

INTERMOUNTAIN GAS COMPANY

555 SOUTH COLE ROAD • P.O. BOX 7608 • BOISE, IDAHO 83707 • (208) 377-6000 • FAX: 377-6097

RECEIVED

2019 AUG -9 PM 1:22

IDAHO PUBLIC
UTILITIES COMMISSION

August 9, 2019

Ms. Diane Hanian
Commission Secretary
Idaho Public Utilities Commission
P.O. Box 83720
Boise, ID 83720-0074

RE: Case No. INT-G-19-04

Dear Ms. Hanian:

Attached for consideration by this Commission are the original and seven (7) copies of Intermountain Gas Company's Application for a Determination of 2017-2018 Energy Efficiency Expenses as Prudently Incurred.

If you should have any questions regarding the attached, please don't hesitate to contact me at (208) 377-6015.

Very truly yours,



Lori A. Blattner
Director, Regulatory Affairs
Intermountain Gas Company

Enclosure

cc: Mark Chiles
Preston Carter

INTERMOUNTAIN GAS COMPANY

CASE NO. INT-G-19-04

APPLICATION

AND

EXHIBITS

**In the Matter of the Application of INTERMOUNTAIN GAS COMPANY
For a Determination of 2017-2018 Energy Efficiency Expenses as Prudently
Incurred**

Preston N. Carter, ISB No. 8462
Givens Pursley LLP
601 W. Bannock St.
Boise, Idaho 83702
Telephone: (208) 388-1200
Attorneys for Intermountain Gas Company

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

In the Matter of the Application of
INTERMOUNTAIN GAS COMPANY
for a Determination of 2017-2018 Energy
Efficiency Expenses as Prudently
Incurred

Case No. INT-G-19-04

APPLICATION

Intermountain Gas Company (“Intermountain” or “Company”), a subsidiary of MDU Resources Group, Inc. with general offices located at 555 South Cole Road, Boise, Idaho, pursuant to the Rules of Procedure of the Idaho Public Utilities Commission (“Commission”), 1) respectfully submits its *Energy Efficiency 2018 Annual Report* and 2) makes application to the Commission for an order designating \$1,496,198 of 2017-2018 Energy Efficiency expenditures as prudently incurred.

Please address communications regarding this Application to:

Preston N. Carter
Givens Pursley LLP
601 W. Bannock St.
Boise, Idaho 83702
pnc@givenspursley.com
kendrah@givenspursley.com

and

Lori A. Blattner
Director – Regulatory Affairs
Intermountain Gas Company
Post Office Box 7608
Boise, ID 83707
Lori.blattner@intgas.com

In support of this Application, Intermountain alleges and states as follows.

I.

Intermountain is a gas utility, subject to the jurisdiction of the Commission, engaged in the sale of and distribution of natural gas within the State of Idaho under authority of Commission Certificate No. 219, issued December 2, 1955, as amended and supplemented by Order No. 6564, dated October 3, 1962.

Intermountain provides natural gas service to the following Idaho communities and counties and adjoining areas:

Ada County - Boise, Eagle, Garden City, Kuna, Meridian, and Star;
Bannock County - Arimo, Chubbuck, Inkom, Lava Hot Springs, McCammon, and Pocatello;
Bear Lake County - Georgetown, and Montpelier;
Bingham County - Aberdeen, Basalt, Blackfoot, Firth, Fort Hall, Moreland/Riverside, and Shelley;
Blaine County - Bellevue, Hailey, Ketchum, and Sun Valley;
Bonneville County - Ammon, Idaho Falls, Iona, and Ucon;
Canyon County - Caldwell, Greenleaf, Middleton, Nampa, Parma, and Wilder;
Caribou County - Bancroft, Grace, and Soda Springs;
Cassia County - Burley, Declo, Malta, and Raft River;
Elmore County - Glenns Ferry, Hammett, and Mountain Home;
Fremont County - Parker, and St. Anthony;
Gem County - Emmett;
Gooding County - Gooding, and Wendell;
Jefferson County - Lewisville, Menan, Rigby, and Ririe;
Jerome County - Jerome;
Lincoln County - Shoshone;
Madison County - Rexburg, and Sugar City;
Minidoka County - Heyburn, Paul, and Rupert;
Owyhee County - Bruneau, and Homedale;
Payette County - Fruitland, New Plymouth, and Payette;
Power County - American Falls;
Twin Falls County - Buhl, Filer, Hansen, Kimberly, Murtaugh, and Twin Falls;
Washington County - Weiser.

Intermountain's properties in these locations consist of transmission pipelines, liquefied natural gas storage facilities, a compressor station, distribution mains, services, meters and regulators, and general plant and equipment.

II.

In the Company's General Rate Case No. INT-G-16-02, Intermountain petitioned the Commission for authority to begin a residential Energy Efficiency Program ("EE Program"). The Commission granted the Company's request in Order No. 33757 and found that "DSM, as both a least-cost resource and an important element of promoting energy efficiency, is an important part of any utility's provision of service. As such, we look forward to seeing the Company's program develop." *Case No. INT-G-16-02, Order No. 33757 at 37.*

Subsequently, in Case No. INT-G-17-03, the Company requested authority to implement Rate Schedule EE – Residential Energy Efficiency Rebate Program, which outlined the program offerings, and Rate Schedule EEC – Energy Efficiency Charge, which established a charge to fund the program. In Order No. 33888, the Commission approved both rate schedules effective October 1, 2017.

The EE Program is available to all residential rate class customers in the Company's service territory and consists of two main categories of rebates: high-efficient appliances and new residential construction earning both ENERGY STAR certification and a Home Energy Rating Score (HERS) of 75 or less.

