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Attorney for the Commission Staff

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF INTERMOUNTAIN)
GAS COMPANY’S APPLICATION FOR) CASE NO. INT-G-19-04
DETERMINATION OF 2017-2018 ENERGY)
EFFICIENCY EXPENSES AS PRUDENTLY) COMMENTS OF THE
INCURRED) COMMISSION STAFF
)
)
)

COMES NOW the Staff of the Idaho Public Utilities Commission, by and through its attorney of record, Dayn Hardie, Deputy Attorney General, and in response to the Notice of Application and Notice of Modified Procedure issued in Order No. 34440 on September 17, 2019, in Case No. INT-G-19-04, submits the following comments.

BACKGROUND

On August 9, 2019, Intermountain Gas Company (“Intermountain Gas” or “Company”) applied to the Commission for an order designating expenses associated with its 2017-2018 residential Energy Efficiency Program (“EE Program” or “Program”) as prudently incurred. In Case No. INT-G-17-03, Intermountain Gas received the Commission’s authorization to implement two new rate schedules: 1) Rate Schedule EE—Residential Energy Efficiency Rebate Program, outlining the offerings of the EE Program; and 2) Rate Schedule EEC—Energy Efficiency Charge (“EE Charge”), establishing a per therm charge to fund the EE Program. *See* Order No. 33888; Application at 4. Both Schedules became effective October 1, 2017. *Id.* at 4.

The initial period for both schedules ran from October 1, 2017 through December 31, 2018 (“Initial Period”). *Id.*

In Case No. INT-G-19-05, the Company requested to increase its EE Charge from \$0.00367 per therm to \$0.02093 per therm. The Company asserted that from the EE Program inception on October 1, 2017 through June 30, 2019 it had collected \$1,712,654 from customers through the EE Charge and incurred \$2,810,560 in EE Program expenses. The Commission approved the Company’s requested EE Charge increase in Order No. 34454.

STAFF ANALYSIS

This is the first prudency filing made by the Company since it began its EE Program on October 1, 2017. Staff examined the Company’s Application, workpapers, 2018 Energy Efficiency Annual Report (“Report”), exhibits, Conservation Potential Assessment (“CPA”),¹ and additional information provided by the Company through Production Responses. The Company is seeking approval for EE Program expenses of \$1,496,198 for the period of October 1, 2017 through December 31, 2018 as prudently incurred. Based on its review, Staff recommends the Commission approve the Company’s EE Program expenses of \$1,496,198 as prudently incurred.

Staff comments address the Company’s EE Program financials, program offerings, avoided cost, Evaluation, Measurement and Verification (“EM&V”), CPA, and other issues. Staff notes that the absence of any discussions on other issues should not be construed as Staff support for the Company’s position.

While Staff believes the EE Program expenses of \$1,496,198 were prudently incurred, Staff believes that some of the initial assumptions about measure savings and incentive levels should be re-evaluated as soon as possible. In particular, Staff recommends that EE Program savings be evaluated by an independent third party EM&V evaluator and that the Company, with input from stakeholders, adjust its avoided cost methodology so that it more accurately represents actual costs avoided through energy efficiency.

¹ The CPA was submitted in Case No. INT-G-19-07 as Exhibit 4.

Financial Review

Staff audited the Company's EE Program, which included reviewing transactions across all of the Company's EE measures. Staff verified that expenses were well documented and that internal controls were in place to prevent improper payment of incentives and to properly record Program expenses. The Tariff Rider balance, Program costs, labor expenses, and avoided cost methodology and calculations are described in greater detail below.

Tariff Rider Balance

Table 1 shows Tariff Rider activity from Program inception through December 31, 2018.

Table 1: Tariff Rider Reconciliation

Beginning Balance as of October 1, 2017	\$0
Funding	\$1,185,328
Reported Expenses	(\$1,496,148)
Adjustments	\$0
Balance as of December 31, 2018 (Underfunded)	(\$310,820)

In Case No. INT-G-19-05, the Company reported that the Tariff Rider underfunded balance had increased from \$310,820 at the end of 2018 to \$1,097,907 as of June 2019. While Staff has not yet reviewed the prudence of any 2019 expenses, Staff recommended and the Commission approved the Company's request to increase its EE Charge to reduce its underfunded Tariff Rider balance. *See* Order No. 34454.

