

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Re: Act 129 Energy Efficiency and Conservation Program Phase III

Docket No. M-2014-2424864

COMMENTS OF THE KEYSTONE ENERGY EFFICIENCY ALLIANCE
TO THE TENTATIVE IMPLEMENTATION ORDER REGARDING THE DESIGN AND
IMPLEMENTATION OF PHASE III OF ENERGY EFFICIENCY AND CONSERVATION
PROGRAMS UNDER ACT 129

Introduction

On October 23, 2014, the Pennsylvania Public Utility Commission (PUC, or Commission) released a Secretarial Letter seeking comments on a number of important topics relevant to designing and implementing a potential Phase III of the energy efficiency and conservation (EE&C) Program required under Act 129. Act 129 directs that the Commission set new incremental consumption and peak demand reduction targets, if the benefits of the program exceed the costs. More than 30 organizations submitted comments in response to the Secretarial Letter, including the Keystone Energy Efficiency Alliance. On March 11, 2015, the PUC issued a Tentative Implementation Order for Phase Three of Act 129.

Keystone Energy Efficiency Alliance (KEEA) is a non-profit, tax-exempt 501(c)(6) corporation dedicated to promoting the energy efficiency and renewable energy industries in Pennsylvania. With over 50 member organizations and individuals and growing, KEEA is the premier advisory group representing a diverse group of Pennsylvania's energy efficiency and advanced energy companies, entrepreneurs, and workers. KEEA is a diverse organization that

represents many energy efficiency businesses interests, several of which are engaged directly with implementing utility programs in the state. KEEA advocates on behalf of Pennsylvania's energy efficiency and renewable energy professionals on the local, state, and federal levels. KEEA greatly appreciates the opportunity to submit comments to the PUC on these issues.¹ The programs implemented under Act 129 have been successful in delivering cost-effective energy efficiency to the businesses and residents in Pennsylvania.

KEEA supports the initiation of a Phase III of EE&C Programs, and is in agreement with the Commission on many of the elements of Phase III proposed in the Tentative Order. In particular, KEEA approves of the five-year length of Phase III and the Commission's decision to allow and encourage EDCs to continue to spend Phase II budgets even after Phase II targets have been met. KEEA also appreciates the steps the Commission has taken to limit carryover savings in Phase III by requiring that EDCs meet the entirety of Phase II targets (exclusive of Phase I carryover) before rolling excess savings into Phase III. KEEA appreciates the opportunity to comment on the Commission's Tentative Order, and below offers several suggestions to maximize the benefits and effectiveness of EE&C programs moving forward.

Comments

Length of Phase III

¹ KEEA prepared these comments with assistance from the American Council for an Energy-Efficient Economy (ACEEE). ACEEE is a nonprofit, 501(c)(3) organization that acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, and behaviors.

KEEA supports the Commission's proposal of a five-year term for Phase III. However, we re-emphasize our comments in the Secretarial Letter that "there is still considerable uncertainty surrounding final rules for the U.S. Environmental Protection Agency's (EPA) Clean Power Plan (CPP)."² In the Tentative Order, the Commission noted that it may "reconsider its direction at a later date should the uncertainties surrounding the previous issue be resolved,"³ KEEA requests that the Commission further clarify this comment and be explicit that they will reconsider targets should it be warranted by pending federal rules like the proposed Clean Power Plan.

Cumulative Targets

The cumulative targets proposed by the Commission in the Tentative Order average about 0.82% per year as a percentage of expected sales (statewide). KEEA recognizes that this is a slight increase from Phase II average targets, but also notes that these targets are certainly not aggressive relative to regional peer jurisdictions. For example, yearly energy savings targets for electric utilities are about 1.6% Maryland, 1.3% in Iowa, and 1% in Michigan.⁴ A review of state energy efficiency resource standards found median incremental electricity savings targets to be about 1.4% per year.⁵ There is significantly more energy efficiency potential available in

² See KEEA Comments to Secretarial Letter, page 4.

³ See Tentative Order, page 16.

⁴ Data from ACEEE's 2014 State Energy Efficiency Scorecard. <http://aceee.org/research-report/u1408>.

⁵ See Downs, A. and C. Cui. 2014. Energy Efficiency Resource Standards: A New Progress Report on State Experience. ACEEE. <http://aceee.org/sites/default/files/publications/researchreports/u1403.pdf>.

