EDCs demonstrate compliance by conclusively showing that they have conserved the requisite amount of electricity – not that they have achieved a net reduction in electricity sales.

Act 129's goals for reducing electricity consumption by 2011 and by 2013 are contained in §2806.1(c)(1) and (c)(2) which read:

(c) Reductions in consumption.--The plans adopted under subsection (b) shall reduce electric consumption as follows:

(1) By May 31, 2011, total annual weather-normalized consumption of the retail customers of each electric distribution company shall be reduced by a minimum of 1%. The 1% load reduction in consumption shall be measured against the electric distribution company's expected load as forecasted by the commission for June 1, 2009, through May 31, 2010, with provisions made for weather adjustments and extraordinary loads that the electric distribution company must serve.

(2) By May 31, 2013, the total annual weather-normalized consumption of the retail customers of each electric distribution company shall be reduced by a minimum of 3%. The 3% load reduction in consumption shall be measured against the electric distribution company's expected load as forecasted by the commission for June 1, 2009, through May 31, 2010, with provision made for weather adjustments and extraordinary loads that the electric distribution company must serve.

There are two possible interpretations to this subsection. Stated as simply as possible, if an EDC's forecasted load for June 1, 2009, through May 31, 2010 is 100 MWh, by May 31, 2011 that EDC must either demonstrate that its plan conserved 1MWh of electricity or that it only sold 99 MWh of electricity. The Department believes that the correct interpretation is that the EDC must demonstrate that the plan conserved 1 MWh of electricity.

This interpretation is only valid however, if the EDC conclusively demonstrates that the plan conserved 1 MWh of electricity. The purpose of Act 129 is not to spend consumers' money on feel good projects that have little impact. The purpose is to implement rigorous conservation measures that achieve concrete and verifiable reductions in electricity consumption.

This means that mere "assumptions" about the effectiveness of a conservation measure cannot be relied upon. For example, it cannot be presumed that if a consumer purchases a compact fluorescent lamp as part of an EDC's plan that the lamp is even installed, much less used for a set number of hours per day, 365 days per year. Instead, implementation of the measure must be verified as must the actual effectiveness of the measure.

This is why the Department recommended in its comments in response to the October 21, 2008 Secretarial Letter that the Commission's program pursue a "whole building" approach rather than providing a number of possible measures according to convenience or the customer's wishes. The whole building approach requires that buildings that present an opportunity for significant energy savings should be given preference in receiving service and that all energy saving measures that are also cost-effective should be provided in each building that receives services under utility plans. Not only does this approach result in the most cost-effective and prudent use of the ratepayer funds but the energy savings are more readily verified through mechanisms that satisfy the quality assurance standards defined in the act.

1. Conservation Service Providers

a. Should the EDCs collaborate/coordinate on contracting with conservation service providers?

The Department supports EDC collaboration and coordination in contracting with CSPs. This should occur whenever a joint approach will reduce the cost and improve the efficiency of services delivered. In particular, collaboration/coordination should be pursued where results are demonstrably superior. In addition, these efforts can aid in spreading uniform conservation measures and consistency in regards to customer education. However, the Commission should carefully review collaborative proposals to ensure that they are not largely driven by a desire to simplify acquisition of services. Quality of services should be the first and dominant consideration.

b. Are there enough common programs for the conservation service providers to provide effective measures across Pennsylvania?

The Department urges the Commission to examine whether enough service providers will be available to implement utility programs next year and thereafter. The Department has been engaged in quantifying the pool of existing qualified service providers for the programs that will be implemented under the Alternative Energy Investment Act (SS Act

1 of 2008), and providing opportunities for more training across the Commonwealth. At present, there are programs that are training skilled professionals to national standards and others that can serve as a reservoir of skilled personnel.

The Department believes that the Building Performance Institute/Residential Energy Network standards are acceptable minimum CSP standards. To date, the West Penn Sustainable Fund has invested over \$1.5 million into their PA Home Energy Program, which includes training over 70 people to Building Performance Institute/Residential Energy Network standards and providing field verification services. The Energy Coordinating Agency has trained an additional 30+ people to these same standards. PPL has begun a BPI only training program and Penn College of Technology is fully booked for their training offerings as an accredited training provider.