Labor Expenses

As the Company developed and expanded its EE Program, new staff was hired and additional time for existing employees was charged to the program. The Company has three employees fully allocated and two employees partially allocated to the EE Program. The Company also allocates the equivalent of two Energy Service Representatives to the EE Program.

The total labor expense from inception of the program through December 31, 2018 was \$189,962, which represents 12.7% of total Program expenses. The Company did not report any labor expenses for the EE Program until the start of 2018. Staff believes that labor expenses are prudently incurred and are similar to those incurred by other utility EE programs in Idaho. Staff will monitor any increase in labor expense in future prudence cases.

DSM Program Assessment

The Company's first year reported savings of 283,067 therms, is well above its initial target of 65,000 therms and stretch goal of 97,825 therms. Report at 1. The Company also stated that the program was cost-effective, and achieved a UCT ratio of 1.23 as illustrated in Table 2 below. Report at 1. These measures are available to all of the Company's customers who receive service under the Residential Rate Schedule.

Table 2: DSM Measure Savings, Throughput, and Cost-Effectiveness:

Measure	Rebate Amount	Measures Installed	Annual Therm Savings per Measure ²	Total Therm Savings by Measure	UCT	TRC
Whole Home Program	\$1,200	619	204	126,276	1.13	1.17
95% AFUE Furnace	\$350	1,334	112	149,408	1.36	0.44
90% High E Combo System	\$1,000	3	451	1,353	1.94	0.95
80% Fireplace Insert	\$200	-	76	-	-	-
70% Fireplace Insert	\$100	13	56	728	2.17	0.70
.67 EF Water Heater	\$50	9	22	198	1.57	0.30
.91 Condensing Tank-less Water Heater	\$150	88	58	5,104	1.56	0.23
Totals		2,066		283,067	1.23	0.64

Whole Home Program

The Company offers a Whole Home Program rebate of \$1,200 for a new home with natural gas space and water heating. This program provides incentives to builders for constructing energy efficient homes. Builders must be Energy Star certified to participate in the program. In order to qualify for a rebate, the home must be evaluated by a RESNET certified third party evaluator, and receive a Home Energy Rating System ("HERS") threshold index score of 75 or less, as determined by the Company. Currently, the Company uses a deemed savings of 204 therms per home per year to estimate program cost-effectiveness. Staff believes

² Annual Therm Savings lines 14-20, Exhibit No. 26, Case No. INT-G-16-02.

that the 204 therm deemed savings estimate may not accurately reflect natural gas savings realized by the program, and recommends that both the 204 Therm deemed savings value and the 75 threshold index score be reevaluated by a third party EM&V evaluator, and by comparing the billed consumption of a sample of new homes that received a Whole Home Program rebate to a sample of similar homes that did not.

According to literature provided by RESNET, homes built to the 2006 International Energy Conservation Code (“IECC”) are awarded a HERS index score of 100 (Reference Home). A home's HERS score provides a measure of its energy efficiency relative to the reference home. For example, a home with a HERS score of 130 uses 30% more energy than the reference home, and a home with a HERS score of 70 uses 30% less energy than the reference home. According to RESNET, the typical HERS score of a resale home is 130.

Staff's analysis of HERS scores from participating and non-participating homes was not consistent with the information provided by RESNET. Using information provided by the Company (Production Request Nos. 27 and 28), Staff found that the average HERS score for non-participants was 64, instead of the 100 HERS score used by the RESNET reference home. Staff compared HERS scores of Whole Home Program participants with the HERS scores of non-participants, and found very little difference between the HERS scores of the two groups (Figures ES1 and ES2). The average HERS score of 61 used for program participants, was only slightly less than the average HERS score of 64, received by non-participating homes.

