

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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

**HB 2200 EN BANC HEARING
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**Written testimony of Liz Robinson, Executive Director
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Introduction

I am Liz Robinson, Executive Director of the Energy Coordinating Agency of Philadelphia, a non profit energy service provider. ECA provides comprehensive energy conservation, education and bill payment assistance services to residential customers in the Philadelphia area. ECA is also a leader in the development of energy efficient new homes, serving as an ENERGY STAR Rater and a LEED for Homes provider. Last year ECA provided approximately 78,500 energy services to 40,000 households.

- 1. Conservation Service Providers**
 - a. Should the EDCs collaborate/coordinate on contracting with conservation service providers?**

Collaboration among the EDCs in this way could save effort for both the EDC's and the prospective service providers. EDCs could coordinate a common request for proposal for each type of service provider. They could then allow providers to specify the service territories in which they provide services.

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

To meet the goals of Act 129 most cost effectively, utilities should implement programs which have a proven track record across the country. In the residential sector, this means national programs including Home Performance with ENERGY STAR, ENERGY STAR Homes and LEED for Homes. These programs are well established nationally, have very clear performance criteria, use nationally certified building analysts, and raters, and produce real, cost effective energy savings. It is essential to rapidly build consumer confidence in energy conservation and efficiency across Pennsylvania, and it will be essential to use nationally proven programs in order to do so.

The American Council for an Energy Efficient Economy (ACEEE) has been commissioned by the Department of Environmental Protection (DEP) to assess the energy efficiency and solar resources in Pennsylvania and to recommend to policy makers the most cost effective approaches to deploy these clean energy resources. The first draft of this report will be available for comment before the end of this month. This report may be helpful in focusing on the most effective approaches for Pa.

- 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's are required to use third parties for some or all of program delivery. Where a third party will be given control of an entire program, i.e. will administer a program, then competitive bidding should be required on a regular basis, for example, every two to three years. For other aspects of program delivery the EDC may rely upon a stable of service providers. For example, a residential energy audit program could make use of multiple auditing firms. Such firms should be selected through a Request for Proposal. Similarly, the EDC will likely have a need for multiple quality assurance / quality control contractors to perform site inspections, review applications, and review the work of other contractors. These quality assurance/quality control (QA/QC) contractors should be selected through a Request for Qualification (RFQ).

- 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?

While the language is not as precise as it could have been, the term conservation services provider (CSP) clearly means an entity that provides conservation services. That said, there are a broad range of such entities, which may provide any one or all of the following services: program design, marketing, outreach, customer screening, enrollment, auditing, savings estimation, direct installation, quality assurance, etc..

- 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 addition to demonstrating their technical proficiency, CSPs should be required to meet the insurance and other requirements consistent with related state contracts. Any additional requirements, such as bonding, are probably

unnecessary and may create unwanted barriers. It is important to recognize that much of the nation is in the process of building its capacity in the energy efficiency and renewable energy industries, and unnecessary or burdensome requirements may prevent qualified Pennsylvania companies from entering this important market.

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

Service providers should be selected for each program through a qualifications based approach. Certain national programs such as the Home Performance with ENERGY STAR program requires all auditors, or building analysts, to be certified through the Building Performance Institute (BPI). Likewise the ENERGY STAR Homes program requires that the building be inspected and reviewed by a Home Energy Rating System (HERS) rater. These national certifications are extremely important in assessing the technical competence of the auditor and inspector. In the commercial sector, many firms have a professional engineer (PE). However, this is not always a required credential. Certification and technical credentials will vary depending on the program. Demonstrated experience is probably the most important qualification.

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?

Customary load growth within a utility service territory consistent within the range of the last ten years should be considered “ordinary”. If load growth exceeds the highest year of that range by a significant amount agreed upon by the Commission, it could be considered extraordinary.

- 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.)?

A program impact evaluation will look at the reported program activity, as tracked by the EDC, and then apply realization rates to the reported results. Such evaluations are not typically based in any way on the EDCs total load. Changes in customer behavior such as manually adjusting thermostat settings etc. may also result from utility consumer education programs. A more likely source of reductions in demand outside of utility programs will be the current economic downturn. It will be important to disaggregate these effects from those resulting from intentional utility activity.

- 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 Act states that the program activities must lead to the reduction. There is thus no way that a recession can help the EDC meet their goals. The impact evaluation must be capable of disaggregating any reduction due to economic downturn from the intentional EDC program activity.

ECA believes that the goals of the Act are clearly to reduce overall consumption and peak load from the baseline year. These goals must be met in addition to any reduction that may be attributed to economic downturn. That level of reduction would be considered a "free rider".

