BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Comments of the National Association of Energy Service Companies (NAESCO) Regarding the Energy Efficiency and Conservation Program and EDC Plans

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Submitted by:

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Introduction

NAESCO's current membership of about 75 organizations includes firms involved in the design, manufacture, financing and installation of energy efficiency and renewable energy equipment and the provision of energy efficiency and renewable energy services in the private and public sectors. NAESCO members deliver about $5 billion of energy efficiency, renewable energy and distributed generation projects each year – about equal to all of the energy efficiency projects delivered by all US EDCs combined, according to a recent report by the Lawrence Berkeley National Laboratory.

NAESCO numbers among its members some of the most prominent companies in the world in the HVAC and energy control equipment business, including Carrier, Honeywell, Johnson Controls, Siemens, Trane and TAC Energy Solutions. Our members also include some of the nation's largest EDCs: Pacific Gas & Electric, Southern California Edison, New York Power Authority, and TU Electric & Gas. In addition, ESCO members include affiliates of several EDCs including ConEdison *Solutions,* FPL Energy Services, Pepco Energy Services, Constellation Energy Products and Services, Energy Systems Group and Direct Energy. Prominent national and regional independent members include AECOM Energy, AMERESCO, Atlantic Energy, Burns & McDonnell, Chevron Energy Solutions, CLT, Comfort Systems, CTS, EnergySolve Companies, EPS Capital, GDC/Unalite, NORESCO, Onsite Energy, Science Applications, Synergy Companies, UCONS, and Wendel Energy Services.

NAESCO member companies have delivered energy efficiency, renewable energy, demand response and distributed generation projects to Pennsylvania institutional, government, industrial, commercial and residential customers for over a decade. Our members have delivered almost all of the $300 million of projects in the Pennsylvania state (GESA) and local government performance contracting programs during the last few years.

In addition to the project delivery experience of its members, NAESCO has served on a number of advisory groups that assist the administrators of energy efficiency programs in several states, including:

- The New York SBC Advisory Group, which is appointed by the New York Public Service Commission to review and transmit the quarterly evaluation reports for the New York energy efficiency programs administered by NYSERDA.
- The Program Advisory Groups for three California utility energy efficiency programs;

- The Leadership Group of the National Action Plan for Energy Efficiency;
- The New York City Energy Policy Task Force;
- The Energy Efficiency Task Force for the Western Governors Association Clean and Diversified Energy Advisory Committee; and,
- The New York State Regional Greenhouse Gas (RGGI) Operating Plan Advisory Group.

NAESCO's experience on these advisory groups, as well as its experience in state proceedings that are developing new energy efficiency programs in North Carolina, South Carolina, Indiana, Oklahoma, Michigan, Illinois, Florida and New Jersey during the past year provide some perspective on the development of effective energy efficiency programs that may be useful to the Pennsylvania Commission.

Comments

NAESCO would like to offer brief comments on several of the questions posed by the Commission in its November 26, 2008 letter to interested parties as well as provide comments on several aspects of the November 26 draft staff proposal.

Question 2a. Should the Commission encourage, by policy, a statewide approach to some programs that are likely to be effective across Pennsylvania?

NAESCO strongly supports the statewide development and implementation of common energy efficiency and conservation programs by the EDCs across Pennsylvania. NAESCO suggests that the 80/20 rule applies to this issue. While there are certainly some programs that will be unique to each utility and based on the particular circumstances of some customer classes, the nucleus of the programs will offer a set of core technologies and efficiency program incentives to all customers within designated customer classes. These core programs will be directed at, and used by, the vast majority of customers within each EDC service territory and will deliver the vast majority of energy efficiency and conservation program savings. The co-ordination of program design by all of the program administrators (and with program design input from program providers) should ensure that the fundamental program elements of marketing approaches, application processes and forms, incentive levels, financing processes and forms, quality control procedures, monitoring and verification, and evaluation requirements will be the same across programs. These common program elements will make the programs much more cost effective for program administrators as well as program providers by reducing overall administrative and marketing costs and enabling the realization of volume discounts in the procurement of material and equipment. In addition, streamlining and standardizing the core program's administration and implementation framework will enable the program administrators to develop significant expertise in the operation of the various programs more quickly as well as create institutional administrative continuity. Moreover, the program commonality will result in the enhancement of the ability of the Commission to review and assess program results more effectively with a greater data pool from which to draw and evaluate outcomes.