The Company's *Energy Efficiency 2018 Annual Report* ("Annual Report"), attached as Exhibit No. 1 and incorporated herein by reference, provides a review of Intermountain's EE Program finances, cost-effectiveness, and performance by measure. It also discusses promotional activities and lessons learned throughout 2018 and outlines future plans for the EE Program. *Annual Report at 2.*

III.

The initial customer response to the program far exceeded Company expectations. From the beginning of the program on October 1, 2017 through December 31, 2018, the Company's EE

Program achieved an estimated 283,067 therm savings. These energy savings exceeded the first year therm savings target of 65,000 as well as the stretch goal of 97,825 therms established in the Company's Integrated Resource Plan ("IRP") in Case No. INT-G-17-04. *Annual Report at 1, 5.*

The natural gas saved through the EE Program in the first year was enough to provide natural gas service to 386 homes in the Company's service territory. The biggest driver of therm savings was the 95% AFUE Natural Gas Furnace energy efficiency rebate, with 149,408 of annual therm savings. *Annual Report at 1.*

An illustration of the initial success the EE Program has had in improving energy efficiency throughout Intermountain's service territory can be seen in the number of homes earning the ENERGY STAR certification. When the program started, there were two builders routinely receiving ENERGY STAR certification. Through the end of the 2018 program year, 18 builders had received ENERGY STAR certification on at least one home. One of the 18 builders is 100% certified, meaning every home built earns ENERGY STAR certification, and ultimately the Intermountain rebate. While ENERGY STAR certification is not yet within reach for every home builder, the EE Program also encourages builders to implement other home energy efficiency measures. In 2018, 20 different builders submitted for over 125 appliance rebates, contributing to the continued growth of the appliance rebate program.

The Company is encouraged by the strong growth of the EE Program, and looks forward to working with customers, the Commission, and other stakeholders to maximize the participation in and the effectiveness of the EE Program going forward.

IV.

The EE Program expenditures are funded through collections from customers via the Energy Efficiency Charge of \$0.00367 per therm. Total EE Program revenues for the fifteen months since inception and through December 31, 2018 were \$1,185,328. *Annual Report at 3.*

V.

EE Program expenditures from the beginning of the program in October 2017 through December 2018 were \$1,496,198. *Annual Report at 3.* Of this amount, \$1,227,650, or approximately 82%, is related to energy efficiency rebates paid directly to customers. *Annual Report at 3.* Rebates have been paid on nearly every incentive offered in the Company's EE Program, with the majority of rebates related to the 95% AFUE Natural Gas Furnace and Energy Star Certified Home incentives. *Annual Report at 5.*

In addition to the amount spent on energy efficiency rebates, the Company incurred an additional \$268,548 of EE Program expenses for labor, program delivery, and a conservation potential assessment. *Annual Report at 3.* These expenditures were a critical factor in the tremendous success the Company's EE Program has enjoyed in the first 15 months of existence.

VI.

Because of the positive response to the launch of the EE Program, the expenditures for October 2017 through December 2018 exceeded revenues by \$310,870. *Annual Report at 3.* The Company is deferring this balance and intends to submit a subsequent application asking this Commission to adjust the EEC rate to collect the deferred balance.

VII.

Intermountain reports the cost effectiveness of its EE Program based on two industry standard metrics: the Utility Cost Test ("UCT") and the Total Resource Cost ("TRC"). The UCT measures cost effectiveness from the utility company's perspective and takes into consideration avoided supply costs, program administration costs, and incentives paid by the utility. The TRC measures cost effectiveness from the customer's perspective and focuses on avoided supply costs, program administration costs and net participant costs. Although both are common industry metrics for measuring cost effectiveness, the Company relies more on the UCT because it measures the cost-effectiveness of items directly under the Company's control.

Because the Company has not previously included an avoided cost analysis in its IRP filing, the avoided costs used in these cost effectiveness calculations come from a draft version of Intermountain's IRP. The IRP containing the detail supporting the avoided costs will be filed with this Commission later in 2019. *Annual Report at 6 and Supplement 1.*

From October 1, 2017 to December 31, 2018, the overall EE Program achieved a UCT ratio of 1.23. *Annual Report at 6.* Additionally, all measures except for the 80% AFUE Natural Gas Hearth, had a UCT ratio greater than 1.0. No customers participated in the 80% AFUE Natural Gas Hearth rebate as further explained in the Annual Report. *Annual Report at 7.*

VIII.

The Company hosted its first EE Program stakeholder meeting in Boise in November of 2018. The meeting was attended by representatives from the Commission Staff, the Governor's Office of Energy and Mineral Resources, Boise Valley Habitat for Humanity, and Idaho Conservation League. Home energy raters representing both sides of the state attended, as well as

builders and HVAC professionals. The meeting is described on page 23 of the Annual Report; minutes are attached as Supplement 2 to the Annual Report.

During this meeting, the Company reviewed the EE program design, budget, collection mechanism, and the cost-effectiveness tests that would be used to assess program performance. The meeting also covered rebates paid during the first three quarters of the year, budget balances, education and awareness activities, lessons learned, and successes and challenges surrounding outreach activities.

Meeting participants provided positive feedback as well as suggestions for future changes. Some of the feedback and suggestions include: the ease of use of the rebate program; the lack of credentialed HVAC professionals as a roadblock to participation in the Whole Home rebate; ideas for development of a trade ally program; and development of a seasonal newsletter. *Annual Report at 23.*

The Company is pleased with the level of participation and feedback provided in its first stakeholder meeting and it looks forward to future meetings to help refine the offerings and delivery of its EE Program.

IX.

Because the Company's EE Program was only recently implemented, Intermountain has not yet had its program evaluated by a third-party contractor. The Company intends to request proposals from third-party evaluators in the fall of 2019. After an evaluator has been selected, the Company intends to have the 2018 and 2019 program years evaluated. The Company will include the results of the program evaluation in its *Energy Efficiency 2019 Annual Report*.