Pennsylvania, as the SWE Potential Study points out.⁶ KEEA recommends that the Commission seriously consider Phase III targets averaging 1% per year. Even with the Act 129 limitations on spending, KEEA believes that achieving 1% savings per year is possible. During Phase I, EDCs were able to meet savings targets for significantly less than both the SWE and the EDCs themselves projected, and it appears that this will again be the case for most EDCs during Phase II. Therefore, it is reasonable to assume that this pattern of overachievement will hold for Phase III. KEEA encourages the Commission to set more aggressive savings targets to account for this likely overachievement. In the following sections, we also identify several cost-saving mechanisms that may help EDCs achieve higher targets within the context of the Act 129 budget cap. These mechanisms include use of excess Phase II budgets, more emphasis on low-cost industrial programs, and cost-sharing arrangements for multifamily and low-income programs.

KEEA also notes that there is some confusion around how progress toward targets will be counted. In recent stakeholder meetings, staff seemed to say that the 2021 target would represent the sum of the annual incremental savings as opposed to the annual cumulative savings (the latter accounting for measure decay). EDC progress toward meeting that goal would be accounted for by summing the annual incremental savings at the end of each program year. This accounting methodology was unclear in the Tentative Order, and should be clarified in the final order.

KEEA suggests the following proposed change to the Tentative Order language to make it consistent with the Statewide Evaluator (SWE) Potential Study, which KEEA believes provides EDCs with greater confidence that they can invest in energy savings earlier in the Phase and

⁶ See Energy Efficiency Potential Study for Pennsylvania Final Report (February 2015) base achievable potential calculations, page 4. <http://www.puc.pa.gov/pcdocs/1345079.pdf>.

provides additional customer energy saving benefits while also contributing to helping the EDC meet its final year target.

From page 43 of the Act 129 Phase III Tentative Order: “The Act 129 programs are cumulative at the end of a phase such that the savings at the end of a phase must show that the total savings from measures installed during the phase are equal to or greater than the established reduction target.” KEEA recommends the following addition: “*To achieve the established reduction target, EDCs will be given credit for all new incremental savings delivered in each year of the Phase, rather than exclusively focusing on the cumulative savings that appear in the final year of the Phase.*” This addition will allow EDCs to make better use of behavior programs, which complement traditional measures and can help drive customer engagement throughout the phase.

Phase II Excess Budgets

In the Tentative Order, the Commission proposes that while EDCs will be able to continue to spend EE&C budgets during Phase II even after their savings targets have been met (using excess savings to meet Phase III compliance targets), they should not roll remaining budgets into Phase III. The Commission proposes that EDCs begin Phase III utilizing solely their Phase III budgets. The Commission states that it does not believe it is “sound policy to continue spending Phase II budgets in Phase III when those monies could be refunded back to the appropriate rate classes.”⁷

⁷ EE&C Phase III Tentative Order (page 110)

KEEA supports the Commission's decision to allow EDCs to continue committing Phase II budgets to programs even after targets have been met. However, we also note that the fact that the Commission is faced with the question of what to do with unspent Phase II budgets suggests that underlying assumptions made by the Commission in setting these targets resulted in targets that were too low, or there has been a change in circumstances allowing EDCs to achieve energy savings at lower costs. As we noted above, this should suggest that higher targets are achievable, and the Commission should consider this pattern of under-spending in finalizing Phase III targets.

Additionally, should the Commission determine that unspent Phase II funds remain, we offer several alternatives to the Commission's proposal to refund these dollars. We urge the Commission to reconsider its statement that it is a more sound policy to refund remaining Phase II dollars to customers rather than commit them to additional efficiency programs in Phase III. With cost-effectiveness requirements in place, every dollar spent on efficiency is guaranteed to generate more than \$1 in benefits for the state of Pennsylvania. The SWE final report on Act 129 Phase I determined that all PA EDCs had positive benefit-to-cost ratios. Each dollar spent on energy efficiency generated significantly more savings. TRC ratios ranged from 1.6 (Met-Ed) to 3.1 (Duquesne). In other words, every dollar of efficiency investments yields \$1.60-\$3.10 in benefits to Pennsylvania ratepayers. In addition, there are likely high administrative costs to returning money, and these dollars instead should be allocated to further customer savings.

Using excess Phase II budgets for Phase III efficiency programs would also enable the utilities to expand customer participation through a more diverse set of programs.⁸ Moving away from a heavy focus on lighting programs toward more balanced portfolios that achieve long-term savings will generate greater savings for customers beyond the first several years of Phase III. Shifting excess Phase II budgets into Phase III will give EDCs the financial room they need to meet higher targets while also investing in more comprehensive programs, which we discuss next. PennFuture, along with KEEA, Sierra Club, Environmental Defense Fund, and Clean Air Council, recently contracted with Optimal Energy and Energy Futures Group to design a sample portfolio that emphasizes more comprehensive-long term measures. This document is attached (see attached study). We strongly urge the Commission to consider the potential that excess budgets could have in allowing EDCs to reach more customers across all customer classes with comprehensive programs without compromising overall Phase III energy savings targets.

