

➤ **Summary of 60-Day Notice: High Efficiency Air Conditioning Product Evaluation**

In accordance with the 2012/2013 DSM Plan Stipulation and Settlement Agreement in Docket No. 11A-631EG, Public Service Company of Colorado agreed to provide the results of its High Efficiency Air Conditioning Product Evaluation conducted in 2012. The Product Evaluation Final Report made a number of recommendations, which are listed in the tables below. Please note that any of the recommendations that PSCo chooses to adopt that require notification will be reported under a separate 60-Day Notice.

The complete High Efficiency Air Conditioning Product Evaluation can be found at:

<http://www.xcelenergy.com/About Us/Rates & Regulations/Regulatory Filings/CO DSM>

The following tables provide a summary of the final Product Evaluation report recommendations and Xcel Energy's responses, categorized by type: Net-to-Gross, Marketing/Process Improvements and Impact Improvements.

**Table 1: Net-to-Gross**

<b>Recommendation</b>	<b>Response</b>
1. Based on the evaluation of the 2011 program, a net-to-gross (NTG) of 67.6% is recommended. The NTG of 67.6% is based on a calculated free-ridership of 42.8% and a spillover of 10.5%.	PSCo will adopt a NTG of 68% (lowering it from 89%) for the 2013 program year. Benchmarking of NTG values for similar programs in other jurisdictions revealed that the NTG estimate for PSCo's 2011 program is within the range of NTG values for other programs.

**Table 2: Marketing and Process Improvements**

<b>Recommendation</b>	<b>Response</b>
2. Continue to build relationships with contractors. The majority of participants not only reported having first heard about the program from their contractor, but also that their contractor was the key source of other energy-saving information.	PSCo has a robust channel plan and utilizes multiple communications and activities to encourage trade participation. We agree with the recommendation and will continue to look for additional opportunities to grow our trade ally network.
3. Continue having the residential channel manager serve as a direct line of communication between trade allies and Xcel Energy. Survey and focus group results indicated that this is an effective source of contractor program awareness.	PSCo agrees with this recommendation and will continue to use the residential channel manager as the direct line of contact to the trade.

**Table 2: Marketing and Process Improvements (cont'd)**

<b>Recommendation</b>	<b>Response</b>
4. Continue providing program information to contractors through mail and e-mail.	PSCo agrees with this recommendation and will continue to provide program information through these channels.
5. Explore expanding trade ally participation to include opportunities for friendly competition and rewards for increased equipment installations.	PSCo will evaluate the opportunity for contractor competition and reward in the 2013 calendar year.
6. Explore sponsoring contractor roundtables to: (1) promote industry discussion among participating contractors, and (2) provide an opportunity for participating contractors to share program benefits and positive experiences with nonparticipating contractors in order to encourage greater participation.	PSCo will work with contractors to discuss the timing, format and topics for roundtables. Based on contractor feedback, PSCo will look to implement the roundtables in 2013.
7. Continue to recognize participating contractors by providing them with program-specific marketing materials.	PSCo will continue to recognize participating contractors and will evaluate new, engaging ways to do so.
8. Consider enhancing existing customer-focused Quality Install (QI) handouts and brochures.	PSCo will consider enhancing existing customer-focused brochures to include talking points for contractors to share with customers.
9. Consider allocating more training time to discussing how the sizing requirement can be met to help contractors better understand what equipment could meet the needs of a home and to cut down on the time it takes them to research the information.	In 2013, PSCo will be offering a new approach to contractor training including sessions with industry experts on how to right size equipment. These trainings will also serve towards NATE certification.
10. Consider adding a specific training component around duct sizing, explaining how old or improperly sized ducts can impact an installation.	PSCo plans to add specific training around duct sizing in revised 2013 contractor training.
11. Explore ways to facilitate contractors' ability to meet the NATE certification requirement by either offering an incentive to help offset the upfront cost of the certification or by updating the contractor training to more closely reflect the language and structure used in NATE certification.	PSCo's revised 2013 contractor training will serve towards NATE certification. By integrating more of the NATE training protocol, contractors will experience the additional benefit of achieving the NATE endorsement.

**Table 2: Marketing and Process Improvements (cont'd)**

<b>Recommendation</b>	<b>Response</b>
12. Explore a tiered approach to document submittal requirements by initially requiring contractors to submit recorded measurements, load calculations, and the AHRI reference number for every installation, but decreasing this requirement after they have completed a certain number of jobs. Once a contractor has successfully completed a certain number of installations, submitting the load calculations could be required only for sites selected for an M&V visit.	PSCO will research the potential for implementing this recommendation, taking into consideration the DSM program's administrative costs, data system limitations, rebate operations protocols, and administrative costs, etc. We will weigh the costs and the benefits of the tiered document submittal recommendation; if it is feasible and reasonable to implement it, we will move forward with it.
13. Explore selecting installations for on-site verification based on the contractor, using a tiered system rather than conducting a random sample of all submitted applications.	PSCo will evaluate this recommendation with respect to measurement and verification protocols.
14. Increase program awareness and explore the possibility of expanding customer-focused marketing by highlighting the benefits of QI, the available rebates, and the online list of registered contractors available through the Xcel Energy Website.	PSCo will continue its efforts to increase program awareness and expand customer focused marketing through enhancing existing customer-focused QI handouts and brochures.
15. Consider investigating ways to increase customer awareness about the QI component of the program and its value. Almost one-quarter (23%) of participants did not know about the QI requirement. Increasing customer awareness of the QI component would provide them with a deeper understanding of program benefits, particularly the added energy savings that can be achieved with QI.	PSCo will investigate ways to increase customer awareness about the QI component and will evaluate new communication strategies to do so.
16. Consider exploring strategies to increase customer awareness and use of Xcel Energy's registered contractor list. Only 3% of participants reported using the registered contractor list to find a contractor or retailer. As customers turn to Xcel Energy for this resource, contractors may more fully appreciate the program as a potential referral source.	PSCO will re-examine the program's website structure to ensure that the contractor list is easy to access within one or two page levels. Additionally, PSCo will use print, online and radio advertisements to increase customer awareness of contractor list.