X.

Intermountain requests that this matter be handled under modified procedure pursuant to Rules 201-204 of the Commission's Rules of Procedure. Intermountain stands ready for immediate consideration of this matter.

XI.

Intermountain respectfully petitions the Idaho Public Utilities Commission as follows:

- a. That the Commission issue an order designating \$1,496,198 of 2017-2018 Energy Efficiency expenditures as prudently incurred,
- b. That this Application be heard and acted upon without hearing under modified procedure, and
- c. For such other relief as this Commission may determine proper herein.

DATED: August 9th, 2019.

INTERMOUNTAIN GAS COMPANY

Givens Pursley LLP

By



Lori A. Blattner
Director – Regulatory Affairs

By



Preston N. Carter
Attorney for Intermountain Gas Company

CERTIFICATE OF MAILING

I HEREBY CERTIFY that on August 9th, 2019, I served a copy of the foregoing Application upon:

Ed Finklea
Alliance of Western Energy Consumers
545 Grandview Drive
Ashland, OR 97520

Chad Stokes
Cable Huston et al.
1001 SW Fifth Avenue, Suite 2000
Portland, Oregon 97204-1136

Benjamin Otto
Idaho Conservation League
710 N 6th Street
Boise, ID 83702

Brad Purdy
Attorney for Community Action
Partnership Association of Idaho (CAPAI)
2019 N 17th Street
Boise, ID 83702

by depositing true copies thereof in the United States Mail, postage prepaid, in envelopes addressed to said persons at the above addresses.



Lori A. Blattner
Director – Regulatory Affairs

EXHIBIT NO. 1
CASE NO. INT-G-19-04
Intermountain Gas Company
Energy Efficiency 2018 Annual Report



A Subsidiary of MDU Resources Group, Inc.

In the Community to Serve®



ANNUAL REPORT





Energy Efficiency





INTERMOUNTAIN GAS COMPANY

Energy Efficiency Annual Report

TABLE OF CONTENTS

Executive Summary	1
Introduction	2
Energy Efficiency Programs	5
Space Heating Program Rebate Offerings	6
Fireplace Insert Program Rebate Offering	7
Water Heater Program Rebate Offerings	9
Whole Home Program Rebate Offerings	10
2018 Program Outreach, Awareness, and Education	14
All Sectors	14
Home Builders	18
Contractors	20
Home Energy Raters	20
Special Partnership Project Boise Valley Habitat for Humanity	20
Stakeholder Input	23
The Future	23

LIST OF TABLES

<i>Table 1. 2017-2018 Plan to Actual Comparison</i>	3
<i>Table 2. Program Cost-effectiveness Ratios</i>	6
<i>Table 3. Space Heating Program Results</i>	6
<i>Table 4. Fireplace Insert Program Results</i>	8
<i>Table 5. Water Heater Program Results</i>	9
<i>Table 6. Whole Home Program Results</i>	10

LIST OF FIGURES

<i>Figure 1. 2018 Annual Therm Savings</i>	5
<i>Figure 2. HERS Score Distribution</i>	10
<i>Figure 3. ENERGY STAR Blue Label</i>	12
<i>Figure 4. ENERGY STAR Rebates by District</i>	12
<i>Figure 5. November Bill Insert</i>	14
<i>Figure 6. March Bill Insert</i>	15
<i>Figure 7. Energy Efficiency Program Webpage</i>	16
<i>Figure 8. Whole Home Rebate Webpage</i>	16
<i>Figure 9. Appliance Rebates Webpage</i>	16
<i>Figure 10. Examples of Social Media Posts</i>	17
<i>Figure 11. Trade Show Booth</i>	18
<i>Figure 12. Parade of Homes ENERGY STAR Marketing Materials</i>	18
<i>Figure 13. Efficiency Hole</i>	19
<i>Figure 14. The ENERGY STAR Difference</i>	20
<i>Figure 15. BVHFH Groundbreaking</i>	21
<i>Figure 16. BVHFH Build Volunteers</i>	22

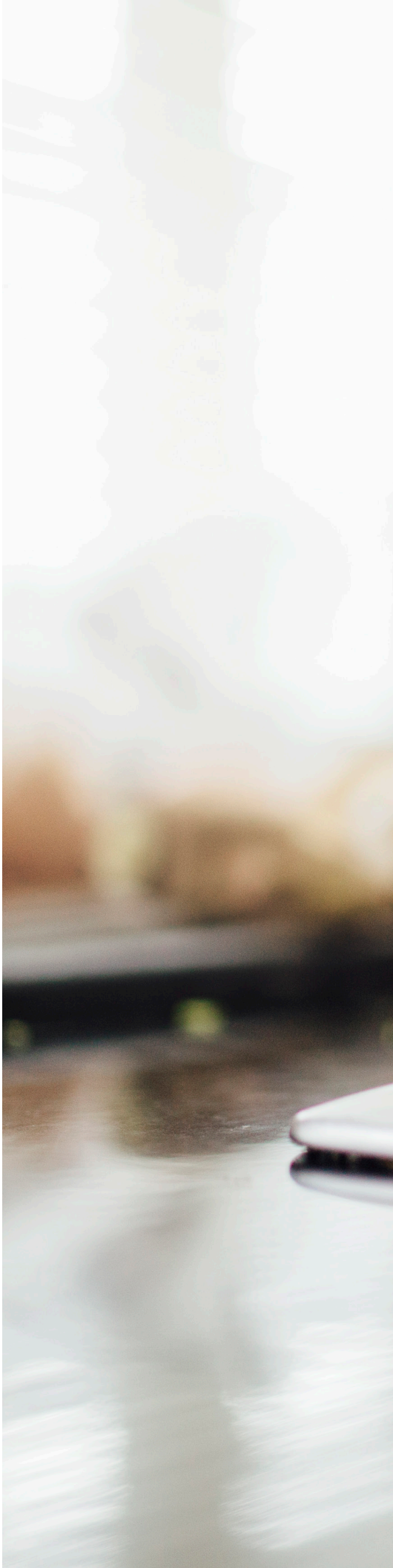
INTERMOUNTAIN GAS COMPANY
Energy Efficiency Annual Report