NAESCO would go one step further and recommend that the Commission strongly consider a single program Commonwealth administrator for these core programs, or subsets of the core programs, (*e.g.,* individual administrators for residential, commercial and industrial programs).

The EDCs may respond to the recommendation of adoption of core statewide programs by saying that at this juncture they cannot design statewide programs, because they need to be able to test various program models over the next few years in order to select the best delivery model. NAESCO suggests that acceptance of this response by the Commission would seriously handicap the potential of the Commonwealth to reach its aggressive energy savings goals.

Numerous reports and studies of what constitute superior energy efficiency and conservation program design and which identify best practices are readily available. Based on operational programs and multi-year program results, this body of program evaluation data provides interested Pennsylvania EDCs with ready access to field tested data and measurable results. If the EDCs are unwilling or unable to integrate existing energy efficiency and conservation program data with their own programmatic mandates, or, to put energy efficiency and conservation programs into place in a timely manner, NAESCO suggests that the Commission turn to the robust and competitive world of third party program administrators who can deliver "best practices" statewide programs immediately.

Question 2b. Should the Commission seek to harmonize Act 129 programs with other Federal, State, local RTO or other group programs?

NAESCO strongly recommends that the EDCs combine the offers of various types of EE and DSR incentives offered by various entities, (*e.g.,* PJM capacity payments, federal tax credits, potential GHG emissions reductions allowances) into composite offers specifically targeted at different types of customers. Energy industry professionals understand that energy efficiency, demand response and distributed generation, for example, employ different types of technologies that have different economic characteristics. Most customers, however, do not know much about these distinctions and are confused by different energy resource programs that seem to overlap and sometimes compete with each other. Customers who want to buy a new car are not forced to procure the body from one vendor, the engine from a second vendor and the seats from a third vendor. Rather, the customers are presented with a base model and a coherent list of options from which to choose.

NAESCO suggests that it is the job of the EDCs and the Conservation Service Providers (CSPs) to break down the technology silos behind the design of many energy programs. The EDCs and the CSPs should be required to blend the available technologies and incentives into comprehensive, coherent customer-centric packages that are available to the customer through a single point of contact. We cannot expect customers to adapt to our way of marketing DSR and EE. Rather, we must adapt our marketing to the way that customers are used to buying.

NAESCO further suggests that the Commission mandate the EDCs to fully utilize the capabilities of the successful Pennsylvania Guaranteed Energy Savings Agreement (GESA) program for state and local government facilities. This program is considered a national model that has delivered hundreds of millions of dollars worth of projects. It has a robust and competitive infrastructure of Conservation Service Providers (CSPs) in place, is efficiently administered by the Commonwealth's Department of General Services and offers expert technical assistance to customers from a specialized engineering group at Penn State University. The use of the GESA program is supported by Act 77, which mandates that all public agencies in the Commonwealth that are planning substantial renovations or retrofits evaluate the applicability of GESA to their projects as per the following excerpt from Title 62, PA C.S.A. Procurement, Part II, General Procurement Provisions – Chapter 37: Contract Clauses and Preference Provisions, Subchapter E. Guaranteed Energy Savings Contracts:

> "**s. 3758 – Review of proposed capital improvement projects**
>
> Prior to entering into a guaranteed energy savings contract, every governmental unit shall review all proposed capital improvement projects for potential applicability of this subchapter and shall consider proceeding with a guaranteed energy savings contract under this subchapter where appropriate."

With some additional resources from the EDCs, DGS and Penn State can achieve the legislative target of 10% of Commonwealth energy savings from federal, state and local government buildings. There is no need for the EDCs to create redundant programs, or programs that compete with GESA. The EDCs should simply contribute resources to accelerate the expansion of the already successful GESA program.

Question 3c and Draft Proposal page 11. Can the TRC test include avoided environmental costs or other avoided societal costs?

NAESCO believes that the TRC test should include avoided environmental costs, because these costs either now are a quantifiable component of the cost of electricity generation (in the case of NO_x and SO_x) or are likely (in the case of CO_2) to become quantifiable components within the lifetime of the programs that will be proposed by the EDCs. NAESCO leaves to more knowledgeable parties the question of what other societal costs should be included in the TRC test.

Question 3f. What elements of the "avoided monetary cost of supplying electricity" should be included in the TRC test?