The EPA's Home Performance with Energy Star (HPwES) and Energy Star Homes (ESH) programs, the LIURP (low income usage reduction program), WAP (Weatherization Assistance Program), the Pennsylvania Housing Finance Agency's renovate and repair program, WPPSEF's PAHomeEnergy program, ECA's Smart Energy Solutions and the KeystoneHELP program are foundations to build upon. Incorporating programs like Home Performance with Energy Star provides a national standard and a common approach for quality assurance and effective measures for the residential sector.

In conclusion, the Department cautions that the decision about the feasibility of higher technical standards in the future cannot be based solely on the currently existing pool of skills. Such a perspective will inevitably lead to standards that are set too low and do not rise to appropriate levels. The labor market will expand in response to known demand. Thus, the Commission should give ample advanced notice when future auditor/inspector or contractor technical qualifications will increase.

c. Does the provision providing for competitive bidding for all contracts with CSPs require the utility to competitively bid all energy efficiency and conservation services? If not, what energy efficiency and demand services should not be competitively bid?

The EDC does not need to competitively bid all energy efficiency and conservation services. The fundamental test should be one of cost-effectiveness. If the EDC can demonstrably perform the service more cost-effectively than the CSP or if no qualified CSPs bid on the contract, the EDC can implement that part of the program.

d. Under definitions, a CSP is an unaffiliated entity providing information and technical assistance. Under 2806.1(a), however, a CSP is said to provide conservation services. How should this Commission interpret this apparent inconsistency?

The potential responsibilities of CSPs must be drawn broadly. A fundamental tenant of statutory construction is to give effect to all provisions of the law if possible. Together,

the definition of CSP, the CSP registry required by section 2806.2, and the requirement that CSPs implement all or part of the energy conservation plans indicate that the responsibilities of a CSP extend to all aspects of providing energy conservation services.

The definition of CSP focuses primarily on the affiliation between the CSP and the utility with only passing reference to the responsibilities for which a CSP may be contracted, viz., providing “information and technical assistance on measures...” Thus, the definition is more about what a CSP is than what it does. However, nothing in the definition of CSP limits the role a CSP can play in providing conservation services. The phrase “technical assistance” is undefined and very broad. Importantly, the phrase cannot be limited to simply providing information because the definition explicitly states that CSPs provide technical assistance in addition to information. Therefore, providing technical assistance must extend to more significant responsibilities. Under “Registry” it becomes plain that CSP responsibilities are indeed broader since the language states that they may be contracted to “provide conservation services”. Finally, in examining the requirements for utility plans, CSPs are to implement “*all* or part of a plan”. Clearly, a CSP could not implement all of a plan if it only provided information. Taking these sections together, the responsibilities of a CSP may range from providing information or advice to providing services and to implementation of entire utility plans. Therefore, the Department urges the Commission to recognize a broad range of possible services for CSPs.

e. Under 2806.2, the Commission must establish a registry of approved CSPs. What basic business elements (better business bureau rating, bonding, for example) should be required to be registered?

In the early stages of this Program, the Department suggests that the commission adopt the standards used in the PA Treasury Department’s registry of approved contractors under the Keystone Home Energy Loan Program. These contractors have demonstrated that they possess necessary technical skills, are bonded and have a favorable rating from the Better Business Bureau.

f. What experience and qualifications should be required of registered CSPs?

CSP minimum qualifications will differ depending on the customer class to which they will provide services and the specific services involved.

Large customers - CSPs providing service to industrial customers and the largest commercial customers should employ staff that include qualified professional engineers. The Department recommends that the Commission staff consult with the Pennsylvania Technical Assistance Project (PennTAP) at Penn State, the Electrotechnology Applications Center (ETAC) at Northampton Community College, etc. These organizations have extensive experience working with high demand customers and are best prepared to provide specific information about skills necessary to providing effective services.

Commercial customers – As a group, commercial customers are difficult to characterize. They range from storefronts to massive retail and wholesale operations. However, information on needed skills is available from the Environmental Management Assistance Program (EMAP), which has a range of responsibilities including efficiency assessments. EMAP is sponsored by the PA Departments of Community and Economic Development, the U.S. Environmental Protection Agency, the U.S. Small Business Administration, and participating colleges and universities. In general, the Department recommends that CSPs providing service to commercial customers include qualified professional architects and engineers for facility-related programming.