TABLE OF CONTENTS

LIST OF SUPPLEMENTS

Supplement 1: Avoided Costs

Supplement 2: Energy Efficiency Open House Meeting Notes







Intermountain Gas Company
Executive Summary

2018

Intermountain Gas Company (Intermountain, IGC, or Company) kicked off 2018 with the launch of its new Energy Efficiency Program (EE Program). The response to the program was overwhelming and resulted in the actual therm savings realized for the year exceeding both the year one target and stretch goal. The EE Program is available to all residential rate class customers in the Company's service territory and consists of two main categories: high-efficient appliances and new residential construction earning both ENERGY STAR certification and a Home Energy Rating Score (HERS) of 75 or less.

The EE Program encourages the wise use of natural gas and provides economic benefits to participating customers by lowering their usage and thus their monthly energy bills. By reducing the amount of natural gas that customers use the Company can also utilize its existing resources more efficiently, which keeps costs low for everyone.

Intermountain achieved an estimated first year savings of 283,067 therms, exceeding both the year one target of 65,000 therm savings and the stretch goal of 97,825 therm savings. The natural gas saved through the EE Program was enough to serve 386 homes in the Company's service territory (based on average annual usage of 742 therms). The EE Program was also cost-effective based on the UCT (Utility Cost Test) with a ratio of 1.23. The TRC (Total Resource Cost) ratio was 0.64.

Rebates for the installation of high-efficient natural gas furnaces and construction of ENERGY STAR certified homes were the two highest contributors to the 2018 energy savings. Therm saving contributions by other measures were modest due to issues, such as: a lack of appliance availability in the marketplace (80% AFUE fireplace) and an ambitious minimum efficiency requirement (0.67 EF tanked water heater) relative to the industry standard install (0.59 EF).



283,067
therms saved

Intermountain's Energy Efficiency Charge rider funds the EE Program. Collection of the \$0.00367 per therm charge began on October 1, 2017. Rider charge collections for the 15-month period ending December 31, 2018 were \$1.2 million. Intermountain officially launched the EE Program January 1, 2018. The total expenditures for the year were \$1.5 million. An overwhelming customer response to the launch of the EE Program resulted in program expenditures exceeding collections by \$300,000 for the year.

IGC focused initial outreach efforts on three target audiences: customers, contractors (HVAC contractors and home energy raters), and home builders. The Company used traditional outreach methods such as bill inserts and an energy efficiency website to raise awareness about the program, and IGC also leveraged existing industry memberships and unique partnerships to promote the new EE Program.

Intermountain invited stakeholders to a meeting on November 29, 2018. The meeting provided a forum for the Company to provide an update on the status of the program and to answer questions, as well as an opportunity for stakeholders to provide input about the program. While the feedback on the program was mostly positive, the Company took steps to address concerns and suggestions raised during the meeting.

To assist in planning for the future, Intermountain has engaged a third-party consultant to conduct a Conservation Potential Assessment (CPA), to assist in refining and growing the EE Program. In addition, in 2019, The Company will be issuing an RFP (Request for Proposal), for an Evaluation, Measurement and Verification (EM&V) study.

This Energy Efficiency 2018 Annual Report provides a review of Intermountain Gas Company's Energy Efficiency Program finances, cost-effectiveness and performance by measure, activities and lessons learned throughout 2018, and outlines future plans for the EE Program.

Intermountain Gas Company
Introduction

2018

Intermountain Gas Company, a subsidiary of MDU Resources Group, Inc, is a natural gas distribution company serving approximately 365,000 residential, commercial and industrial customers in 75 communities across southern Idaho since 1955.

Energy efficiency provides many benefits to both Intermountain and its customers. From Intermountain's perspective, reducing demand per customer on the system provides operational efficiencies and reduces upward pressure on customer prices. All customers benefit from using Intermountain's infrastructure as efficiently as possible which reduces the need for expensive upgrades and keeps prices low for everyone. When individual customers participate in the program, they benefit directly through increased comfort and lower monthly energy bills. Cost-effective energy efficiency is a win for everyone.

This report focuses on the inaugural year of Intermountain's EE Program. It provides an analysis of program savings, a description of program activities, and reviews program cost-effectiveness and results on both a portfolio and individual measure level.

Prior to the start of the EE Program, Intermountain offered a \$200 rebate for the installation of a 90% AFUE or greater efficiency natural gas furnace when the customer converted from an alternative heat source. Following the approval of Intermountain's new program, the \$200 furnace rebate was cancelled effective December 31, 2017.

The Company began its efforts to pursue cost-effective energy efficiency in the form of natural gas savings by creating an energy efficiency rebate program. Intermountain's EE Program was approved by the

Idaho Public Utilities Commission (IPUC) in Order No. 33888, effective October 1, 2017. The new EE Program offers rebates on high-efficient equipment, whether it is replacement, new construction, or conversion from another energy source. The program also offers rebates for new construction homes that have an energy efficient design meeting the requirements of the EE Program. Energy efficiency rebates are available to all residential rate class customers within the Company's service territory.

During the 2017-2021 IRP process, the Company set a therm saving target of 65,000 therms for the first year of the EE Program and a stretch goal of 97,825 therms.

In the first year of the program, IGC exceeded both of those targets with an estimated first year savings of 283,067 therms.