This is slightly different from a savings goal, in that programs would produce a specific level of savings irrespective of total consumption. The Act clearly requires reduction as a result of program activity – not economic downturn.

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?

Yes. The states with the greatest experience in running successful programs include California, Vermont and Massachusetts. The California Public Utility Commission's Energy Efficiency Policy Manual Version 4.0 is an excellent model for the Commission. Massachusetts recently modified its cost effectiveness test definitions. Both these states provide good models for Pennsylvania.

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

The Societal Cost Test should also be used. The Societal Cost Test counts impacts such as job creation, reduced utility service terminations, and environmental benefits, all of which are of critical interest to the Commonwealth. Quantifying environmental benefits is important to do in anticipation of a national Cap and Trade program and a national carbon market. Our neighboring states of New York, New Jersey, Delaware and Maryland are all members of RGGI (Regional Greenhouse Gas Initiative) which just held its first auction of carbon permits in September. We could well see a national carbon market emerging in the next year or two.

- 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?

The annual impact evaluations should be conducted by a reputable Evaluation Contractor that specializes in that work and that has no involvement in the implementation of the programs. In order to insure that evaluation methodologies are consistent across utilities, and in order to save money on the evaluation process, it will be best if an evaluator is hired statewide to evaluate all programs. Given the differences between rate classes, one evaluator should be selected statewide for residential programs and another evaluator should be selected for commercial and industrial programs. In order to insure the independence of the evaluator, it would be best if the PUC itself issued the RFP and selected the evaluator. That way there would be no opportunity for collusion or coercion of the evaluator by one or more utility company.

It is important to differentiate between the QA/QC contractors and the Evaluation Contractors as they have very different roles. QA/QC contractors will be actively involved in the implementation of the programs. It is not to their advantage or the EDC's advantage for the QA/QC contractor to fudge numbers, since those numbers will later be subject to the impact evaluation.

4. Cost Recovery:

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

The American Council for an Energy Efficient Economy (ACEEE) has done a great deal of analysis of energy efficiency and conservation programs across the country and has found that 3 cents per kilowatt hour (kWh) is the current average cost of a negawatt (a kilowatt hour saved). However, since the capital cost of measures is almost always an up front cost, the initial investment can be more on the order of \$.30 (thirty cents) per kilowatt hour.

The savings should not be counted in advance of the year in which they occur, for example if a new high efficiency heating system has a life expectancy of 30 years, the energy savings should be counted in each of those 30 years. However, the capital expenditure occurred in the first year, and can be counted in that year. This method of accounting makes sense until expenditures begin to reach the funding cap of 2% of gross

revenues. At that point, the Commission should consider amortizing the energy efficiency and demand response expenditures over a longer period of time.

- 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?

The annual independent impact evaluation should analyze both savings and costs for the programs. Program costs are recoverable after they have been expended and evaluated.

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

The Commission can use the national average cost of 3 cents per kilowatt hour as its benchmark to determine whether the utilities’ costs are reasonable and prudent. In other words, if a utility is spending close to 3 cents or less per kWh of energy savings, that is a reasonable expense. If the utility is spending significantly above that level, for example 5 cents per kwh or higher, the Commission would consider that unreasonable and could decide not to allow the utilities to recover any imprudent or unreasonable costs.

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?

Clearly the intention of Act 129 is that all customer classes benefit and be offered significant energy conservation programs. The most equitable way to accomplish this is to ensure that significant programs are offered to all classes of customers, capable of achieving the reduction goals within each rate class. Given the adverse economic impact of pending rate increases on specific groups of customers within both the residential and commercial classes, it will also be essential for the Commission to pay particular attention to program designs which can insure that all members of a rate class can participate in and benefit from conservation and demand management programs. For example, in the residential class, utility delinquency and termination have increased sharply among customers who are not low income. Many of these customers, whose incomes are between 150% of the federal poverty level and 80% of median income, will not be able to participate in loan programs, and will need at least a partial grant in order to benefit from these programs. One model that has worked extremely well in New York, is the Assisted Home Performance with ENERGY STAR program, which is a 50% grant, 50% loan program.

- 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 EDCs should be given some latitude to create a unique program portfolio. For example, some EDCs should have a program that includes agricultural end-uses while such a program would have limited applicability in other territories. The makeup of each EDC's load is different so the overall portfolios will have different levels of cost effectiveness.

Within a rate class however, especially the residential customer class, all utilities should offer the same programs, that is the ENERGY STAR suite of programs. These are the fundamental building blocks of residential energy efficiency across the country.