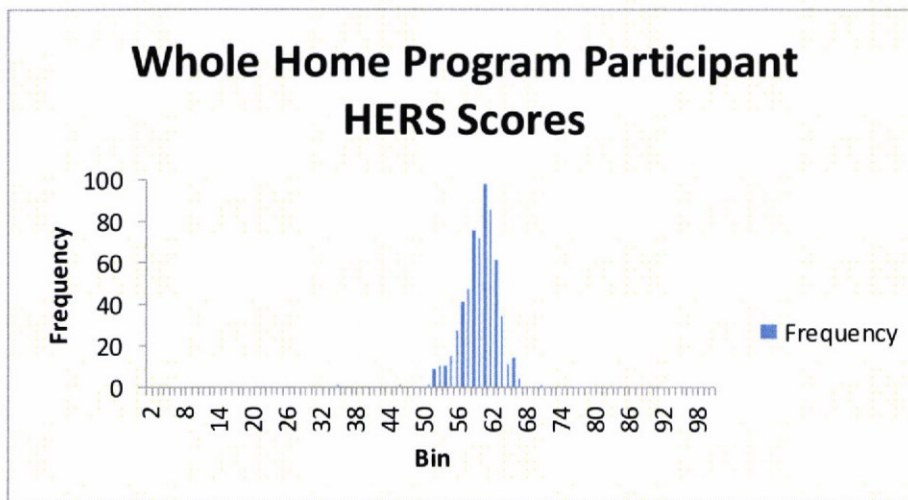


Figure ES1: Distribution of Whole Home Program Participant Scores Average HERS Score is 61. Sample Size = 619

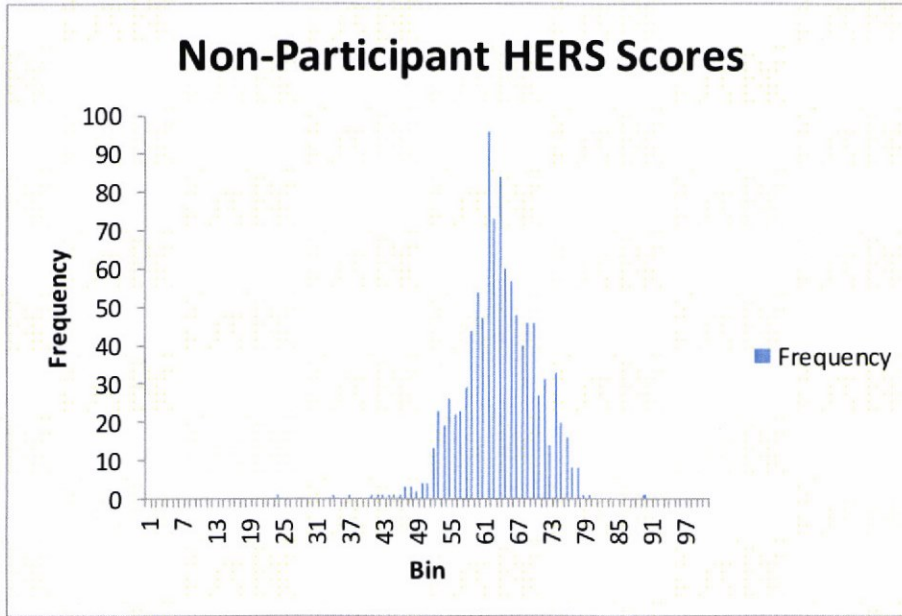


Figure ES2: Distribution of Whole Home Non-Participant HERS Scores Average HERS Score is 64.
Sample Size = 1,035.

The vast majority of non-participating homes in Staff’s evaluation received HERS scores at or below the Company’s 75 HERS threshold (94.7%), suggesting that many energy efficient homes would have been built without any incentive from the Company. However, Staff cautions against overextrapolation from the 1,035 homes used in its analysis to the general population of new homes in the Company’s service territory. Participation in HERS evaluation is voluntary, making it possible that non-participant homes receiving HERS evaluation differ from the majority of homes being built in the Company’s service territory. Because HERS participants are self-selected, and do not represent the larger population of new housing stock, Staff does not believe that HERS scores, by themselves, provide an adequate basis for evaluating cost effectiveness.