To launch the program, Intermountain focused on three main target audiences: customers and the community at large, contractors, and home builders. The Company used traditional means of marketing the program, such as bill inserts and an EE Program website. Additionally, Intermountain leveraged social media and unique partnerships to raise awareness and education about home energy efficiency in general, and more specifically, the energy efficiency rebate program.

The EE Program is funded through the Energy Efficiency Charge rider which collects \$0.00367 per therm from the Company's residential customers. The Energy Efficiency Charge rider was approved and began collecting funds on October 1, 2017. The total funds collected for the 15 months ended December 31, 2018 were \$1.2 million.

As proposed in Case No. INT-G-17-03, the planned EE program expenses necessary to acquire cost-effective therm savings totaled \$777,000. This included \$600,000 in rebate expenses, \$147,000 in personnel expenses and \$30,000 in program delivery expenses. An overwhelming customer response to the launch of the EE program resulted in total expenditures of \$1.5 million, exceeding the plan by over \$300,000. As the balance in the rider account continues to grow, Intermountain will review whether an adjustment to the Energy Efficiency Charge is necessary.

2017-2018 Plan to Actual Comparison		
	Plan Over/(Under) Collection	Actual Over/(Under) Collection
Revenue	<u>\$ 777,000</u>	<u>\$ 1,185,328</u>
<u>Program Expenses</u>		
Residential Energy Efficiency	600,000	1,227,650
Labor	147,000	189,962
Program Delivery and CPA	<u>30,000</u>	<u>78,586</u>
Total Program Expenses	<u>777,000</u>	<u>1,496,198</u>
Rider Account Balance	\$ -	\$ (310,870)

Table 1. 2017-2018 Plan to Actual Comparison

Rebate requirements, performance, cost-effectiveness and lessons learned are outlined in this report both from the perspective of the program portfolio in total and from an individual measure perspective. Program outreach and education activities are also reviewed, followed by community feedback and planned next steps for the EE Program.





YOUR ENERGY STAR[®] CERTIFIED NEW HOME BETTER IS BETTER



Intermountain Gas Company
Energy Efficiency Programs

2018

619
ENERGY STAR Certified
homes built

Over 1,300
high efficient furnaces
installed

The EE Program was offered to all customers receiving natural gas through IGC’s Residential Rate Schedule. The portfolio was comprised of two main categories of offerings: high-efficient appliances and construction of ENERGY STAR certified homes. The high-efficient appliance rebate offering focused on three groups: Space Heating, Fireplace Inserts, and Water Heating.

The Energy Efficiency Program portfolio as a whole, achieved an estimated first year savings of 283,067 therms, exceeding both the 65,000 target and 97,825

stretch goal. The greatest therm savings were achieved by the installation of 1,334 high-efficient furnaces that contributed to 149,408 of the annual therm savings, while 619 ENERGY STAR certified homes contributed to 126,276 of the annual therm savings (see Figure 1). Therm saving contributions by other measures were modest due to various issues, such as availability in the marketplace and ambitious minimum efficiency requirements relative to industry standards.