Residential customers – The Department proposes that Registry requirements for CSPs serving the residential market ramp-up over time. Initially, financial fitness as discussed above, coupled with a minimum level of technical experience, should be the threshold for entry in the registry. However, the Department requests that the Commission initially establish a second, higher technical requirement to be implemented after utility programs are in operation. Specifically, within six months of initial services under a utility plan, each contractor should have completed a one-day “whole-house performance” training, similar to that being offered under the Keystone HELP program. Eighteen months following implementation of a utility plan, each CSP should be required to have staff with minimum training requirements appropriate to their functions. For example, each auditor and inspector should have attained Building Performance Institute (BPI) certification for existing buildings or Residential Energy Services Network (RESNET) certification for new construction, and each home improvement contractor/installer should have attained BPI installer certifications.

Registry for companies or individuals – A final issue is whether the Registry should include both individuals and businesses or only businesses. The Department observes that qualified employees will move in and out of the industry or between companies. This makes registering each technician burdensome and potentially confusing. Therefore, the Department suggests that only businesses, including sole proprietorships, be registered. However, as an incentive for businesses to ensure that technically demanding work is done by qualified individuals, the Department also proposes that businesses be required, as a condition of registration, to have work done by appropriately trained and certified staff. To satisfy the letter of 2806.2, each registered business will need to maintain a list of all current employees and their respective qualifications and certifications. This list should be available to both the utility and the commission on request.

Maintaining the registry – § 2806.2 makes it clear that the registry shall include only “approved persons qualified to provide conservation services”. Therefore, entry to the Registry is a privilege not a right. The Department asks that the Commission, in addition to creating a process to register qualified CSPs, establish procedures through which CSPs can be removed from the Registry both for failure maintain financial and technical fitness and for failure to achieve satisfactory results. Specifically, the Department suggests that the utility, as the party holding primary responsibility for implementation of the plan, be required to include in that plan, in compliance with § 2806.1(b)(1)(C), (D) and (E),

details regarding how contractor performance will be monitored. Further, utilities should be required to report to the Commission any CSP that is found to provide an unsatisfactory quality of work. Finally, and consistent with an observation made elsewhere in these comments, the Department specifically requests that the Commission ensure that utility monitoring of CSP performance be routine and continual and not occasional. This is necessary to protect individual consumers and the good reputation of the Program generally.

2. Measurement of Meeting Statutory Requirements

a. How would the *addition* of new load in an EDC territory (i.e. RCI new development/construction) be measured, and at what point do these additions meet the “extraordinary load” exceptions?

The Department observes that the legislative declaration of policy focuses, in part, on economic benefits of conservation including economic growth and affordability of electric service. Clearly, it would be inimical with the declaration of policy to implement energy efficiency and conservation programs that suppress economic growth. Instead, the Department interprets the overall goals as consistent with homes and businesses that use the minimum necessary amount of energy. Programs that achieve this result will maximize benefits to consumers. Therefore, these programs should not serve as a break on economic activity. The Commission can ensure this by reinforcing the message that the goals in the Act should be achieved without suppressing economic activity; for example, by encouraging growth activity that strives to achieve exceptionally efficient energy consumption standards.

As to the question at hand, the Act does not provide additional guidance as to the nature of “extraordinary load.” The Department concludes that this leaves to the Commission’s discretion the definition of this exception. Extraordinary load is used only in the context of consumption rather than peak load. Thus, only the requirements of 2806.1(c) are in play. In examining standards that might be used, the Department concludes that extraordinary load should include unanticipated, major increases in consumption within a particular utility’s service territory. Specifically, consumption that occurs in hours when demand exceeds the PJM 90/10 peak load forecast during the June 1, 2009 to May 31, 2010 reference period should be considered as extraordinary load. Otherwise, load will be within a reasonable range of the 50/50 forecast, i.e., the most likely outcome.

b. How would one distinguish between *reductions* in consumption as a result of customer participation in technology programs in an EDC territory, implemented as part of an EDC’s Energy Efficiency and Conservation Plan, as opposed to unrelated and independent consumer actions (i.e. manually adjust thermostat heat/cooling settings, turn lights off, etc.)?