Staff notes that HERS index scores include savings from electrical efficiency measures, and therefore may not accurately reflect natural gas savings. Further, HERS scores may not necessarily reflect standard homebuilding practices because the IECC has been updated four times since RESNET’s 2006 base year, and Idaho building standards currently require builders to comply with the 2015 IECC. Although Staff believes the Company’s HERS threshold index score of 75 was a reasonable starting point for the Whole Home Program, Staff believes that the

Company has acquired sufficient program data to determine its own rebate criteria in order to incent energy efficient building practices at the lowest program cost.

Staff is also concerned with the 204 Therm savings value that the Company used to determine cost effectiveness. In its response to Staff's Production Request No. 33, the Company did not provide workpapers supporting the annual therm savings values used to determine the Whole Home program's benefits. Instead, the Company provided hard coded values obtained from a CPA model developed for another company—Cascade Natural Gas—by Nexant. Staff notes that this is the same value proposed by the Program in the Company's last rate case (INT-G-16-02).

Staff found no evidence supporting the Company's 204 therm value. Staff compared average annual consumption of homes receiving Whole Home rebates with the average consumption of homes determined in Case No. INT-G-16-02. Staff discovered that annual consumption by Whole Home Program participants was slightly higher (771 Therms) than average consumption for all space and water heater equipped homes in the Company's service territory (755 Therms). It is possible that homes receiving Whole Home Program rebates are larger, or have more gas appliances than other homes in the Company's service territory; however, workpapers provided by the Company do not support either of these possibilities.

Staff believes that the Whole Home program's actual therm savings should be determined from a billing analysis comparing actual billed consumption of a sample of homes receiving a Whole Home Program rebate to the actual billed consumption of a sample of similar new homes that did not receive a rebate. Currently, the Company collects information about home size (square feet) and the types of gas appliances installed in all new homes in the course of its lines/mains extension application process, so the necessary information is readily available to the Company. Staff believes that it is important for the Company to update energy savings values and incentive levels as soon as possible, and that this analysis should be performed by a third party EM&V evaluator. Until a third party EM&V evaluation is completed, Staff believes that the Company should perform a bill consumption evaluation and update its savings and incentive levels accordingly.

Space Heating Measures

The Company offers two space heating measures. The first measure is a \$350 rebate for installation of a 95% Annual Fuel Utilization Energy (“AFUE”) or greater natural gas furnace. The second measure is \$1,000 rebate for installation of a 90% or greater efficiency condensing tankless combination system for space and water heating. The Company reported that 1,334 95% AFUE furnaces were installed with therm savings of 149,408 resulting in a UCT of 1.36 and a TRC of 0.44. Report at 6. In Staff’s avoided cost analysis, the UCT for a 95% AFUE furnace with the current incentive is 0.98. Similar to the Whole Home Program, Staff believes that energy savings and incentive levels should be re-evaluated as soon as possible. The Company reported that three 90% AFUE combination systems were installed with therm savings of 1,353 resulting in a UCT of 1.94 and a TRC of 0.95.

Fireplace Insert Measures

The Company offers two fireplace insert measures. The first measure is a \$200 rebate for installation of an 80% AFUE or greater natural gas fireplace insert. The second measure is \$100 rebate for installation of a 70% or greater Fireplace Efficiency (“FE”) natural gas fireplace insert. The Company reported that thirteen 70% FE inserts were installed with a savings of 728 therms resulting in a UCT of 2.17 and a TRC of 0.70. Staff believes that energy savings and incentive levels for this measure should be re-evaluated as soon as possible.