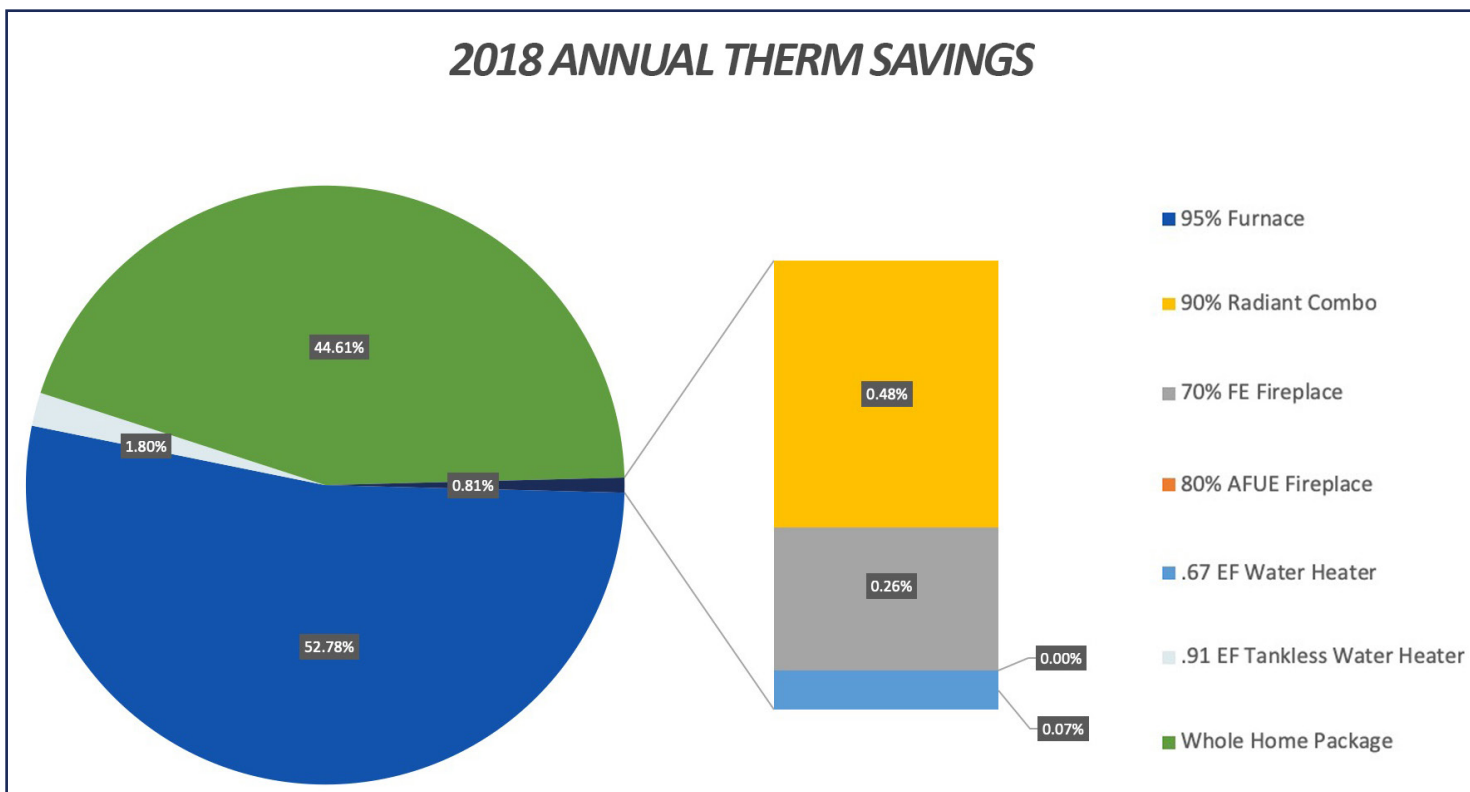


Figure 1. 2018 Annual Therm Savings

Intermountain Gas Company measured the cost-effectiveness of the energy efficiency portfolio based on two industry standard metrics: the UCT and the TRC. As a whole, the UCT for the program was 1.23, while the TRC ratio was 0.64. Although both metrics are commonly used for measuring cost-effectiveness, the Company relies more on the UCT because it measures the cost-effectiveness of items directly under the Company's control.

Avoided supply costs are one component of both the UCT and TRC cost test calculation. In future years, the EE program will be able to apply avoided costs that have been previously filed in an IRP. At the time of this report, IGC did not have filed avoided costs due to the fact the IRP will be submitted in Fall 2019. In the meantime, energy efficiency cost test calculations were based on preliminary avoided costs prepared for the 2019 IRP. See Supplement 1 for avoided costs.

The UCT measures cost-effectiveness from the utility company's perspective and takes into consideration avoided supply costs, program administration costs, and incentives paid by the utility. The TRC measures cost-effectiveness from the customer's perspective and focuses on avoided supply costs, program administration costs and net participant costs. For both the UCT and TRC, a benefit to cost ratio of 1.0 or above indicates that the benefits have exceeded the costs, indicating the cost-effectiveness of the program.

Program Cost-Effectiveness			
Perspective	Benefits	Costs	Benefit/Cost Ratio
UCT	\$ 1,838,122	\$ 1,496,198	1.23
TRC	\$ 1,838,122	\$ 2,854,830	0.64

Table 2. Program Cost-effectiveness Ratios

Details regarding performance, cost-effectiveness, and lessons learned are all presented by individual measure in the following sections.

Space Heating Program

- \$350 rebate for installation of a 95% AFUE (Annual Fuel Utilization Energy) or greater efficiency natural gas furnace
- \$1,000 rebate for installation of a 90% or greater efficiency condensing tankless combination system for space and water heat

The 95% AFUE furnace program contributed the greatest portion of therm savings, with 149,408 annual therm savings and a total of 1,334 furnaces installed. This measure was cost-effective under the UCT with a 1.36 ratio but was not cost-effective under the TRC at 0.44.

The 90% AFUE Combination Radiant Heat System program provided the fourth highest therm savings at 1,353 annual therm savings and three measures installed. This measure had a UCT of 1.94, and TRC of 0.95.

Space Heating Program Results				
Measure	Measures Installed	Therm Savings	UCT	TRC
95% AFUE Natural Gas Furnace	1,334	149,408	1.36	0.44
90% AFUE Combination Radiant Heat System	3	1,353	1.94	0.95

Table 3. Space Heating Program Results



Lessons Learned – Space Heating Program

There were two items on the application form that regularly required additional explanation. These were the “heat loss calculation for the home” and the “furnace size installed” line items. Heat loss and heat load calculations, or Manual J, in HVAC design and sizing of equipment is an essential part of space heating efficiency. If the equipment is improperly sized, it will not achieve the labeled efficiency levels. To address the issue of proper HVAC design and sizing, the Idaho Division of Building Safety (DBS), instituted new plan review requirements for residential new construction effective in January 2019.

In order to prepare contractors to comply with the new plan review requirements, DBS conducted HVAC contractor meetings across the state. IGC joined DBS at the meetings that occurred in Intermountain’s service territory. At the top of the meeting, IGC was granted time to promote the EE Program and field questions about the program.

As a further step to prepare contractors for the upcoming changes, DBS also promoted a training course on residential HVAC design by software provider, Wrightsoft. One component of the course included a detailed review of heat load and heat loss calculation and equipment sizing. Since the heat load calculation and furnace sizing were among the most frequently asked questions about

the rebate application, IGC capitalized on the opportunity to support the DBS effort to provide education on the new plan review requirements, specifically training on heat load calculations and equipment sizing.

Working directly with HVAC design course provider Wrightsoft, IGC offered a \$50 course subsidy to HVAC contractors in the Company’s service territory to offset the \$320 course fee. Participants were required to register prior to attending the class, and verification of course completion was provided by the course provider, Wrightsoft. A total of ten contractors from across the IGC service territory took advantage of the course subsidy and completed the training course held in Idaho Falls.

Fireplace Insert Program

- \$200 rebate for the installation of an 80% AFUE or greater natural gas fireplace insert
- \$100 rebate for the installation of a 70% FE (Fireplace Efficiency) or greater natural gas fireplace insert

Unfortunately, there were no applications for 80% AFUE fireplace inserts during the 2018 program year, due mainly to the lack of availability of qualifying equipment. This program offering will be re-evaluated as a new program is developed.



The 70% FE Fireplace Insert program had a total of 728 annual therm savings, with 13 measures installed. The UCT was calculated at 2.17, and the TRC at 0.70.