Well-developed and tested evaluation protocols exist to determine the impact of customer conservation actions. Use of an established protocol, including the protocol embedded in the EnergyStar Portfolio Manager system, will enable the Commission to identify, with a

strong level of confidence, which changes in consumption relate to conservation measures. However, these determinations cannot be made without the collection of pre- and post-treatment consumption and price data. Thus the Department's recommendation [in comments filed last week] that the Commission establish a standard data format and data collection protocol for all customer consumption and price data. While Portfolio Manager is not directly applicable to residential customers in the sense of generating information about energy savings potential and results, the Department urges the Commission to use the Portfolio Manager data format as the standard for these customers. Going forward, overall evaluation and critical comparisons between utilities' programs will then be possible.

As noted below, an EDC should only be allowed to take credit for reductions that are directly related to specific activities listed in their approved programs. It is probable, however, that a significant component of an EDC program will include a consumer outreach and education element, with appropriate metrics attached to evaluate success. In this case, any reductions unrelated to technological interventions (i.e. consumer behavior) should be counted as achieved credits due to the program.

c. How will economic activity within Pennsylvania and an EDC's service territory be considered when measuring the performance of EE/DR programs? For example, an EDC's territory that is experiencing a recession may meet their goals from decreased economic activity from plant closures, business failures and worker migration out of the service territory.

The requirements of Act 129 cannot be achieved by a decline in economic activity. If the Commission determines that forces other than implementation of the plan are responsible for the reductions in consumption, it should not allow the EDC to recover the costs of plan, impose a civil penalty and take over implementation of the plan as required by Act 129.

The Department observes that the Act requires many activities of the Commission and the electric utilities. A program will be created, plans will be filed consistent with that program, and CSPs will be contracted to produce results consistent with each Plan. It is inconsistent with these directives that utilities not then be required to produce results that can be directly linked to activities under their plans. In other words, the Department suggests that credit for reductions be taken only for those activities that are identified and measurable under the approved program. Reductions that occur as a result of unforeseen circumstances such as those described, should NOT count toward achievement of an EDC's goals.

3. Evaluation

a. Should the Commission establish a standardized total resource cost manual to evaluate projects? If so, is there a state or utility this Commission should use as a starting point for discussions?

The Department urges the Commission to establish a standardized total resource cost manual for project evaluation and it should be based on a manual used successfully in a state that has successful energy efficiency and conservation programs. Other states with successful energy efficiency and conservation programs include California, New York, Massachusetts, or Vermont. The Department recommends that the Commission look at the evaluation tools used in these states. Furthermore the Department recommends using the Northeast Energy Efficiency Partnerships as a resource for guidance and assistance regarding project evaluation screening tools, and the measurement and verification of EDC programs.

b. What other cost benefit tests should the Commission use to achieve reduction in consumption requirements pursuant to Section 2806.1(c)(3)?

The Department supports impact evaluations of residential energy conservation programs using the standard PRISM (Princeton Scorekeeping Method) methodology. Using the levelized cost of saved energy – the average levelized cost of a measure per kWh saved over its lifetime - allows utilities and the Commission to compare programs despite wide variations in electric and gas rates between jurisdictions.

c. Act 129 requires utilities to file a plan to assure quality assurance [includes evaluation, measurement and verification by independent parties to ensure quality of completed measures], and further requires an annual independent evaluation of cost effectiveness of the Plan. Given the exposure to penalties by EDCs for potential non-compliance on meeting statutory energy efficiency and conservation goals, what approaches are appropriate to ensure that such independent, third parties are free of coercion from the EDCs they evaluate?

There are two separate responsibilities identified regarding quality control and two separate responsibilities identified regarding evaluation of cost effectiveness. The Act does require that the EDCs include in their plans the measures they will use to fulfill these obligations. For example, if an EDC uses a Home Performance with Energy Star program as part of its plan, the independent quality assurance will be done by certified BPI/RESNET auditors. The value of this third-party certification is that performance is monitored by the certifying agency, and credentials can be withdrawn for sub-standard performance. Additionally, the Act requires that the EDC plans "require an annual independent evaluation of its cost-effectiveness and a full review of the results..." The EDCs are not explicitly required to perform that independent evaluation.

Equally important, the Act also requires that the Commission's Program include provisions to ensure quality control and evaluation - Section 2806.1 (A). The Department envisions that the oversight and administration duties of the Commission will include contracting for the independent third-party evaluations required as part of the EDC plans. The cost for this and other services will be recovered from the EDC's according to Section 2806.1 (H).