The Company reported that zero 80% AFUE condensing fireplace inserts were installed and no therm savings were achieved. The Company would like to discontinue the 80% AFUE fireplace insert measure because no customers have used the incentive and installation of condensing technology is cost prohibitive from a customer’s perspective. Staff supports discontinuing the 80% AFUE measure.

Water Heating Measures

The Company offers two measures in its Water Heater Program. The first measure is a \$50 rebate for installation of a 0.67 Energy Factor (EF) or greater natural gas water heater. The second measure is \$150 rebate for installation of a 0.91 EF or greater condensing tankless water heater. The Company reported that nine 0.67 EF water heaters were installed resulting in 198 annual therm savings and a UCT of 1.57 and a TRC of 0.30. Given the relatively modest savings

the 0.67 EF water heaters, 22 therms, Staff believes that the \$50 rebate should be re-evaluated as part of the Company's EM&V evaluation.

The Company reported that 88 condensing tankless water heaters with 0.91 AFUE were installed with savings of 5,104 therms resulting in and a UCT of 1.56 and a TRC of 0.23. Staff believes that energy savings and incentive levels for this measure should be re-evaluated as soon as possible.

Avoided Cost

Staff has several concerns with the Company's avoided cost calculations. In its review, Staff found that the Company included base rate embedded distribution costs in its avoided cost computations. Production Request Nos. 10 and 33. Staff does not believe this is appropriate because costs that are already incurred and embedded in rates cannot be avoided. Staff also believes that the Company's forecast of avoided commodity costs is unreasonably high and appears to exceed costs the Company could actually avoid. Staff recommends that the Company conduct an avoided cost review in order to accurately determine the value of future capacity costs that might be avoided by the Company's EE Programs.

DSM avoided costs are those costs that the Company avoids by implementing a DSM measure or program. For example, a measure that incents customers to replace a low efficiency furnace with a high efficiency furnace allows the Company to avoid the cost of gas saved by the high efficiency furnace, as well as some of the costs of transporting that gas from the producer to the Company's distribution system; however, no energy efficiency measure can affect fixed costs that are already embedded in the Company's base rate.

After excluding embedded distribution costs, Staff recomputed UCT ratios for each of the seven measures offered by the Company and found that the Whole Home Program and the High Efficiency Natural Gas Furnace program are not cost-effective at current incentive levels.

Table 3: Recomputed UCT without Embedded Costs

Measure	Rebate	Company UCT	Staff UCT
Whole Home Program	\$1,200	1.13	0.78
HE Combination Radiant Heat System	\$1,000	1.95	1.39
95% AFUE Furnace	\$350	1.36	0.98
HE 70% AFUE Insert	\$100	2.18	1.56
.67 EF/ .68 UEF Water Heater	\$50	1.58	1.15
.91 EF/ .92 UEF Tankless Water Heater	\$150	1.57	1.13

Notes: The 80% AFUE Insert was not included because no rebates have been issued. Company avoided costs and therm savings used in calculations are based on initial calculations included in case INT-G-16-02.

In its avoided cost calculations, the Company used the present value of forecasted Fixed Transportation Costs (TCF), Variable Transportation Costs (TCV), Commodity Costs (CC), and Embedded Distribution Costs (DSC) in its calculation of nominal Avoided Costs (AC_{nominal}).

The Company expressed this relationship as:

$$AC_{\text{nominal}} = TCF + TCV + CC + DSC$$

Using this method, the Company estimated an avoided cost of \$0.4759 per therm. Staff notes that this value nearly equals the entire \$0.4972 residential rate.³ This is noteworthy because avoided costs are usually less than the retail rate since they are intended to reflect only those costs that can be avoided, not all costs.

In addition to including embedded distribution costs, Staff believes the inclusion of natural gas commodity costs in the avoided cost calculation are unreasonably high. Staff found that the commodity costs used in the Company's avoided cost calculation are even higher than those included in retail rates. For example, the Company used an avoided commodity cost of \$0.3163 per therm in its 2019 avoided cost rate, whereas the cost of gas currently in residential retail rates is \$0.1533 per therm.⁴ Company Responses to Staff's Production Request Nos. 10 and 33. It appears that the Company used an Integrated Resource Plan ("IRP") forecast to

³ Does not include \$0.02093 per therm energy efficiency charge.

