

BLACK HILLS POWER, INC.
d/b/a BLACK HILLS ENERGY
EL17-026

REQUEST DATE : 07/20/17

RESPONSE DATE : 08/03/17

REQUESTING PARTY: Staff

SDPUC Request No. 2.1:

Provide a revised model removing all residential and C&I prescriptive measures with a TRC less than 1.0. Provide the impact removing each measure has on the Residential/Commercial & Industrial and Total Portfolio TRC results.

Response to SDPUC Request No. 2.1:

The revised model is included with this response.

The impact to the Residential Portfolio, by removing the measures with a TRC below 1.0, leaves only two residential programs in Year 1, Appliance Recycling and High Efficiency HVAC. In the High Efficiency HVAC Program, there would only be two measures available: Heat Pump replacing Electric Furnace and Central Air Conditioner (CAC).

The Residential Lighting Program becomes cost effective in Year 2 and the School Education Program becomes cost effective in Year 3. Terminating these two programs and then restarting would be difficult. Both Programs currently demonstrate good participation. It is difficult to predict whether these programs could regain the momentum and trust from the both participants and trade allies.

The impact on the C&I Prescriptive Program would be a reduction of 18 measures that would no longer be available. After Year 1, there is one measure (Open Drip Proof-ODP Motor) that becomes cost effective.

Removal of all non-cost-effective measures would be a significant impact to the budgets. A table has been provided to show the impact to the budget:

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BLACK HILLS POWER Energy Efficiency Program - Budget Comparison (Corrected Model VS Cost-Effective Only Model)									
	Corrected Model			Cost-Effective Only			Comparison		
	YEAR 1	YEAR 2	YEAR 3	YEAR 1	YEAR 2	YEAR 3	YEAR 1	YEAR 2	YEAR 3
Residential Lighting	\$37,800	\$38,263	\$38,726	\$0	\$38,263	\$38,726	-\$37,800	\$0	\$0
Appliance Recycling	\$16,232	\$16,232	\$16,232	\$16,232	\$16,232	\$16,232	\$0	\$0	\$0
High Efficiency HVAC	\$35,607	\$42,225	\$48,843	\$22,686	\$28,359	\$34,031	-\$12,921	-\$13,866	-\$14,812
Whole House Efficiency	\$12,592	\$12,592	\$12,592	\$0	\$0	\$0	-\$12,592	-\$12,592	-\$12,592
Residential Audit	\$32,629	\$32,629	\$32,629	\$0	\$0	\$0	-\$32,629	-\$32,629	-\$32,629
School-Based Education	\$66,150	\$66,150	\$66,150	\$0	\$0	\$66,150	-\$66,150	-\$66,150	\$0
Weatherization	\$13,230	\$13,230	\$13,230	\$0	\$0	\$0	-\$13,230	-\$13,230	-\$13,230
C&I Custom	\$367,662	\$373,789	\$379,917	\$367,662	\$373,789	\$379,917	\$0	\$0	\$0
C&I Prescriptive	\$286,045	\$286,045	\$286,045	\$118,146	\$118,230	\$118,230	-\$167,899	-\$167,815	-\$167,815
Residential	\$214,239	\$221,320	\$228,402	\$38,918	\$82,853	\$155,139	-\$175,322	-\$138,467	-\$73,263
C&I	\$653,707	\$659,835	\$665,962	\$485,808	\$492,019	\$498,147	-\$167,899	-\$167,815	-\$167,815
Cross Marketing & Training	\$46,794	\$47,746	\$48,698	\$33,275	\$36,657	\$37,534	-\$13,519	-\$11,089	-\$11,164
TOTAL BUDGET:	\$914,740	\$928,901	\$943,062	\$558,000	\$611,530	\$690,820	-\$356,740	-\$317,371	-\$252,242

The Company's experience in other states shows that the more mature an energy efficiency program becomes, coupled with an increase in building code requirements, the more the portfolio cost effectiveness decreases. The costs incurred to secure additional savings increases as codes and standards increase. It is important to note that removing these rebates causes customers and trade allies to revert back to installing the lowest cost equipment that meets code rather than the higher efficient equipment. In cases like this, the operating costs for a home owner increases.

BHP believes in the importance of including the measures listed below in the Residential Program:

School Education Outreach Program

The purpose of including School Educational Outreach Programs is to educate our young customers on the importance of energy efficiency and the effect it has on energy usage. While not cost effective on its own, the teachers and parents see a societal benefit with this program. Resource Action Programs, the contractor who administrates the Program on behalf of Black Hills, supplies an annual report. The summary report for the 2016-2017 school year is attached. This summary report includes student's letters, teacher responses and parent feedback regarding the benefits received by the participants.

Home Energy Audit Program and Online Audit

While this program does not pass the cost effectiveness test, it is an important tool utilized to educate and inform our residential customers of energy efficient measures available to them. BHP understands that this program is a conduit for engagement across the portfolio.

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Weatherization Program

The Weatherization Program is an important tool to reach those with the most need in lowering their energy costs. While not cost effective, this program has a significant effect on its elderly and low income participants. Historically, Weatherization Programs do not pass the cost effectiveness tests and are excluded from the overall Portfolio cost effectiveness calculations in other jurisdictions. This important program is, however, included as part of the energy efficiency goals and cost effectiveness calculation.

High Efficiency HVAC Program

In the past, air source heat pumps, mini-split heat pumps, geothermal heat pumps, heat pump water heaters were included in the portfolio to encourage efficient electric heating, cooling and water heating. Today, these technologies are difficult to promote in natural gas areas. However, there are many locations where natural gas is not available and the customer's choice for heating and water heating is propane and electric - it is very important to continue to promote the efficient use of electricity especially to these customers.

Energy Star Lighting Program

The importance of offering rebates for Energy Star rated LEDs and fixtures is to promote the most efficient lighting source available to residential customers. It is also important to note that this program applies to all residential customers and can make the most impact to electric bills.

Attachments: Attachment 2.1a
Attachment 2.1b

Responder: Don Martinez