

➤ **Summary of 60-Day Notice: Electronically Commutated Motors**

Public Service Company of Colorado (“the Company”) posts this 60-Day Notice to update the technical assumptions for the Residential Heating, Home Performance with ENERGY STAR, and Single-Family Weatherization products to (1) correct an error in the energy savings calculation for electronically commutated motors (ECMs) in 2015 and to (2) update the incremental capital cost for the measure in 2016 forward.

The Company has corrected several technical assumption errors—including hours of operation, “with A/C” and “without A/C” splits, and coincidence factor—for the ECM (electric) measure, as shown in the redlined deemed savings sheet for Residential Heating. The Home Performance with ENERGY STAR and Single-Family Weatherization Deemed Savings refer to Residential Heating’s Deemed Savings assumptions in the Plan, and therefore do not need to be edited; however those products’ electric forecasts have been updated. Technical assumption changes will take effect, and be applied retroactively, to all participating units since January 1, 2015 (with no impact to the customer).

Energy Savings Correction – Residential Heating

- kW/unit savings were changed from assuming an annual average kW to assuming kW savings only when the motor is operational. This resulted in a higher kW/unit savings and a lower Coincidence Factor.
- kWh/unit savings reference (Reference 3 in the Deemed Savings sheet) was updated to reference the primary data in the study, rather than data within the appendix of the study. This resulted in lower kWh/unit savings.

Energy Savings Correction – Home Performance with ENERGY STAR

- Hours of Operation originally only included heating hours, but needed cooling and ventilation hours accounted for as well. This correction results in an increase in the kWh/unit savings.
- Efficient Product Consumption and Baseline Product Consumption originally only included the heating motor watts, but needed associated cooling and ventilation watts as well.
- In the Plan as originally filed, for HPwES, the ECM measure did not differentiate between homes “with A/C” and homes “without A/C.” This Notice corrects that error, to match the technical assumptions for the Residential Heating product’s Deemed Savings.
- Increase in Coincidence Factor (CF) resulting in a higher kW/unit savings.

Energy Savings Correction – Single-Family Weatherization

- Hours of Operation originally only included heating hours, but needed cooling and ventilation hours accounted for as well. This correction results in an increase in the kWh/unit savings.
- Efficient Product Consumption and Baseline Product Consumption originally only included the heating motor watts, but needed associated ventilation watts in addition.
- Increase in Coincidence Factor (CF) resulting in a higher kW/unit savings.

Incremental Capital Cost and Rebate Adjustments

ECM units' incremental cost will decrease for Residential Heating and Home Performance with ENERGY STAR from \$464 to \$212 per unit starting in 2016 based on new information from the U.S. Department of Energy (DOE).¹ The DOE information also results in an increase in the baseline cost from \$0 to \$236 in 2016.² This change will improve cost-effectiveness.

Due to the decrease in incremental cost, the Home Performance with ENERGY STAR product will be lowering the rebate amount to \$125 starting in 2016.

The incremental capital cost for Single-Family Weatherization is not changing, it is provided by the third-party administrator for that product.

These corrections and updates result in the following forecasted impacts for the Residential Heating, Home Performance with ENERGY STAR, and Single-Family Weatherization products' performance in 2015 and 2016, as shown in Tables 1-3 below.

Table 1: Summary of Forecasted Impacts: Residential Heating

Residential Heating	2015		2016	
	<i>As Filed</i>	<i>Revised per 60-Day</i>	<i>As Filed</i>	<i>Revised per 60-Day</i>
Electric Savings (kWh)	2,557,160	1,725,690	2,557,160	1,725,690
Electric Demand Reduction (kW)	242	286	242	286
Budget* (\$)	\$321,715	\$321,715	\$321,715	\$321,715
MTRC Test Ratio	1.39	1.11	1.43	1.97

*While the anticipated expenditure impacts are forecasted, the Company acknowledges that this Notice does not change the filed budget.

Table 2: Summary of Forecasted Impacts: Home Performance with ENERGY STAR

Residential Home Performance with ENERGY STAR	2015		2016	
	<i>As Filed</i>	<i>Revised per 60-Day</i>	<i>As Filed</i>	<i>Revised per 60-Day</i>
Electric Savings (kWh)	594,532	606,126	594,532	606,126
Electric Demand Reduction (kW)	288	292	288	292
Budget* (\$)	\$362,031	\$360,156	\$362,031	\$360,156
MTRC Test Ratio	1.05	1.07	1.08	1.10

*While the anticipated expenditure impacts are forecasted, the Company acknowledges that this Notice does not change the filed budget.

¹ Table ES.3.8, page 19 of 31.

https://www1.eere.energy.gov/buildings/appliance_standards/pdfs/ff_prelim_ch_00_execsummary_2012_06_26.pdf

² Table ES.3.8, page 19 of 31.

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Table 3: Summary of Forecasted Impacts: Single-Family Weatherization

Single-Family Weatherization	2015		2016	
	<i>As Filed</i>	<i>Revised per 60-Day</i>	<i>As Filed</i>	<i>Revised per 60-Day</i>
Electric Savings (kWh)	2,350,230	2,671,202	2,379,324	2,700,296
Electric Demand Reduction (kW)	219	290	223	294
Budget* (\$)	\$1,402,432	\$1,402,432	\$1,358,190	\$1,358,190
MTRC Test Ratio	0.98	1.13	1.02	1.18

*While the anticipated expenditure impacts are forecasted, the Company acknowledges that this Notice does not change the filed budget.

Included with this Notice, are the following documents:

- Redlined Residential Heating Deemed Savings Technical Assumptions;
- Updated ECM Electric Forecast Summary for Residential Heating;
- Updated ECM Electric Forecast Summary for Home Performance with ENERGY STAR; and
- Updated ECM Electric Forecast Summary for Single-Family Weatherization.

These documents can be found on our website at the following link:

http://www.xcelenergy.com/Company/Rates_&Regulations/Filings/Colorado_Demand-Side_Management