⁴ Rate Schedule RS Weighted Average Cost of Gas (\$0.20904) less the Temporary purchased gas cost adjustment (\$0.05573).

determine its avoided commodity costs, but instead of using a single forecast to calculate the avoided cost, the Company seems to have used the highest of three forecasts in each month to determine the avoided commodity costs. Staff was also unable to reconcile discrepancies in the transportation costs (TCF and TCV) used by the Company.

The Company included a distribution cost of \$0.1624 in its avoided cost calculations. These were calculated using a weighted average of Residential and General Service distribution rates from the Company's current tariff. Because the Company's current DSM program only includes Residential customers, Staff believes that it was inappropriate for the Company to use the distribution rate from its General Service tariff in its calculations. Further, Staff does not believe that the distribution costs already embedded in the Company's base rates can be avoided, and, thus, disagrees with the Company's inclusion of this term in its avoided cost calculations.

In order to calculate the UCT values in Table 2, Staff used a value of \$0.3342 per therm as a proxy for avoided costs. This value includes the \$0.20904 weighted average cost of gas (\$0.05573) temporary purchased gas cost adjustment, and \$0.18087 Gas Transportation Cost included in the Company's 2019 residential tariff.

Staff notes that it is possible for energy efficiency measures to enable the Company to avoid future capacity costs that have not yet been embedded in rates. Energy efficiency measures might decrease load growth sufficiently to allow the Company to delay capacity upgrades, or to use smaller pipes when extending new service; however, the Company provided no evidence that it takes its EE Program into account when planning or designing its distribution system. Staff notes that the Company's line and main extension policies do not distinguish between homes with and without Energy Star ratings, or between homes constructed using energy efficiency measures incented by the Company.

Further, the Company has stated in previous cases that it does not consider the effects of capacity expansion in its DSM cost-effectiveness assessment. As noted in Order No. 33314 at 7-8, "in reply, the Company explains that avoided costs from avoided capacity expansions do not affect the Company's DSM cost-effectiveness assessment because the expansions are driven by rapid customer growth and system integrity issues that DSM programs cannot address." In the current case, Staff found no evidence that the Company has begun considering the effects of energy efficiency programs when planning new construction or upgrades to existing distribution plant.

Staff believes it's likely that an updated review of the Company's avoided costs would identify and quantify capacity contributions for some of the Company's energy efficiency measures, and recommends that the Company conduct an avoided cost review in cooperation with its Energy Advisory Group.

EM&V

The Company stated, in its report, that it will be issuing a request for proposal ("RFP") for an EM&V study in 2019 "to assess the performance of energy efficiency activities and assure the certainty and effectiveness of future activities." Report at 23. EM&V studies are necessary to assess the performance of a Company's EE Programs and to establish whether Programs and measures are generating the level of savings they were created to deliver.⁵

Because the Company's DSM program has been underway for two years, and there are concerns about the amount of savings associated with its fastest growing and highest incented program—Whole Home Program; Staff believes it is time for the Company to conduct an evaluation to confirm the savings achieved by its programs and measures. Staff recommends that the Company develop a plan for completing an EM&V study within two months of a Commission order in this case. Staff recommends that this plan outline when an RFP will be submitted, how and when a contractor will be selected, and how the Company will use the findings to evaluate and update their EE Program.

CPA

The purpose of a CPA is to estimate the amount of energy savings in a utility's service territory that is possible to acquire. The Company sent a RFP to thirty companies in April 2018. Six companies returned proposals and the Company conducted interviews with three of them. The Company selected Dunsky Energy Consultants to complete its CPA. Dunsky Energy is a respected energy research group with staff that have advanced degrees and certifications in energy-related fields. Staff notes the CPA expenditure was greater than other Idaho companies with mature energy efficiency programs; however, Staff believes the cost to be justified for a new program such as that being implemented by Intermountain Gas. The Company's CPA was submitted with its 2019 IRP in Case No. INT-G-19-07. Staff looks forward to the Company

⁵ https://www.energy.gov/sites/prod/files/2014/05/f16/what_is_emv.pdf

using the results of the CPA to include EE as a resource in its IRP and develop the annual savings goals of the EE programs.