KEEA sees clear benefits to rolling excess Phase II budgets into Phase III. However, in order to maximize benefits to ratepayers, it is important that EDCs truly do use these additional funds to go “above and beyond” rather than displace approved Phase III funds. Therefore, should the Commission allow budget rollover, KEEA also recommends that backstops be put in place to ensure that the entirety of Phase III budgets are also spent during Phase III.

While rolling excess budgets into Phase III to fund more comprehensive programs is preferable, KEEA also suggests that it may be possible to use excess budgets to fund a shared

⁸ For strategies to achieve higher participation, see York et al. 2014. Expanding the Energy Efficiency Pie: Serving More Customers, Saving More Energy Through High Program Participation. ACEEE. <http://aceee.org/research-report/u1501>.

savings mechanism for EDCs that exceed Phase II targets by some reasonable amount. The Commission should consider the best ways to ensure that programs do not go dark and that EDCs are properly incentivized to deliver programs throughout the entirety of Phase II and Phase III. A shared savings mechanism based on specific annual and cumulative portfolio goals could ensure that EDCs continue to invest in successful programs. During Phase II, even successful programs have faced setbacks as EDCs have shifted portfolio funds.⁹ A well-designed incentive could encourage EDC investment in programs with high TRC ratios and broad participation, guaranteeing popular programs do not go dark. We discuss performance incentives in more detail later in our comments.

Demand Response Targets

KEEA supports the development and adoption of demand response targets and required incremental reductions in peak demand for all Act 129 EDCs, and with a few exceptions agrees with the Commission's proposal. We do request that the Commission further consider a few specific elements of the DR proposal. With recent concerns over power outages in the Erie area, DR for PENELEC service territory should be reconsidered. If the Commission still agrees with the SWE earlier analysis that there is no cost effective DR in PENELEC service territory, KEEA agrees with the Commission's determination that PENELEC spend the entirety of its budget on EE programs if no cost effective peak demand reductions exist in its service territory.

⁹ For example, PECO received approval to divert money from its small business budget, leading to significant downsizing of the successful SmartWatt program and freezing future potential projects.

Regarding dual participation, KEEA respectfully disagrees with the Commission and believes that programs through PJM's ELRP are reliability and emergency focused and Act 129 DR programs have an added economic value for all consumers. There are times when DR will be most effective at reducing high cost peak demand periods that would be compromised if both options don't exist for customers, thereby having a deleterious impact on wholesale market prices. There are safeguards the Commission can impose to ensure against a certain amount of double counting without eliminating dual participation. Developing those safeguards will acknowledge DR's contribution to both reliability and peak demand reductions and potentially avoid larger investments in transmission and distribution. Each of these programs has its value to consumers and the grid, and if safeguards designed to weed out double payments in cases where that may exist are put in place, it will retain the economic and environmental value of dual DR programs while limiting the use of high price peak electricity from polluting generators complicating compliance with the upcoming Clean Power Plan.

Further, KEEA recommends that the Commission encourage the EDCs to deploy new innovative DR programs, for example behavioral demand response programs or thermostat-based DR that were not considered by the SWE in the DR Potential Study. Given that technologies change and evolve, the EDCs should not be constrained to deploying only the programs and measures included in the DR Potential Study. In addition, these newer measures should be integrated into future studies over time.

Comprehensive Programs

In our response to the Secretarial Letter, KEEA strongly urged the Commission to investigate other mechanisms for encouraging comprehensive programs. Specifically, KEEA suggested that the Commission clarify the definition of “comprehensive” for the purposes of providing guidance to the utilities design progress. KEEA supports defining comprehensive at the individual program level using flexible performance-based programs that reward savings depth. However, KEEA also agrees with PECO’s assertion that “the portfolio as a whole should be comprehensive and offer energy savings across all cost effective electric end uses through various types of programs.”¹⁰ To that end, KEEA suggests that there may be additional portfolio-level improvements that would deliver deeper savings while keeping costs low.

