

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking to Examine the Commission's Post-2008 Energy Efficiency Policies, Programs, Evaluation, Measurement, and Verification, and Related Issues

Rulemaking 09-11-014
(November 20, 2009)

**COMMENTS OF PORTLAND ENERGY CONSERVATION INCORPORATED ON
PROPOSED DECISION OF ALJ FARRAR PROVIDING GUIDANCE ON
2013-2014 ENERGY EFFICIENCY PORTFOLIOS AND 2012 MARKETING,
EDUCATION, AND OUTREACH**

I. Introduction and Summary

Portland Energy Conservation Incorporated (PECI) respectfully submits these comments on the Proposed Decision. These reply comments are submitted in accordance with Rule 1.13, and Rules 1.9 and 1.10 of the California Public Utilities Commission's (CPUC or Commission) Rules of Practice and Procedure.

PECI is a WBE-certified non-profit leader in the field of energy efficiency solutions within California and nationally for over 31 years. PECI's focus is to make energy efficiency a reliable resource for utility and government agency clients through the design, innovation, and delivery of energy savings measures and programs now and in the future. Through sustained market and customer engagement, PECI reaches millions of commercial, residential, and industrial customers nationwide. PECI provides a wide range of services including programs that create energy efficiency related jobs, technical consultation, research and analysis, commissioning, program design and implementation, technology pilots, work force education and training, and demand response programs. A nonprofit corporation dedicated to creating the new energy economy, PECI was founded in 1980 and has offices in San Francisco and Santa Ana California, and Portland, Oregon.

To overcome the constraints of the existing program framework, PECI recommends:

- Transitioning to longer-term portfolio planning and implementation cycles to facilitate enduring customer and contract engagement

- Modifying cost-effectiveness calculations to reflect a holistic view of the program engagement, enabling programs to distribute the cost of long-term customer and contractor engagements.
- Developing new M&V methods for documenting attribution of program impacts beyond the payment of incentives to capture behavior change impacts.
- Promoting market-oriented approaches that are structured with a balance of meeting program cost-effectiveness objectives while creating an environment for long-term customer and contractor engagements.

These modifications will enable the program to better align regulatory objectives, utility objectives, and third party implementer business interests with customer needs and requirements.

II. Discussion

The PD provides the Commission's proposed guidance for the development of the investor-owned utilities (IOUs) 2013-2014 transition portfolio and requests comments on the proposal. The Commission has rightly detected that a fundamental shift in energy efficiency programs is needed to move beyond chasing short-term energy savings and facilitate the market transformation objectives articulated in the Long Term Strategic Plan. For the industry to evolve in this direction, approaches that are more market-oriented, customer-centric, and scalable are required. Two types of program platforms offer substantial traction: market engagement and whole building. Our comments and recommendations for the Commission focus on changes in program guidance that are required to support these approaches and remove obstacles to executing the Strategic Plan.

1. Existing Constraints

The current framework for program planning and evaluation constrains market engagement programs in the following ways:

- Short portfolio planning and implementation cycles make it difficult to engage customers and contractors over the long term. This cycle discourages market actors from making necessary business investments either in energy efficiency or in their own business due to perceived risk. Extending funding cycles or developing mechanisms for sustaining relationships across funding cycles is essential.

- Cost effectiveness metrics concentrate all the costs of recruiting participants on the first few measures. This practice penalizes programs that invest in long term relationships, by making them appear less cost effective than they are. Methods need to be developed to amortize contractor and customer engagement costs across programs that support long-term relationships.
- New energy efficiency measures are slow to be approved due to a backlog in the system. Utilities either push forward with unapproved work papers and take on significant risk — as in the case of the new statewide commercial HVAC program — or they fail to innovate. Customer engagement and market transformation models require a steady flow of new measures to enable continuous improvement.

2. Policy Recommendations

Organizing to intervene in the market more effectively will require the Commission to better align regulatory objectives, utility objectives, and third party implementer business interests with customer needs and requirements. A shift in focus from measures to long term relationships and whole buildings is an essential part of the solution. We recommend the following policy changes:

Promote long-term engagement

- Lengthen the program cycle for market engagement programs. The timeframe should be informed by the length of time customers need to act on all of the deeper savings opportunities available. Alternatively, eliminate the notion of program cycles altogether and emphasize continuous portfolio improvements along the lines of what was termed “evergreen” in the PD.
- Amortize customer and contractor engagement costs over all expected measures, rather than the initial cycle. This will encourage programs that establish a scalable program platform for continuous improvement.
- Encourage whole building cost-effectiveness and M&V. This will allow more complex projects that achieve deeper savings by: 1) more fully capturing interactive effects; 2) allowing more expensive but high savings potential technologies to be implemented in conjunction with low cost or no cost measures, and 2) accommodating multiple rounds within a building as part of a long-term continuous improvement project.