Fireplace Insert Program Results				
Measure	Measures Installed	Therm Savings	UCT	TRC
80% AFUE Natural Gas Hearth (Fireplace)	-	-	-	-
70% FE Natural Gas Hearth (Fireplace)	13	728	2.17	0.70

Table 4. Fireplace Insert Program Results

Lessons Learned - Fireplace Insert Program

Fireplace insert efficiency ratings presented two challenges: availability and consistency. Fireplace inserts are typically designed for decorative purposes, but consumers often use them for space heating. Because fireplace inserts are designed to be decorative features, efficiency ratings receive little attention from consumers and manufacturers alike. In fact, finding the efficiency ratings of fireplace inserts required additional effort from the consumer, dealer, and Company since ratings were not readily available, either in marketing information or equipment specifications.

The second issue with fireplace efficiency ratings was the rating system itself. Frequently, fireplace manufacturers only refer to the steady state efficiency rating, which is a less reliable efficiency measurement when compared to the FE rating, because it does not take into consideration appliance cycling. Furthermore, the AFUE rating system does not accurately reflect the actual energy performance of gas fireplace inserts. Currently, the FE rating, which utilizes the Canadian Standards Association P.4. 1-02 testing methodology for capturing overall energy performance of gas fireplace inserts, appears to be the most accurate rating system.

To date, Intermountain is not aware of existing fireplace

inserts that meet the 80% AFUE efficiency criteria. The Company received feedback from both fireplace dealers and customers regarding the lack of availability of these units. The 80% AFUE fireplace was considered emerging technology when the program was designed and, unfortunately, never became available on the market. One explanation for lack of adoption is that an 80% AFUE efficiency rating requires the fireplace insert to be a condensing unit. The condensate produced by the high-efficient unit can itself be a barrier to adoption, as the location of the fireplace in the home often cannot accommodate a condensate line.

Water Heater Program

- \$50 rebate for installation of a 0.67 EF or greater natural gas water heater
- \$150 rebates for installation of a 0.91 EF or greater condensing tankless water heater

Of the rebate programs that had customer participation, the 0.67 EF Water Heater program had the least overall annual therm savings, with 198 therms saved and nine measures installed. For this tanked water heater measure, the UCT was 1.57 and the TRC was 0.30.

The 0.91 EF Condensing Tankless Water Heater program had the third highest annual therm savings at 5,104 and 88 measures installed. UCT and TRC calculated ratios were 1.56 and 0.23 respectively for the tankless water heater.

Water Heater Program Results				
Measure	Measures Installed	Therm Savings	UCT	TRC
.67 EF Natural Gas Hot Water Heater (with tank)	9	198	1.57	0.30
.91 EF Natural Gas Hot Water Heater (tankless)	88	5,104	1.56	0.23

Table 5. Water Heater Program Results

Lessons Learned - Water Heater Program

It should be noted that, at the time the water heater program was designed, water heater efficiency was measured using the Energy Factor (EF), as noted in the IGC tariff. The Department of Energy developed a new metric for communicating the energy efficiency of water heaters, the Uniform Energy Factor (UEF), effective June 2017. The EE Program accepted both EF and UEF rated water heaters meeting minimum efficiency to accommodate existing EF rated stock as the industry moves to the new UEF rating.

Informal conversations with home builders and HVAC contractors suggest that the standard tanked water heater currently being installed is around 0.59 EF. While the 0.67 EF tanked water heater was readily available in the market, it is significantly more expensive and several efficiency levels up from the standard model. The current rebate level was not enough to incent customers to spend the extra money required to reach the 0.67 EF level. Further study is required to find the right incentive level for this appliance.

Anecdotal conversations revealed various levels of satisfaction with tankless water heater performance, as well as lack of general knowledge about tankless water heaters. These conversations present potential educational opportunities for customers and contractors alike.



Whole Home Program

- \$1,200 rebate for residential ENERGY STAR certified new construction with a HERS score of 75 or lower

The Whole Home program was the second highest therm saving measure, with 126,276 annual therms saved and 619 measures installed. These 619 ENERGY STAR homes

were built by 18 builders and had an average HERS score of 61. The UCT calculated was 1.13 and the TRC was 1.17.

Whole Home Program Results				
Measure	Measures Installed	Annual Therm Savings	UCT	TRC
Energy Star Certified Homes	619	126,276	1.13	1.17

Table 6. Whole Home Program Results

Figure 2 below shows the distribution of HERS scores for ENERGY STAR certified homes in 2018. The HERS score is like a golf score, the lower the score the more energy efficient the home.