NAESCO believes that the "avoided monetary cost of supplying electricity" should include all elements of cost that an EDC incurs to generate electricity, or purchase electricity, and deliver that electricity to the customers' premises. In addition, the costs incurred by competitive suppliers to generate or purchase electricity that is supplied to the customers of the EDC should be included. The quantification of auxiliary avoided infrastructure costs should also be included where possible in order to make further progress toward the goal of properly pricing demand and supply resources to reflect their respective true costs.

NAESCO recognizes that the issue of how to use these costs in setting program budgets and calculating measure TRC scores, especially in the case of Dusquesne Electric, requires further deliberation. But we believe that the full avoided costs should be calculated as a starting point for the deliberation.

Question 3g and Draft Proposal page 11. Should these costs be valued at the "marginal costs for the periods when there is a load reduction" as required by the draft Implementation Order? What does this mean precisely?

NAESCO believes that marginal hourly costs should be used for TRC calculations, because these costs send the correct value signals to the EDC, its customers and program CSPs.

NAESCO cautions, however, that the hourly costs are relatively complex in the PJM region if the TRC test includes environmental costs. For example, load management programs that make economic sense by shifting customer electricity usage from high cost peak periods to lower cost off-peak periods, may incur an environmental emissions penalty by shifting that electricity usage from natural gas to coal-fired generation.

Questions 3j. Should the elements used in the calculation of an EDC's total annual revenue be the same elements used to calculate the "avoided monetary cost of supplying electricity" under the TRC test?

NAESCO believes that the Commission should ensure that the elements comprising the TRC test are transparent and readily understandable. The Legislature has clearly taken a keen interest in energy efficiency and believes that energy efficiency is a very cost effective option for Pennsylvania. The TRC test, which will determine which programs are cost effective, has to be fully transparent so that all interested parties can understand that energy efficiency is in fact more cost effective than many supply options and can readily comprehend the significance of the TRC test result calculations in establishing priorities when evaluating multiple policy and program options.

Question 4a. Should the Commission use a statewide independent evaluator to review EDC compliance with Act 129?

NAESCO believes that the long-term credibility of the EE&C programs is dependent on an independent evaluation of the program results. NAESCO suggests that not only should the Commission retain independent evaluation consultants, but the Commission should establish a stakeholder panel, such as the System Benefit Charge Advisory Group established by the New York Public Service Commission, to formally review the evaluations produced by the independent consultants. The New York Advisory Group has proved to be very valuable in securing the "buy-in" of every customer segment to the New York State Energy and Research Development Authority's (NYSERDA) energy efficiency programs, and also provides unvarnished feedback that NYSERDA uses to modify its programs to better serve customers and more efficiently achieve NYSERDA's energy efficiency targets.

Question 4b and Draft Proposal page 13. What programs lend themselves to a "deemed savings" approach and what programs require more vigorous pre- and post verification processes. How often should savings estimates be reviewed and how?

NAESCO suggests that, in general, programs that provide rebates for, or the direct installation of, large numbers of the same simple measures (*e.g.,* residential CFL bulb rebates or small commercial lighting programs) can rely on deemed savings estimates. These estimates, however, should be continually monitored and updated, using the results of studies in other jurisdictions, supplemented as necessary by studies conducted in Pennsylvania. This monitoring and updating should be conducted by a centralized resource, funded by the EDCs and reporting to the EDCs and the Commission, so that several EDCs are not conducting essentially the same studies simultaneously.

NAESCO notes that the continual monitoring and updating of the deemed savings values is different from the application of those values to programs. NAESCO believes that these applications should only occur at regularly scheduled intervals, perhaps every three years, so as not to make program design and implementation too difficult. It typically takes 6-12 months to get a program up to full production: this entails hiring the CSPs and vendors and training them in the program mechanics as well as educating the customers about the technical and economic aspects of each program. Constantly changing, or, as in California, post-program re-scoring based on deemed savings updates developed subsequent to program delivery, makes it very difficult to maintain program momentum, which is the key to achieving Pennsylvania's aggressive energy savings goals.

NAESCO further suggests that the field work required to update deemed savings estimates for various measures might well be combined with quality control inspections that the utilities perform to ensure that program measures are installed and functioning as specified. For example, an EDC Quality Control (" QC") inspector might combine in a single visit to a small commercial customer a QC inspection of the lighting retrofit and the placement of a "light logger" metering device to provide data on the run hours of the lighting that are used in the deemed savings updates.