KEEA appreciates that in its Tentative Order, the Commission included a requirement that EDCs offer at least one comprehensive program for residential and at least one comprehensive program for non-residential customer classes. KEEA notes that to date EDC programs have tilted toward the residential sector, with about 60% of savings coming from the residential sector and 40% from the commercial and industrial (C&I) sector. Across the country, the portfolio split tends to be the reverse.¹¹ While KEEA does not recommend that EDCs make sudden and dramatic changes to their portfolios, we do recommend that more attention be paid to savings opportunities in the C&I sector. Bringing portfolios closer to a 50% residential-50% C&I split might deliver additional opportunities for programs with low acquisition costs. Making this adjustment, as well as other plan suggestions in the attached Optimal sample portfolio, should

¹⁰ PECO Energy Company’s Comments on the Commission’s October 23, 2014 Secretarial Letter. (pg. 13)

¹¹ A 2014 study by LBNL found that nationwide, about 55% of first-year savings came from C&I programs, and 40% from residential programs. See Billingsley et al. (2014) for more information: <http://emp.lbl.gov/sites/all/files/lbnl-6595e.pdf>.

help EDCs reach the higher Phase III goals proposed by KEEA. C&I programs (particularly non-lighting programs) tend to have longer measure lives than residential programs, bringing their relative cost down in comparison to residential programs. A study of nine states found average cost of saved energy of \$0.037/kWh for residential portfolios and \$0.027/kWh for C&I portfolios. Measure lifetimes averaged 12.5 years for C&I measures compared to 8.1 years for residential programs.¹² Residential programs are an important part of EDC portfolios, and KEEA recognizes that there are opportunities for deep savings in this sector. However, we recommend that the Commission encourage greater investment in the C&I sector, beyond the comprehensive program requirement it sets forth in the Tentative Order. A sample portfolio and specific industrial program examples are attached (see Optimal document attached with ACEEE addendum). While KEEA is not recommending that EDCs must use this portfolio, we do not envision another opportunity to help shape utility plans short of any hearings so we present these documents at this time to help guide the process moving forward. We also note that a greater focus on barriers to engagement of small businesses might be better addressed through turnkey small business programs.

KEEA also recommends that the Commission require EDCs to report lifetime energy savings associated with programs. Reporting and tracking of lifetime savings will help stakeholders better understand EDC portfolio plans and reports. The current focus on acquisition costs emphasizes only first-year savings. However, to truly understand the importance and efficacy of Act 129 efficiency portfolios, stakeholders need data on lifetime energy savings.

¹² See Molina, M. 2014. The Best Value for America's Energy Dollar: A National Review of the Cost of Utility Energy Efficiency Programs. ACEEE. <http://aceee.org/sites/default/files/publications/researchreports/u1402.pdf>.

Especially as focus shifts toward more comprehensive measures that deliver longer-term energy savings, failure to report lifetime savings puts stakeholders at a significant disadvantage in providing comments and participating in EDC planning processes.

Low-Income Carve out and Multifamily Programs

KEEA supports the Commission's focus on conservation in the low-income sector. At the same time, we recognize the fact that these programs are the least cost effective of the Act 129 portfolio, and that by increasing the share of low-income programs, the remaining programs in the portfolio must meet stricter cost-effectiveness guidelines. We therefore encourage the Commission to back its low-income carve-out design proposal with detailed analysis. To begin, we would encourage the Commission to ask and answer the following questions:

1. Does weatherization or energy conservation of a low income payment troubled customer's home reduce the likelihood that that customer will be terminated for nonpayment?
2. How many CAP customers are declining to be weatherized when the service is offered to them? What are the justifications for this refusal? Are the utilities providing any disincentives, such as removing them from the CAP program? If not, why not?
3. What percentage of energy savings is correlated to reduction in bill payment problems?
4. Given that a significant number of low income high users live in homes that are so severely deteriorated that they cannot qualify for whole house weatherization, what steps has the

Commission taken to ensure that Act 129 programs are coordinated in their delivery with other services, particularly the Weatherization Assistance Program?

KEEA also notes that there is insufficient data available on low-income and multifamily potential in each service territory, and requests that the Commission require EDCs to provide better data in terms of multifamily and low-income demographics in each EDC service territory. In terms of multifamily housing, the SWE determined that multifamily housing represented 11.8% of the base achievable savings within the residential sector, when reviewing the base achievable savings by housing type. The SWE did not provide any further analysis of multifamily housing in its EE Potential Study, so it is not possible to determine an accurate picture of the true potential across all sectors and territories. Similarly, the SWE identified 5.8% of the base achievable portfolio savings to be within the low-income sector. EDCs have argued that a service-territory level analysis is more appropriate than a statewide approach for determining achievable potential for carve-outs. KEEA urges the Commission to require utilities to better track and report savings opportunities in the multifamily and low-income sectors so that all stakeholders are able to access data at the service-territory level as the need is different in each region. This information could impact the Commission when determining whether or not program design makes more sense on an EDC service territory basis.