Rethink incentives

PECI applauds the ED's emphasis on energy efficiency financing. Innovative financing alternatives may address serious constraints that customers face due to cash flow, budgeting and balance sheet limits. Consistent with this approach, we make the following recommendation:

- Develop new M&V methods for documenting attribution of program impacts beyond the payment of incentives. This will be particularly important for capturing behavior change impacts. Whole building M&V offers a viable approach.

Promote market-oriented, customer-centric approaches

- Rethink risk and reward: Innovation requires a higher tolerance for risk (some new approaches will undoubtedly fail) and a reward framework that adequately compensates risk-takers. For example, pay-for-performance contracts are best suited to programs that implement proven methods, where performance is largely under the control of the implementer. Both program performance metrics and compensation will need to reflect the degree of innovation and risk.
- Require stakeholder consultation in program design processes to ensure the design addresses market constraints and opportunities and achieves buy-in.

3. Some Examples of What's Working

Fortunately, several program examples and tools already exist to support market engagement and whole building approaches.

Market Engagement: promoting a shift in focus from measures to relationships

To date, energy efficiency programs have been extremely measure-centric. In contrast, market engagement programs are characterized by long term relationships between parties that extend well beyond any particular measure opportunity. Many important opportunities to transform markets are missed because programs are unable to adapt incentive strategies, adjust measure mix, and quickly introduce new measures as the relationship with the customer progresses. In addition the value of market engagement also extends beyond the planning and execution of the customer's specific efficiency potential to the value chain that serves the customer. As programs penetrate deeper into savings potential they should also further leverage business decisions by suppliers, contractors and distributors who will be willing to better organize to serve the deeper savings opportunities if they see an ongoing opportunity for new business.

Examples

Market Engagement: promoting a shift in focus from measures to relationships

We view market engagement as a central tactic in any market transformation program. To date, energy efficiency programs have been extremely measure-centric. In contrast, market engagement programs are characterized by long term relationships between parties that extend well beyond any particular measure opportunity. Many important opportunities to transform markets are missed because programs are unable to adapt incentive strategies, adjust measure mix, and quickly introduce new measures as the relationship with the customer progresses. In addition the value of market engagement extends beyond the planning and execution of the customer's specific efficiency potential to the supply chain that serves the customer. As programs penetrate deeper into savings potential they should further leverage business decisions by suppliers, contractors and distributors who will be willing to better organize to serve the deeper savings opportunities if they see an ongoing opportunity for new business.

Effective market engagement strategies have the following characteristics:

- Align with the way businesses and customers actually make decisions.
- Articulate a clear value proposition for the full range of market actors who need to be part of the solution (such as suppliers, distributors, contractors, and customers).
- Closely related to the above, incorporate a process for systematically identifying and addressing market barriers in consultation with market actors.
- Take advantage of the fact that once initial market barriers begin to lower, new opportunities to change business models and incentive next steps arise.
- Create more predictable market conditions that encourage investment in innovation (supply side) and adoption (demand side) of desired technologies and practices. Fostering long-term relationships between actors facilitates greater coordination within the market and enhances predictability.

We anticipate that several market engagement models are possible in response to different market opportunities. PEGI offers the following examples:

California Statewide Commercial HVAC Program.

PEGI worked with SCE and PG&E to design a market engagement program aligned with the Strategic Plan. The program enhances predictability for market actors by requiring that customers sign a 3-year service agreement with a participating contractor. Greater revenue

stability for the contractor supports a business model based on quality and encourages investments in technician training, which increases the delivery capacity for quality maintenance in the market (an important market effect). Moreover, the program's contribution to workforce development supports "high road jobs", and was noted in the 2011 Berkeley California WE&T Needs Assessment. Data collected on rooftop units is consolidated in a central database and used to: 1) assess building-specific improvements in system performance and identify and 2) prioritize new measures to expand program offerings. As new measures are offered, they are disseminated efficiently through existing contractor channels to existing customers. Each new measure has an appropriate incentive strategy to drive adoption until such time as the value is demonstrated and incentives can be phased out and used to promote new measures. Customers remain engaged with the program through a pipeline of new measures that promote continuous improvement and deeper savings.

GrocerSmart Programs:

PECI developed a streamlined grocery store audit tool (GrocerSmart) that allows us to conduct audits on small commercial businesses on a cost-effective basis, thereby overcoming the primary barrier to working with this hard-to-reach market. Our field agents work with grocery store owners on an iterative basis. The audit software quickly identifies potential savings, eligible measures, incentive levels, and payback periods. Customers start with a few priority measures. We then build on that success to engage them in an ongoing process of continuous improvement. In the Pacific Northwest, our GrocerSmart program evolved to influence supply chain actors. The program leveraged successful relationships with national accounts (large, multi-state stores) to encourage measure adoption. Once these stores demonstrated the value of controls, smaller grocers followed and more opportunities opened up for program contractors. The program formed a buying group and issued a Request for Proposal (RFP) for controls equipment and installation services on behalf of approximately 60 grocery stores. In turn, contractors offered competitive installation prices coupled with equipment discounts from suppliers. Lower measure costs increased adoption rates. As low-cost and no-cost measures provided proven results in the form of energy bill savings, grocers became receptive to newer technologies, which propelled contractors to expand into new product offerings. As a result, the contractors gained expertise and began expanding their business to additional measures such as night covers, refrigeration control systems, anti-sweat heat controllers and walk-in electronically commutated motors

