

July 11, 2018



On May 11, 2018, Public Service Company of Colorado (“Public Service” or “the Company”) issued a 60-Day Notice to modify its existing High Efficiency Air Conditioning product to modify the incremental costs and rebates of eligible measures. The new measure will be implemented as proposed, with the adjustments described below, on October 1, 2018. The original Notice and accompanying documentation can be found on the Company’s website, here:

http://www.xcelenergy.com/Company/Rates_and_Regulations/Filings/Colorado_Demand-Side_Management.

The Company received written comments on the Notice from one Roundtable participant: the Office of Consumer Counsel. After careful consideration of the comments, the Company determined that no change to the Notice was warranted. The Company provides the following formal response:¹

1. Comment Submitted by OCC

The OCC agrees with that stated purpose of this Notice - to encourage the adoption of the most cost-effective measures. PSCo states that the High Efficiency Air Conditioning Product has had a marginally cost-effective mTRC for the last several years. PSCo believes that the adjustments proposed in the 60-Day Notice will improve the cost effectiveness of the product; however, PSCo’s changes appear to be primarily extending the life of the product rather than adjustments that actually reduce the cost of the product.

The primary rebates should be reserved for more efficient air conditioners. Based on the incremental costs in the Deemed Savings Technical Assumptions, the rebate might be \$75 for a SEER of 14.0 to 14.5., \$200 for a SEER of 15 and \$400 for a SEER of 16 and \$600 for a SEER of 17 or higher (plus the incentive for a QI) based on paying roughly 50% to 60% of the higher efficiency product. These rebates would provide greater incentives for even higher efficiency air conditioners, and would likely result in a better mTRC value for the product.

¹ The OCC submitted one comment in response to the 60-Day Notice with multiple subparts. In order to provide a response to the OCC’s comments the Company has addressed each comment separately.

Moreover, PSCo's adjustments appear to increase the cost and decrease the cost-effectiveness of an already-marginal product. Some of the rebate changes do not appear to be justified because the rebates may be more than the cost of the high-efficiency improvement. Specifically, the 60-Day Notice states that the Customer Rebate for a Standard Efficiency Air Conditioner with a Quality Installation ("QI") is \$300 (along with a \$100 Vendor incentive). PSCo's Deemed Savings Technical Assumptions shows that the cost of a QI for a new home is \$116.95 and is \$286.58 for an existing home. Thus, PSCo appears to be proposing to pay a rebate that is greater than the cost of a QI. A QI does not result in an efficiency improvement in the air conditioner.

The rebate and vendor incentive for a QI should be more in line with the cost of a QI, especially for a new home. The rebate should not pay the full cost of the efficiency improvement. Thus, for example, the customer rebate might be \$75 on a new home (compared to a cost of \$116.95) and \$175 on an existing home (cost of \$286.58). These would not have an additional vendor incentive.

Response:

The original forecasted mTRC for the High Efficiency Air Conditioning Product in 2018 was 1.09; the 60-day notice mTRC is 1.28, a significant cost-effectiveness increase. This is due to several factors, such as the energy savings to incremental cost ratio of measures, and was not limited to increasing the lifetime average of the measures.

Based upon the Company's measure-level analysis of cost-effectiveness, high-efficiency new AC and ASHP equipment-only measures were not cost-effective because equipment incremental costs exceed the energy savings benefits. This impact is most pronounced with the 17 SEER and 18 SEER levels.

Conversely, the Company's cost-benefit calculation for Quality Installation (QI) is a 1.64 mTRC and according to energystar.gov, without QI, only an average of 73% of the forecasted energy efficiency of an AC is delivered.²

The Company's justification, generally, for paying rebates that exceed the incremental cost is to drive participation in the most cost-effective measures, which as discussed above, are those combinations of air conditioners with a quality installation. To motivate customers to insist that their contractors

² https://www.energystar.gov/ia/home_improvement/downloads/ESQI_factsheet.pdf?a0fa-c969

perform QI work, the rebate amount must be significant enough to make them aware of the value of the QI and when making large financial decisions the Company's experience indicates that a rebate of \$100 will not drive that awareness and engagement from customers. As an example, 13 SEER air conditioners are the most widely installed systems; however, in 2017, the Company offered a rebate of \$100 for 13 SEER basic air conditioning systems with a QI and counted less than 70 participants indicating that the rebate is not sufficient to motivate customers.

Furthermore, the Company offers a trade incentive in order to motivate contractors to incur the incremental business expense to perform QI work on "baseline" AC systems and thereby achieve the maximum amount of savings and maximize the cost-effectiveness of the installation. The Company's historic experience with trade incentives less than \$100 indicates that contractors do not consider the incentive significant enough to offset the additional business expense incurred with the QI.

Flattening the popular AC/ASHP rebates from six rebate levels to a single rebate is likely to result in lower incremental costs and higher energy savings because the distribution of SEER levels is forecasted to change. It also makes the rebates easier for customers to understand. Behaviorally, if customers are going to receive a \$600 rebate whether they buy a 15 SEER, 16 SEER, 17 SEER, or 18 SEER AC system, many customers will likely choose the lower cost of the (still high efficiency) 15-16 SEER AC system. This decreases their purchase cost, and increases their energy savings, while lowering the incremental costs and increasing net benefits.

Regarding the differentiation between new and retrofit applications, the Company has attempted to simplify the process for customers and the trade in order to encourage participation. New home participation is typically not significant enough to warrant a distinct offering and the Company believes creating a distinct offering will introduce unnecessary confusion in the marketplace thereby discouraging participation. As a trade-driven offering, meaning the Company relies not only on its marketing and awareness activities but also the active engagement of qualified trade partners, keeping offerings simple and easy to explain to customers remains a critical consideration in the success of the product.