4. Cost Recovery

a. What are the appropriate time frames to expense or amortize energy efficiency and demand response expenditures?

The Department takes no position on the recovery method and believes that this should be at the discretion of the utility so that cost recovery is not a disincentive for aggressive pursuit of the goals in the Act.

b. How should this Commission ensure recovery of only “prudent and reasonable” costs? Is this established at the time of plan approval? Is it established only after quality assurance and performance is measured, verified, and evaluated, or is it established during the annual independent analysis?

Regardless of cost recovery method, the success of utility plans should be verified as a prerequisite to finding expenditures to be reasonable and prudent. The Department recommends that a finding of "prudent and reasonable" be determined by the Commission using metrics that are based on the cost-effectiveness of the measures undertaken, and the responsible management of the plan. Failure to actively oversee program quality or CSP effectiveness should be taken into consideration in determining the extent to which costs are prudent and reasonable. Utilities may argue that any expenditure made in what appears to be good faith should be considered prudent and reasonable. The Department is sensitive to the need to prevent disincentives to aggressive utility pursuit of goals but the natural conflict of interest between conservation goals and revenue maximizing for generation affiliates must also be taken into consideration in setting standards for review.

c. If services are not competitively bid, how will this commission determine such costs are reasonable and prudent?

The Department urges the Commission to insist on competitive bidding in order to effectively discipline the CSP marketplace. As the Commission knows well from its management of energy procurement activities, the quality of solicitations can profoundly impact the quality of CSP services. In terms of expenses incurred by the EDCs for self-performed conservation services, it is reasonable for the Commission to rely on the costs of comparable services from CSPs working with other EDCs. It is also reasonable that the Commission retain independent evaluation services for this review as it may do for the performance effectiveness (see above).

5. Program Design

a. How should the statutory requirement be interpreted and implemented that requires energy efficiency and conservation measures be equitably provided to all classes of customers?

Not all customers will equally benefit from energy efficiency measures. Customers who use little energy or whose buildings or processes already achieve a high standard of energy efficiency will see little benefit from efficiency services under this program. Thus, the terms, “equity” and “a variety of measures” should be conditioned by having program services be reasonably available among customers who can gain significant benefits, not among all customers. Equity of classes should not be confused with equity between customers. The most equitable outcome, and one which will be completely consistent with the purpose of the Act, will be maximum cost effective energy savings. This outcome will spread benefits to all customers through the strongest possible impact on market prices. The Commission should not give in to the temptation to spread savings so the each customer receives a token level of services.

b. Should all EDCs be required to implement the same type of EE/DR programs? Is it likely that programs will be equally cost effective in every EDC territory?

The Commission should design the program with a suite of EE/DR programs that EDC can choose from to include in their plans based on what they deem as being most cost effective. Further, the Department recommends that the Commission actively promote successful programs among all EDCs.

c. Which programs are more cost effective if implemented on a statewide basis?

The Department asks that the Commission require utilities to develop plans that include proposals that can be implemented across the Commonwealth. Statewide plans could serve to better educate a larger number of the customer base, provide opportunity for greater efficiency of the program delivery and provide a cost savings for program implementation.

The Department recommends that all plans be submitted at the same time so that the Commission and the public can evaluate the strengths and weaknesses of the plans on a comprehensive basis rather than on a piecemeal basis. The Department believes that many proposals can take advantage of economies of scale, and could be implemented statewide very cost effectively. Identifying these measures and recommending them to the EDCs is one way in which the Department may be assistance during plan development. Administration of statewide programs might be most effective if administered by the Commission itself, with participating EDCs reimbursing costs as provided for in the Act.

One example of a program that can be very successful and cost-effective as a statewide plan is the Home Performance with Energy Star program, offered by the U.S EPA and the U.S. DOE. With the Department or the Commission acting as a statewide "sponsor" for this program, the standards for training and qualifications for participating contractors will be uniform across the Commonwealth, and the costs for services will be within a reasonable range for like services anywhere in the state.

6. Reporting Requirements

a. What additional information should the Commission require the EDCs to report under Section (I)(1)(IV)?

The Commission should require EDCs to submit information indicating increases to load in the service territory caused by new construction and decreases in load resulting from negative economic circumstances.