We also ask that the Commission clarify the details of their proposal for the low-income carve-out. In the Tentative Order, the Commission proposed an additional requirement that “each EDC must obtain no less than 2% of their overall consumption reduction target exclusively from

direct-installed low-income measures.¹³” The Commission did not define “direct-installed measures” but noted that “programs utilizing measures such as home energy reports, efficiency kits, giveaways at community events and all other non-low-income sector program savings (upstream lighting, rebates, etc.) will not count toward meeting the 2% consumption target” while “directly-installed measures... will provide more of a whole-house and/or weatherization (insulation, air sealing) type of program emphasis.¹⁴” This characterization suggests that the Commission has a different understanding of a direct-install program than the definition usually associated with these programs. KEEA typically understands direct-install measures to be prescriptive. However, the Commission’s approach suggests that additional measures and programs might also be considered under this umbrella. KEEA suggests defining a direct-install program as any program utilizing energy-saving measures installed in a home or building. This definition captures the intent of ensuring savings may be derived from both simple, low cost measures (such as lighting) while providing the flexibility to include comprehensive measures requiring higher initial investment but delivering significant and cost effective long term energy and non-energy benefits (such as envelope and HVAC upgrades). Further clarification is needed from the Commission on this issue.

With these details clarified, we encourage the Commission to push EDCs to explore new program designs and best-practices for low-income and multifamily programs. Low-income and multifamily programs are subject to unique challenges, and there are some additional areas in

¹³ Tentative Order page 57.

¹⁴ Ibid.

which the Commission might help guide EDCs, both in terms of reporting and cost-effective program design. The American Council for an Energy-Efficient Economy, for example, has reported on exemplary low-income programs that proved to be cost-effective.¹⁵ Many of these cost-effective low-income programs include behavioral and energy education energy efficiency programs that can reach low-income households in a utility service territory and coordinate with external agencies, such as non-profits or federal weatherization assistance programs. Examples of states with such coordination programs include Ohio, Washington, Wisconsin, and Massachusetts. These programs maximize achievable savings by leveraging funding across multiple sources.

KEEA also believes that a stakeholder collaboration process will be critical to ensuring that best-practices are shared throughout the state, and to that end thanks the Commission for its proposal that interested stakeholders work with the Commission's Bureau of Consumer Services (BCS) to explore possible cost-effective solutions and multifamily program designs that could be developed and presented to the EDCs as potential pilots. We suggest that BCS initiate the stakeholders process well in advance of EDC plans submittal date.

Additionally, KEEA again emphasizes the opportunities that financing could play in the multifamily sector. Financing options, including on-bill repayment, are the most effective new tool that the PUC could bring to support multi-family as well as the commercial sector in general. For example, PSE&G's program in New Jersey for comprehensive retrofit of

¹⁵ For example, see Kushler et al. 2005. *Meeting Essential Needs: The Results of a National Search for Exemplary Utility-Funded Low-Income Energy Efficiency Programs*. ACEEE. <http://aceee.org/sites/default/files/publications/researchreports/U053.pdf>

multifamily buildings incorporates a combination of incentives and on-bill financing to stimulate the deepest possible range of cost effective measures. Stakeholders, including EDCs, have already invested in a stakeholder collaborative and have guidance from the Commission on how to develop a pilot program that the Commission would consider. On bill repayment would greatly help both the multi-family housing sector and the small business sector invest in more efficient equipment and increase participation in these sectors. Billing system upgrades was previously cited as an obstacle to moving forward. Modern billing systems should be able to easily handle changes needed to accommodate on bill repayment as well as other billing changes due to the advancement of technology in this area. The PUC should require at least one utility to conduct an on-bill pilot program to be launched at the beginning of Phase III. These types of programs may help EDCs achieve greater savings in this area, given limited funds.

Furthermore, coordination between EDCs – as well as additional coordination with natural gas distribution companies – could help clarify program offerings for multifamily building owners. ACEEE identified additional best practices in a 2013 report.¹⁶ Similarly, low-income programs are currently offered under several umbrellas. Consolidating programs to the greatest extent possible could significantly increase participation. KEEA encourages the Commission to work with utilities to develop strategies to better reach the multifamily and low-income markets.