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

Some program types will be cost effective across all territories and should be coordinated statewide. For example, Home Performance with ENERGY STAR and ENERGY STAR Homes are well established programs that should be delivered consistently statewide. In fact these programs could be administered by a single administrator statewide. The utilities could contribute a proportionate share of funding to statewide administration of these core programs.

Energy conservation education for consumers should also be done statewide. Not only will it be much less expensive to run one statewide energy education campaign, it will be much more effective. Whenever consumers are confronted with different and seemingly conflicting information, they become confused and do not take action. It is critical that the PUC itself oversee the administration of statewide energy education campaign. Again there are several states which offer useful models.

6. Reporting Requirements

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

7. The EDCs already have some DSR Programs available to various customer classes. They have developed these programs voluntarily without any mandates*

- a. Please provide a brief overview of current EDCs' DSR programs.

I do not have access to this information.

- b. What has been your experience with customer interest and participation levels in current programs?

Customer interest in energy conservation programs is higher than I have ever seen it in my tenure at ECA. This is true for customers of all incomes. Energy issues are on the front burner nationally and people are highly motivated to save energy, save money and help solve our environmental problems.

The current economic crisis has created a new challenge. Many more people and businesses are worried about spending large amounts of money on anything. The program designs will have to motivate customers to invest in energy savings as the best way to strengthen their economic position.

The current economic crisis also informs the education program the Commission needs to provide. Customers across the Commonwealth need to hear and to understand that the State of Pennsylvania is investing in clean energy in the form of energy efficiency in order to strengthen our local economy and in order to provide real savings for residents and businesses all across the state. Participation rates and success rates will be enhanced by a strong statewide education campaign.

- c. What level of weather-normalized peak load and demand consumption reductions have been achieved under the current programs?

I do not have access to this information.

- d. What types of new programs or changes to existing programs, if any, would be needed to achieve the targets contained in Act 129?

The existing programs do not serve all customer classes and the results are much smaller than will be required under Act 129. Electricity consumption has been growing in Pennsylvania at the rate of 1.4% per year during a period in which these programs have been in place. We urge the EDCs to enter into a program design process that looks at the best programs from around the country.

- e. What is the projected level of customer interest or savings in these new programs?

I do not have access to this information.

- f. Please provide references to any market research pertaining to specific EDC programs in Pa.

With a market transformation grant from the US DOE, the DEP has contracted with the ACEEE to conduct an assessment of Pennsylvania's energy efficiency and solar resources. This first draft of this study and its initial recommendations will be ready for review and comment by the PUC, the EDCs and all interested parties in late November.

Examples of existing EDC DSR Programs (2007):

- a. Duquesne, First Energy, PECO, PPL and UGI have load reduction programs requiring use of an interval meter for Commercial & Industrial customers.

Expansion of these programs should take into account the existing PJM programs.

- b. Duquesne and FirstEnergy have load control programs for residential and small C&I customers.
 - c. FirstEnergy has a distributed generation program for C&I customers.
 - d. PennPower has an hourly pricing program available to C&I customers.
 - e. Most of the EDCs already have some Time of Use (TOU) or Billing Demand programs available to various customer classes.
 - f. UGI offers to audit customer facilities as well as provide a rebate program for high-efficiency heat pumps.
 - g. FirstEnergy offers customers a web-based calculator. FirstEnergy is also currently considering two new programs: Power Factor correction for C&I and a Thermostat/Appliance Price Response Program for residential and small commercial customers.
8. In reference to question 1(e) above, the PA Treasury Department already offers the Keystone Home Energy Loan Program (Keystone HELP™). The Department refers to this as Pennsylvania's official streamlined, lower rate financing program for ENERGY STAR™ rated and other high efficiency and renewable energy improvements.
- a. To what extent will there be overlap and duplication between this program and Act 129 programs?

The Keystone HELP Loan is a tool, not a program. If the HELP Loan is modified to support a whole house approach such as Home Performance with ENERGY STAR, then we will have the makings of a cost effective program. The loan itself is excellent. It is very consumer friendly and is a very good tool. It will be an asset in any Home Performance with ENERGY STAR program.

- b. The Treasury Department already has an application process established for customer enrollment and contractor registry. To what extent could this process be used as a model under Act 129 compliance?

The contractor list put together by the Keystone HELP Loan does not screen contractors for their technical skill. The financial screening is adequate, but the technical screening is not.

- b. The Treasury already has a registry of certified contractors. Consumers are able to input a zip code to find certified contractors in their area. To what extent could these contractors' qualifications be used to register CSPs?

In addition to the information gathered by Treasury, contractors will need to submit their technical qualifications: any national certifications, professional licenses and other related credentials that are broadly recognized in the industry.