Marketing and Outreach

Staff believes the Company demonstrated innovative and cost-conscious marketing strategies. The Company used its membership in the Building Contractors Association to create awareness and promote the Whole Home Program. The Company used regional Parade of Home promotions and sponsored “efficiency” holes at golf tournaments to engage with local builders and discuss energy efficiency offerings. The Company also participated in a joint meeting with Rocky Mountain Power’s EE Program for HVAC contractors. Application at 20.

The Company’s marketing, education, and outreach efforts were focused on customers, contractors, and home builders. The Company published multiple electronic and paper bill inserts, created an energy efficiency program section and a dedicated web address on the Company’s website, and used digital and social media to promote the EE Program. However, some information was not clearly related to the Company’s energy efficiency programs. Staff sees an opportunity for the Company to refine its energy efficiency marketing to focus on available programs and incentives. Staff believes the Company can improve its marketing as it develops its understanding of the target population and tailors its message to specific customer segments.

SUMMARY

Based on its review, Staff believes the Company’s EE Program expenses of \$1,496,198 are prudent.

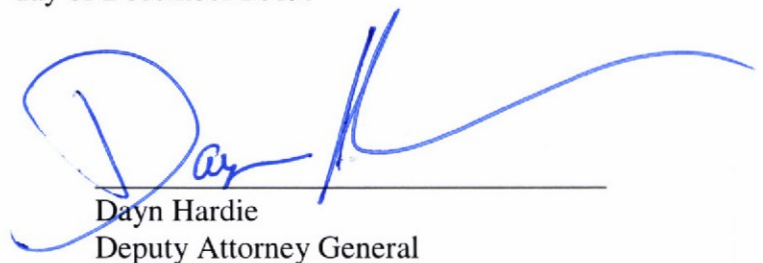
Staff confirmed that the Company’s EE program is based on assumptions, therm savings, and avoided costs described in Case No. INT-G-16-02 and that the Company has taken critical steps in developing its EE Program such as establishing an Energy Advisory Group, completing a CPA, hiring program staff, and creating customer awareness of its EE Programs. Staff encourages the Company to continue refining and enhancing its programs and processes, which Staff believes should include using the recently completed CPA to make program adjustments. Staff also recommends the Company complete an EM&V study and an avoided cost review and use that information to implement additional program and process modifications as necessary.

STAFF RECOMMENDATIONS

Based on Staff's audit and analysis, Staff recommends the Commission:

1. Find that the Company prudently incurred \$1,496,198 in 2017 - 2018 EE Program expenses.
2. Direct the Company, in cooperation with its Energy Advisory Group, to review its avoided cost calculation and develop a plan to establish an avoided cost methodology that represents actual Company costs, which are avoided through its energy efficiency program, and present those results in its next DSM Annual Report.
3. Direct the Company to develop a plan within two months of a Commission order in this case for completing an EM&V study. Staff recommends that this plan outline when an RFP will be submitted, how, and when a contractor will be selected, and how the Company will use the findings to evaluate and update their EE Program.
4. Direct the Company to implement program and measure changes, including incentive level adjustments, as soon as possible and on an on-going basis, using the best data currently available, such as the analysis of the recently completed CPA.

Respectfully submitted this ^{16th} day of December 2019.



Dayn Hardie
Deputy Attorney General

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Brad Iverson-Long
Mike Morrison

CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 16TH DAY OF DECEMBER 2019, SERVED THE FOREGOING **COMMENTS OF THE COMMISSION STAFF**, IN CASE NO. INT-G-19-04, BY MAILING A COPY THEREOF, POSTAGE PREPAID, TO THE FOLLOWING:

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