Finally, KEEA points out that there may be significant opportunities available to EDCs to enter into cost-sharing partnerships for low-income and multifamily programs. Utilities in other

¹⁶ See Johnson, K. 2013. *Apartment Hunters: Programs Searching for Energy Savings in Multifamily Buildings*. ACEEE: Washington, DC. <http://www.aceee.org/sites/default/files/publications/researchreports/e13n.pdf>.

states have successfully partnered with state agencies and local groups to deliver comprehensive energy efficiency programs to low-income households. For example, the long-standing WarmChoice program run by Columbia Gas in Ohio since 1987 includes a partnership with five community-based organizations. The program began to experiment with cost-sharing in 1994, using Weatherization Assistance Program funds.¹⁷ In Maryland, the Multifamily Energy Efficiency and Housing Affordability – EmPOWER Program is a partnership between the Department of Housing and Community Development and utilities. This program matches funds in several ways, including using partial funding from other entities to bring programs into compliance, building on existing DHCD projects, and leveraging funds to finance large projects. Far more common is for utilities to partner together to market programs statewide, which can bring down marketing and administration costs. For example, a four-year collaboration between FortisBC and BC Hydro generated cost savings of \$1,920,000 in the form of better customer reach and more streamlined programs.¹⁸ The Commission clearly has an interest in encouraging EDCs to move beyond cream-skimming measures and toward deeper-savings programs in this sector. Cost-sharing arrangements could bring down acquisition costs of these programs, allowing EDCs to find deeper savings in this sector, and freeing up additional funds for the remainder of the efficiency portfolio. There is some indication that multi-family weatherization coordination efforts are moving forward as part of the State Planning process. Department of Community & Economic Development recently requested that the WAP PAC formulate a Multi-

¹⁷ See Kushler et al. (1995): <http://aceee.org/sites/default/files/publications/researchreports/U053.pdf>

¹⁸ For more information on program design and evaluation procedures, see FortisBC Energy Utilities Energy Efficiency and Conservation Program - 2012 Annual Report. http://www.fortisbc.com/About/RegulatoryAffairs/GasUtility/NatGasBCUCSubmissions/Documents/130328_FEU_2012_EEC_Annual_Report.pdf.

Family Weatherization Subcommittee to consider how to enable either current subgrantees or new partners to provide multi-family weatherization on a larger scale. EDC involvement could be a critical tool for greater participation in these programs while simultaneously lowering costs for EDCs.

Government/Education/Nonprofit Carve out

In the Tentative Order, the Commission proposes a large drop in this carve out, from 10% down to 3.5%. KEEA understands that budgets will be constrained under the 2% cap and that in order to achieve deeper savings, changes have to be made. While KEEA generally supports this recommendation, it may make sense to ask each EDC to respond in the Reply Comments with available data outlining the potential savings in each EDC territory before dropping this sector categorically across each utility service territory.

Net-to-Gross

KEEA supports the assertion by the Commission that both net and gross savings are useful measures in program planning. KEEA supports the Commission's decision to maintain the Phase I and II practice of using NTG for program planning purposes while determining compliance based on gross verified savings. Measuring the gross contributions of energy savings is important for assessing energy efficiency in the context of supply-side resources.¹⁹

¹⁹ See Kushler et al. (2012) A National Survey of State Policies and Practices for the Evaluation of Ratepayer-Funded Energy Efficiency Programs. ACEEE. <http://aceee.org/research-report/u122> for more information on the use of net-to-gross ratios across the country.

Under the current Act 129 structure, KEEA does not see a need to consider net savings for compliance. Attribution of savings can be complex. However, should cost recovery mechanisms change, KEEA encourages the Commission to revisit the NTG issue. Net savings may become a critical element in any future discussion of incentives, since it would be unreasonable for EDCs to benefit financially from changes in energy use not resulting from their actions. KEEA believes that performance incentives could be an effective tool in policy design for Phase III and beyond, and would support the development of net savings goals should the Commission adopt such a mechanism.

Should the Commission further pursue the issue of net savings, KEEA also seeks to make the Commission aware of technological innovations that allow for net savings calculations. Savings measurement software tools that have recently entered the marketplace can provide EDCs with the ability to conduct in-depth measurement quickly and cost effectively. KEEA encourages the Commission to recognize this technology and encourage the use savings measurement software tools in conjunction with traditional EM&V methods.

Cost recovery

In the Tentative Implementation Order, the Commission does not propose the establishment of an incentive or alternative revenue mechanism for EDCs. The Commission notes that Act 129 provides the appropriate mechanism for EDCs to obtain revenue on its assets through just and reasonable rates.

KEEA urges the Commission to reconsider the benefits of well-designed performance incentives for utilities in conjunction with the penalty framework as it is currently structured. Performance incentives are working well in 25 states to align utility business interest with energy efficiency goals.²⁰ The existing regulatory structure with only a statutory penalty is all risk, with no reward for EDCs. It makes sense, therefore, that EDCs will support limited targets and pursue “cream-skimming” strategies that emphasize savings from prescriptive measures rather than pursuing deeper, more complex projects that maximize long-term energy savings. KEEA would like to again take this opportunity to urge the Commission to implement performance incentives for utilities in conjunction with a revised penalty framework that provides for a transparent tiered approach.