**Table 2: Marketing and Process Improvements (cont'd)**

<b>Recommendation</b>	<b>Response</b>
17. Explore advertising on websites geared toward an older audience, given that the highest rates of program participation occur with Affluent Empty Nests and Midlife Success.	PSCo will partner with Corporate Communications to identify websites geared to an older audience and determine if the website will be an effective way to communicate with this market segment.
18. Explore the possibility of expanding customer-focused marketing and advertising by highlighting the benefits of QI through the use of educational videos and social media channels.	PSCo will explore advertising focusing on the benefits of QI, potentially using educational videos that target an older market segment.
19. Consider leveraging contractor testimonials by highlighting them on communication and outreach collateral targeting new contractors.	PSCo will explore leveraging contractor testimonials through customer-focused handouts, brochures, websites, and other program literature.
20. Consider investigating marketing segmentation efforts specifically to reach Affluent Empty Nests, Midlife Success, and Young Accumulators. These three PRIZM segments have high participation potential.	PSCo has been utilizing segmentation information to inform its outreach strategy and will further explore these segments.
21. Consider increasing cross-marketing with Home Performance, Heating System Rebates, and Saver's Switch programs. Furnaces were the most frequently installed additional measure for participants having a CAC installed, indicating that customers often replace their furnace and CAC at the same time.	PSCo currently has an advertising campaign that will bundle HEAC's marketing efforts with suggested programs such as Home Performance, Heating, and Saver's Switch programs and will continue to look for additional bundling opportunities
22. Consider requiring more stringent qualifications for verification staff (e.g., a highly skilled HVAC technician or engineer). HVAC verifiers must have technical expertise and experience to earn contractor confidence, and to ensure an accurate assessment of the quality of HVAC system installation.	PSCo has implemented this recommendation.

**Table 2: Marketing and Process Improvements (cont'd)**

<b>Recommendation</b>	<b>Response</b>
23. Explore the implications of modifying the pass/fail criteria for equipment sizing and airflow, considering factors such as the energy and demand impacts associated with each component and the accuracy of measurement equipment.	PSCo will explore the implication of modifying the pass/fail criteria for sizing and airflow to determine program impacts.
24. Explore the implications of re-evaluating the target airflow and equipment capacity calculations. These two important components of QI could be assessed differently. Cadmus found some systems that failed according to the current M&V method but should have passed, and vice-versa.	PSCo will explore the implications of re-evaluating the target airflow and capacity calculations using existing data to recalculate the target airflow and equipment capacity at peak conditions
25. Consider claiming savings from an undersized system. Although most undersized systems do not provide adequate cooling on the hottest days, this actually saves energy. Therefore, we believe a system should receive a pass rating if it is undersized.	PSCo will adjust the range of acceptable equipment sizes in the M&V protocol. A pass rating for undersized equipment and a fail rating for oversized equipment will be reflected in the QI portion of the realization rate.

**Table 3: Impact Improvements**

<b>Recommendation</b>	<b>Response</b>
26. Consider assessing the amount of savings allocated to QI components. The free-ridership attributable to the QI element of the program is the highest at 54.2% (whereas free-ridership for efficient equipment is 29.3% and for early replacement is 39.4%). We recommend reassessing the deemed savings attributable to correct QI by using the verified EER (through field measurements) and regional HVAC unit energy consumption. This method does not include savings attributable to proper equipment sizing. Another method of reducing free-ridership could be to incentivize only the portions of a QI that are least frequently met (such as sizing).	PSCo will assess the amount of savings allocated to the QI components in 2013 to determine whether to make program changes in 2014.

**Table 3: Impact Improvements (cont'd)**

<b>Recommendation</b>	<b>Response</b>
27. Consider program changes of removing SEER 14.5-14.9 equipment incentives and changing the methodology of analyzing QI savings. These two program changes have the highest impact on free-ridership. When these changes were applied to 2011 data, the NTG value increased from the observed 67.6% to 71.1%.	PSCo has further analyzed the impact of following this recommendation and decided not to implement for the following reasons: The current customer participation in the tier SEER 14.5 to 14.9 makes up 25% of the program. High participation and energy savings from SEER 14.5-14.9 equipment makes this rebate level an important part of market transformation. Through the analysis of this recommendation, the Company identified the removal of the SEER 14.5 to 14.9 rebate tier will reduce more energy savings than the NTG percentage points gain.
28. Explore the costs and benefits associated with a tiered early retirement incentive approach based on the SEER level of the replaced unit. One benchmarked program offered \$110 to customers who replaced a working CAC greater than 10 SEER or any nonworking CAC with any new, efficient unit, but offers a much higher incentive (\$600) for a new efficient unit that replaces a working CAC with less than 10 SEER.	PSCo will assess the cost/bens associated with a tiered early retirement incentive in 2013 to determine whether to make program changes in 2014.
29. Perform additional nonparticipant site visits in a future study to more accurately determine QI free-ridership and market conditions.	PSCo will attempt to perform additional non-participant site visits in future program evaluations. The study Cadmus performed showed great variability in QI component failure in nonparticipating program homes versus self-reported conditions, but sample limitations made it difficult to generalize to the population with confidence.