Programs or projects that go beyond the installation or provisions of rebates for large numbers of simple measures, such as the comprehensive retrofit of large commercial, industrial or institutional facilities, should employ more complex savings monitoring and verification approaches (see discussion below).

Question 4d. In addition to the TRM for standard measures, should the Commission adopt a standard measure and evaluation protocol for determining the energy savings of non-standard or custom measures not included in the TRM?

NAESCO suggests that a combination of the three measurement and evaluation (M&E) protocols (IPMVP, ISO-NE and ENERGY STAR) mentioned by the Commission in its question may be appropriate. NAESCO and its member companies have experience with all three protocols.

IPMVP is the accepted protocol for large, complex projects, and is often contractually required by the customer and the financier of such projects. NAESCO sees no reason for the Commission to supplant IPMVP as the fundamental M&E tool, and knows of no other widely accepted protocol that might be used in place of IPMVP.

In mentioning ISO-NE and ENERGY STAR, the Commission has recognized the limitations of IPMVP and is asking how these limitations might be overcome.

The development of the ISO-NE protocol for the participation of demand resources in the ISO-NE Future Capacity Market exposed the limitations of both the deemed savings and IPMVP approaches currently used by utility program administrators and CSPs. Put simply, ISO-NE found both protocols inadequate to assure its system operators that demand resources would actually be available when needed. IPMVP, for example, does not typically produce the time stamping of project load reductions in the 15-minute intervals that ISO or RTO system operators require. Nor did the ISO accept the retroactive program evaluation studies performed by utilities as adequate verification of the future performance of their programs. Faced with these limitations, ISO-NE used a collaborative process involving all stakeholders to develop an M&E system that it believes will meet its needs. NAESCO therefore urges that the Commission and the EDCs initiate a similar collaborative process that will start with the already developed ISO-NE protocols, and modify them as needed for use in the PJM service territory.

The consideration of the ENERGY STAR Portfolio Manager rating system to track the energy efficiency improvements in larger facilities is a recognition that both IPMVP and the ISO-NE protocol produce reports that require significant technical expertise to understand and are much too complex to be used as verification of program results by many stakeholders, policy makers and the general public. NAESCO has spent six years under contract to the US EPA to research the applicability and promote the use of Portfolio Manager. We think it can be very useful to verify both the pre-project performance of a facility (overcoming the perception of facility managers that their facilities have very few opportunities for efficiency improvements) and the post-project improvement of a facility. NAESCO cautions, however, that the 80/20 rule definitely applies to Portfolio Manager ratings, in that a substantial number of facilities produce anomalous ratings that do not accurately depict the performance of the building. NAESCO will be happy to share its research results with the Commission, the EDCs or other stakeholders as requested.

Question 4f. Should the Commission adopt standard data collection formats and databases for the evaluation of program benefits and results that would be used across all EDC service territories?

NAESCO believes that it would be very useful for Pennsylvania to develop standard data collection formats and databases, but cautions that the development of these formats and databases has proved to be a daunting task in other jurisdictions. If the Commission decides to proceed with this task, NAESCO recommends that it be guided by a stakeholder group (since many of the data requirements eventually fall onto CSPs and other vendors as well as the EDCs), and that the project be guided by expert consultants who have demonstrated successes in building such databases in other industries as well as a knowledge of the data collection pitfalls experienced in other jurisdictions.

Question 7a. Does the definition of "Conservation Service provider" (CSP) in the Act prohibit an affiliated company of an EDC from serving as a CSP to an EDC other than its affiliate?

NAESCO believes that a CSP that is affiliated with an EDC or natural gas distribution company (NGDC) can compete fairly with other CSPs. NAESCO has several members that are EDC or NGDC-affiliated CSPs. However, the pre-requisite for a CSP competing fairly is functional and financial separation from its EDC or NGDC affiliate. In the case of the NAESCO members, this separation is confirmed by independent outside auditors, usually as part of the utility holding company's regular financial reporting. NAESCO observes that it is usually very difficult for a CSP to participate in programs administered by its affiliated EDC while maintaining an arms' length relationship and avoiding even the appearance of impartiality by the

EDC in selecting program CSPs. So we strongly recommend that CSPs not participate in the programs administered by their affiliated EDCs.