As we stated in our Secretarial Letter Comments:

Though Act 129 places limitations on cost-recovery, there is no language explicitly preventing the Commission from implementing performance incentives. A performance incentive is not tied to or equivalent to lost revenue recovery. KEEA does not support lost revenue mechanisms but strongly supports performance incentives. Performance incentives are a key tool in incentivizing EDCs to reach high levels of savings. KEEA feels that performance incentives are an important part of a comprehensive efficiency program and should be included as a reasonable and prudent part of the demand-side management strategy in Pennsylvania. Sixteen of the 24 states that currently have energy savings targets in place couple those policies with performance incentives.²¹ Research done by ACEEE in 2011 found that performance incentives were correlated with higher per-person investment in efficiency programs by utilities, and that they contributed to increased “buy-in” by corporate management.²²

²⁰ See S. Hayes. 2011. Carrots for Utilities. <http://aceee.org/research-report/u111>. ACEEE. See also Galvin and Kim 2013. Show Me The Money: A Review of Recent Utility Energy Efficiency Performance Incentive Designs. http://aceee.org/files/pdf/conferences/eeer/2013/2C-Galvin_0.pdf. ACEEE is currently updating research in this area, and a forthcoming report (Nowak et. al 2015) will further emphasize this finding.

²¹ ACEEE’s 2014 State Energy Efficiency Scorecard

²² Hayes et al. 2011

Recent research by ACEEE has found that nearly all states with performance incentives reward energy savings as opposed to spending. More importantly, this same research finds that states with performance incentives in place are achieving significantly more energy savings than states without performance incentives.²³ In recent years, several states (i.e. Massachusetts, Vermont) have moved toward multi-factor performance incentives that also reward utilities for achieving program goals beyond energy savings. This strategy may fit well in Pennsylvania given Act 129's emphasis on achieving savings within specific sectors.

Should the Commission choose to further consider a performance incentive, KEEA makes the following recommendations. A well-designed performance incentive should:

- Be performance-based. Especially if excess funds from prior phases are used to fund an incentive, it will be critical that a performance incentive be designed in such a way as to encourage EDCs to achieve deep savings rather than cream-skimming. An emphasis on both cumulative and annual targets may help ensure that EDCs achieve meaningful savings during each program year. KEEA continues to ask the Commission to support annual targets.
- Take a tiered approach. Under this system, a utility receives the full value of the incentive only after meeting or surpassing portfolio goals. A well-designed incentive should encourage EDCs to achieve savings beyond targets in order to maximize the incentive.

²³ Nowak et al. (forthcoming)

- Consider both long-term and short-term policy goals. Performance incentives can reward utilities for achievement over the full Phase *and* can encourage utilities to meet incremental targets. Under the current penalty-based system, EDCs are incentivized only to meet the final Phase savings target. A performance incentive could also help shift EDC focus toward measures that provide long-term deep savings.
- Include a reasonable cap. Almost all incentive mechanisms have a cap, or maximum limit on the amount awarded to the utility. This cap should be reasonably high to encourage EDCs to exceed savings targets while also considering consumer protections.

Conservation Service Providers

While the Request for Proposals (RFP) competitive bidding process can be beneficial in many ways, the Commission's proposal to require EDCs to file CSP RFP competitive bidding procedures and to bid all CSP contracts without exception will result in unnecessary increases in costs and delayed energy efficiency savings. The costs incurred by the EDCs and the Commission will be considerable, as an RFP process requires the allocation of significant resources. An RFP process will also result in the delayed implementation of energy efficiency programs, given the fact that an RFP process typically takes several months.

Instead, we propose the following exception. For a program that is currently running in Phase II that is proposed to continue in Phase III, we recommend that the EDCs not be required to rebid that particular CSP contract. Of course an EDC has the option to rebid program

implementation if it seeks new vendors, but it will not be under an obligation to do so, as it is now. In this way, customers will benefit from the opportunity to continue to participate in previously approved programs without disruption, the EDCs will benefit from the continuity and will realize energy efficiency savings expeditiously, and the Commission will incur reduced costs and greater efficiencies.

KEEA thanks the Commission for the opportunity to submit comments.