(ECMs). In turn, several PEGI programs across multiple states formed a group; bundled EMC projects, and approached a national supplier who offered a significant price reduction based on volume. The supply chain for energy efficient technologies and services now boasts bigger delivery capacity that is embedded in new market roles and relationships. The program plays a strategic role because it has built market relationships that have durable value and can be mined for energy savings over and over again.

EnergySmart Jobs

PEGI's ARRA-funded project cited in the ED's Decision introduced a modified approach to our GrocerSmart program that has generated workforce development benefits, leveraged additional resources for program activities, and further reduced the cost of initial audits. We partnered with the California Conservation Corp (CCC) to train disadvantaged youth how to conduct a simplified version of our standard grocery store audit. They generated customer leads for program contractors and collected enough data to identify the initial measure mix and start the customer engagement process. All data was consolidated in a data management system to support ongoing building analytics that helped shape the custom energy efficiency roadmap for each grocery store. This iterative approach is an effective market engagement strategy for a wide range programs and customers. It offers a cost-effective alternative to programs that start big (such as retrocommissioning programs) and therefore limit their reach to larger commercial buildings.

Whole Building Cost Effectiveness

Assessing measure costs and savings is absolutely necessary to understand and bound the potential solution set for customers. However, more savings can be achieved through a whole building approach that pursues more comprehensive measure packages and considers interactive effects. This approach requires that programs define the project as the completion of all planned retrofit measures, operational changes, and other enhancements and then measure and claim total building savings. It offers several advantages:

- Encourages continuous improvement, most likely in a multi-year relationship. Long-term Customer Strategic Plans are an option.
- Customer-centric: It matches owners' decision making processes, in which decisions are made on a total investment basis and may require several sequential steps to accommodate budgets, business cycles, current cash availability and other investment limitations.

- Better measurement: 1) It enables energy savings claims to be based on actual measured data instead of generalized or uncalibrated engineering estimates; 2) captures hard-to-quantify energy savings from operational improvements, technologies such as monitoring systems, and behavior change; and 3) takes into account the interactive effects. A focus on systems and buildings over measures also captures the non-energy benefits of better building performance, such as improved indoor air quality and thermal comfort, among others. These other benefits are often more important to stakeholders than energy efficiency and can serve as important drivers for continuous improvement.

Several measurement and verification (M&V) frameworks have recently been developed that support a whole building approach:

- The California Commissioning Collaborative (CCC) developed “[Guidelines for Verifying Savings from Retrocommissioning Projects](#).” It describes several methods to calculate and verify energy savings; for example, Method 3: Energy Models Using Interval Data, can be used to verify total savings in a whole building or in building subsystems. This method complies with International Performance Measurement and Verification Protocol (IPMVP) Options B and C.
- PEGI developed guidance for applying whole building M&V at a broader scale, without the need to investigate each building in detail. Like the approach above, it uses interval data from the whole building meter. The guidelines describe when a whole building approach can be applied, what regulatory requirements should be considered, and lessons learned putting it into practice in eight cases. PEGI’s research demonstrates that, with proper planning and analysis, a whole building approach to M&V can gain significant traction for cost-effectively verifying savings in commercial buildings.

III. Conclusion

PECI hereby submits its reply comments on 'PROPOSED DECISION OF ALJ FARRAR PROVIDING GUIDANCE ON 2013-2014 ENERGY EFFICIENCY PORTFOLIOS AND 2012 MARKETING, EDUCATION, AND OUTREACH'.

As explained above, PECI has several recommendations for overcoming the constraints of the existing program framework. These recommended changes will make long-term relationships and whole building solutions the focus for the program, moving the market toward the next phase of implementation. Our recommendations are to:

- Transition to longer-term portfolio planning and implementation cycles to facilitate enduring customer and contract engagement
- Modify cost-effectiveness calculations to reflect a holistic view of the program engagement, enabling programs to distribute the cost of long-term customer and contractor engagements.
- Develop new M&V methods for documenting attribution of program impacts beyond the payment of incentives to capture behavior change impacts.
- Promote market-oriented approaches that are structured with a balance of meeting program cost-effectiveness objectives while creating an environment for long-term customer and contractor engagements.

Through these modifications, the program will more effectively align regulatory objectives, utility objectives, and third party implementer business interests with customer needs and requirements.

Respectfully submitted,

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