Question 7c. How should the Commission ensure that EDC self supplied EE&C programs are more cost effective than similar services offered by CSPs?

NAESCO suggests that the Commission might want to consider a process that has been successfully employed in California to successfully monitor the procurement of CSP services by EDC and NGDC program administrators. The California Commission established Program Review Groups (PRGs), composed of stakeholders who have no financial interest in the outcome of the utility procurements (consumer groups, environmental and energy efficiency groups with technical expertise, for example), who monitor the procurement process and certify to the Commission that the process is reasonable and fair. California is on a three-year program cycle, so the work of the PRGs is relatively heavy during the procurement period for each cycle, but the PRG members are compensated at a fair rate for their time, and their certification seems to have eliminated virtually all of the complaints about the utility CSP selection process.

Draft Proposal page 7 and Draft Proposal page 18. Participation of statutory advocates and interested stakeholders in the formulation of EDC plans and the periodic revision of those plans.

NAESCO strongly urges the Commission to mandate that the EDCs involve stakeholder groups in the development of their original program plans and the ongoing review and revision of those plans. NAESCO suggest that there might be one stakeholder group that deals with statewide programs, and additional stakeholder groups that deal with the programs of each EDC. As mentioned above, these stakeholder groups, sometimes called Collaboratives, have been very useful in New York. They have also been successfully used in New England and Massachusetts. The stakeholder groups or Collaboratives provide several critical functions.

First, the CSP or vendor stakeholders can provide valuable input to the program development process. CSPs and vendors work on profit margins that are much lower than observers or non-vendor stakeholders might guess. Therefore, details of program design that may seem insignificant to other parties can determine whether a program will be attractive to vendors or not. For example, ten years ago the precursor of what is now the largest program in the NYSERDA program portfolio, the Enhanced Commercial and Industrial Performance Program, was designed and put into the field with no input from the CSPs. It literally had zero participation during its first year of operation. At the end of that year, NAESCO organized a meeting between the CSPs and NYSERDA, at which the CSPs proposed five changes to the program, changes that were so minor from the NYSERDA standpoint that they were immediately accepted. Within months, the program was fully subscribed, and has been fully subscribed for the last nine years.

Second, the full participation of stakeholders in program design, review and modification can assure the "buy-in" of all groups that are critical to the long-term success of the EDC programs. Stakeholders take "ownership" of the programs, and work to improve them, rather than sniping at the programs and the EDC administrators.

Third, once the non-CSP or vendor stakeholders have "bought in" to the programs, they can open up marketing and delivery channels that have not been available to the EDCs. Stakeholder organizations that are community-based or that have large numbers of members that could be approached with some sort of affiliate marketing program can be very helpful to the EDCs in meeting their overall savings targets as well as their customer segment participation targets.

NAESCO understands that these stakeholder groups are time-consuming, but we believe they are essential to building the permanent foundation of stakeholder and ratepayer support that the EE&C programs will need to meet their aggressive targets.

Draft Proposal page 20. Commission review and approval of contracts between EDCs and CSPs.

NAESCO understands the need for the Commission to review and approve the terms of contracts between EDCs and CSPs. NAESCO urges the Commission to handle this review and approval in a timely way that does not derail the startup of programs. The Commission should outline, well in advance of the development of EDC-CSP contracts, the key terms that it expects to see in each contract, so that these terms can be built into the EDC competitive procurements, and CSPs will not be surprised when the contracts they are offered entail material changes from the RFP or specifications on which they based their proposals. The Commission should involve both EDCs and CSPs in a stakeholder process to develop these key contract terms, so that the Commission fully understands the key concerns of all parties and formulates contract terms that are fair and reasonable to all parties. As suggested above, the Commission should also utilize a

Program Review Group (PRG) to monitor and certify the EDC procurement process for CSPs and other vendors, because the PRGs will be able to reassure the Commission that the vendor selection and contracting process is fair and reasonable.

Conclusion

NAESCO appreciates the opportunity to present these comments to the Commission. We believe that the Commission has the opportunity to achieve the mandated energy savings goals for the Commonwealth by utilizing the resources of all stakeholders to design and implement a set of "best practices" programs, including expansion of the successful GESA program for state and local government facilities. NAESCO is ready to contribute its experience and resources to this effort.

Respectfully submitted by,

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