Sincerely,

Maureen Mulligan

Addendum – Industrial Energy Efficiency Program Options

States, utilities, and other program administrators have pursued many different types of industrial energy efficiency programs including technical assistance and knowledge sharing programs, prescriptive programs, custom programs, market transformation programs, energy management programs, and self-direct programs.²⁴ In Pennsylvania’s industrial sector, significant untapped energy savings are available and EDCs should consider programs that target these customers. Since the large majority of C&I sector savings came from lighting projects in Program Year 5 portfolios, there are substantial opportunities to pursue savings from other, non-lighting equipment and projects to help both large commercial and industrial customers use energy more efficiently.

In order to achieve high participation from industrial customers in utility programs, program features must respond to the specific and unique needs of industry. For example, programs should be prepared to offer high quality technical expertise for the sophisticated customer and provide both prescriptive and customized project options. A combination of prescriptive offerings for common technologies and customized project offers can meet the needs of different kinds of customers and offer the level of control and choice that industries demand. In addition, programs should be administered so that they enable flexibility, accommodate industrial customer scheduling needs, and facilitate a streamlined application processes that encourages participation.²⁵

The following discusses four different program options that could help industrial customers in Pennsylvania improve the efficiency of their facilities and their manufacturing processes, while benefiting Pennsylvania residents and helping the state achieve its savings targets.

Prescriptive C&I Equipment Energy Efficiency Programs

For many customers, incentives for prescriptive equipment improvements are easiest to take advantage of. Prescriptive offerings provide incentives for a range of predetermined eligible equipment that can include lighting, motors, pumps, HVAC systems, and other technologies that apply broadly to industrial facilities. For example, Rocky Mountain Power’s Energy FinAnswer Express program offers prescriptive rebates to industrial customers in Wyoming and Utah for an extensive list of equipment that increases energy efficiency, including retrofits and upgrades of existing equipment as well as new construction projects. The prescriptive program is coupled with a custom program to target both deep savings and quick wins (SEE Action 2014).

²⁴ This categorization and a full description of each of these types of programs can be found in the SEE Action report.

²⁵ The SEE Action report includes a more in-depth discussion of program features that add value to industrial customers and contribute to program success.

Custom C&I Equipment Energy Efficiency Programs

For large, highly engaged customers, custom incentive programs provide the best opportunity for large energy savings projects. Customized offerings can be responsive to the specific needs of an individual company's industrial process in ways that prescriptive programs cannot. Nearly all established industrial programs offered by utilities have some form of custom incentive program available to their customers (Neubauer 2013). The customer often works with program staff to identify a project, analyze the savings opportunity, and estimate project costs. Then, the program administrator agrees to an incentive amount based on the project characteristics. A large paper mill in Washington State was able to cut its power requirements by 12% per year through custom equipment upgrades and projects financed through Bonneville Power Administration.²⁶

Strategic Energy Management (SEM) Programs

Utility strategic energy management (SEM) programs help large customers develop a more systematic, strategic approach to energy management, going beyond the one-project at a time approach (Kolwey 2013). There are several program options under the SEM approach including: (1) co-funding an onsite energy manager at customer facilities, (2) training staff at facilities to implement the management systems needed for achieving long-term energy-saving goals, and (3) finding low-cost operations and maintenance (O&M) opportunities, and on measuring these savings through better energy monitoring and analysis (Kolwey 2013).

In 2013, ACEEE and the Southwest Energy Efficiency Project (SWEET) conducted studies of strategic energy management program options. SWEET's study documented energy savings from three utilities or program administrators -- Bonneville Power Administration, Energy Trust of Oregon, and Puget Sound Energy -- that achieved savings from SEM programs of 15-25% of their total savings for all C&I programs (Kolwey 2013). ACEEE's study looked at five energy efficiency programs that placed energy managers onsite in industrial facilities, which helped to accelerate the pace and volume of industrial efficiency initiatives by overcoming obstacles to energy optimization (Russell 2013).

Combined Heat and Power (CHP) Programs

Programs to encourage CHP can take several forms and increased deployment can contribute significant energy savings and additional benefits. States and utilities should consider programs that provide financial assistance including incentives for both production (\$/kWh) and capacity (kW), grants, and loan programs. Customers demonstrate a strong interest in these types of programs when they are available. In addition to financing options, programs may provide technical assistance including engineering or feasibility studies which help reduce expenses and overcome the high upfront costs of installing a CHP system. Eversource Energy, which administers a ratepayer funded CHP program in Massachusetts reported 54,024 MWh of annual

²⁶ See Example 7 in SEE Action's report, which details the benefits of NORPAC's Washington Mill from custom energy efficiency offerings.

energy savings from CHP systems in their service territory during the 2013 program year with \$4,785,086 in CHP program spending (Nowak, Kushler, and Witte 2014).²⁷

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²⁷ Eversource Energy was known NSTAR in 2013.