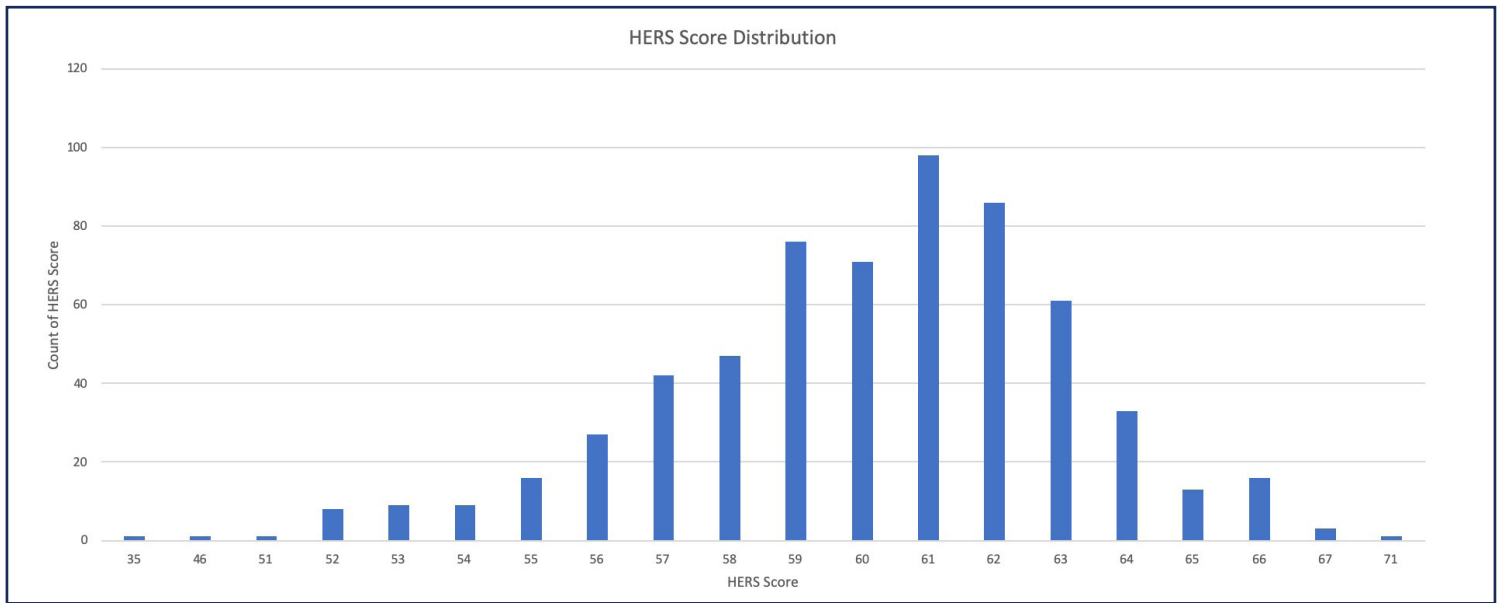


Figure 2. HERS Score Distribution





Lessons Learned - Whole Home Program

While ENERGY STAR is one of the most recognized consumer brands, the implementation of this measure presented many educational opportunities around home energy efficiency in general. When Intermountain began the EE Program, there were less than 5 builders in IGC's service territory building ENERGY STAR certified homes. Through outreach and education, Intermountain was able to increase that number of builders to 18. This market transforming success has been a high point for the program thus far.

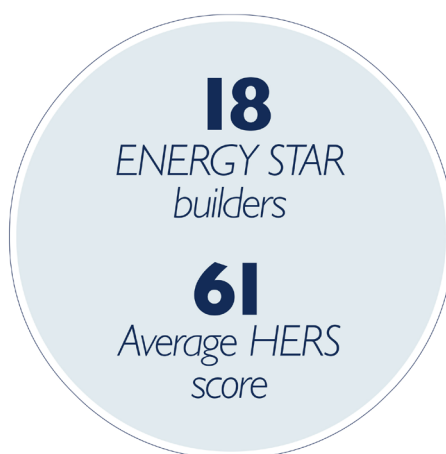
Personal conversations revealed that builders often equate quality with efficiency. It is important to differentiate these two home attributes when promoting home energy efficiency. Based on the inputs that make a home energy efficient, it is likely that an energy efficient home, is also a quality home. Conversely, a quality home may not necessarily be an energy efficient home.

Affordability is another misconception when it comes to home energy efficiency. Many consumers falsely

assume that measures, like ENERGY STAR certification, are only applicable or affordable for homes at a higher price point. IGC focused home energy efficiency education and awareness on the savings benefit of keeping long term home operations affordable, regardless of the home's cost.

Finally, IGC focused on easy ways for the consumer to understand and recognize "the real deal," when it comes to home energy efficiency certification. Intermountain's ENERGY STAR certified home promotions directed customers to "Look for the Label," which is the little blue label affixed to the breaker box when a home is ENERGY STAR certified. Another important aspect of home energy efficiency education emphasized the difference between modeled homes (energy efficient design in the

blueprint phase) and verified homes (performance testing of completed homes by a certified home energy rater.) Consumers were encouraged to visit the publicly available RESNET (Residential Energy Services Network) database to check HERS scores as a means of confirming a home has been certified.



While the question, “What exactly is ENERGY STAR certified?” was a universal question from builders throughout the service territory, different regions experienced unique challenges. ENERGY STAR certification requires the builder to use an ENERGY STAR credentialed HVAC contractor. Implementation of the program revealed there is a shortage of ENERGY STAR credentialed contractors within the Intermountain Gas Company service territory, specifically in the Magic Valley and Pocatello areas. There was also a scarcity of home energy raters in these same regions. Both are essential to ENERGY STAR certification and HERS scoring. Figure 4 illustrates the geographical distribution of the Whole Home rebates across the Company’s regional districts.

While builder demand for credentialed contractors will provide a natural market pull and business opportunity for HVAC contractors to become credentialed, IGC has also taken steps to make credentialing opportunities for HVAC contractors more accessible and affordable in 2019.

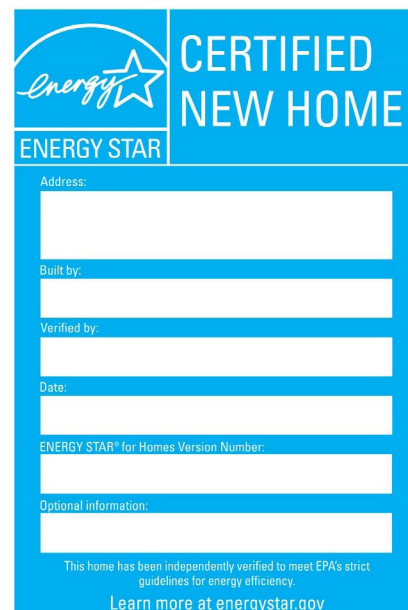


Figure 3. ENERGY STAR Blue Label

ENERGY STAR REBATES BY DISTRICT

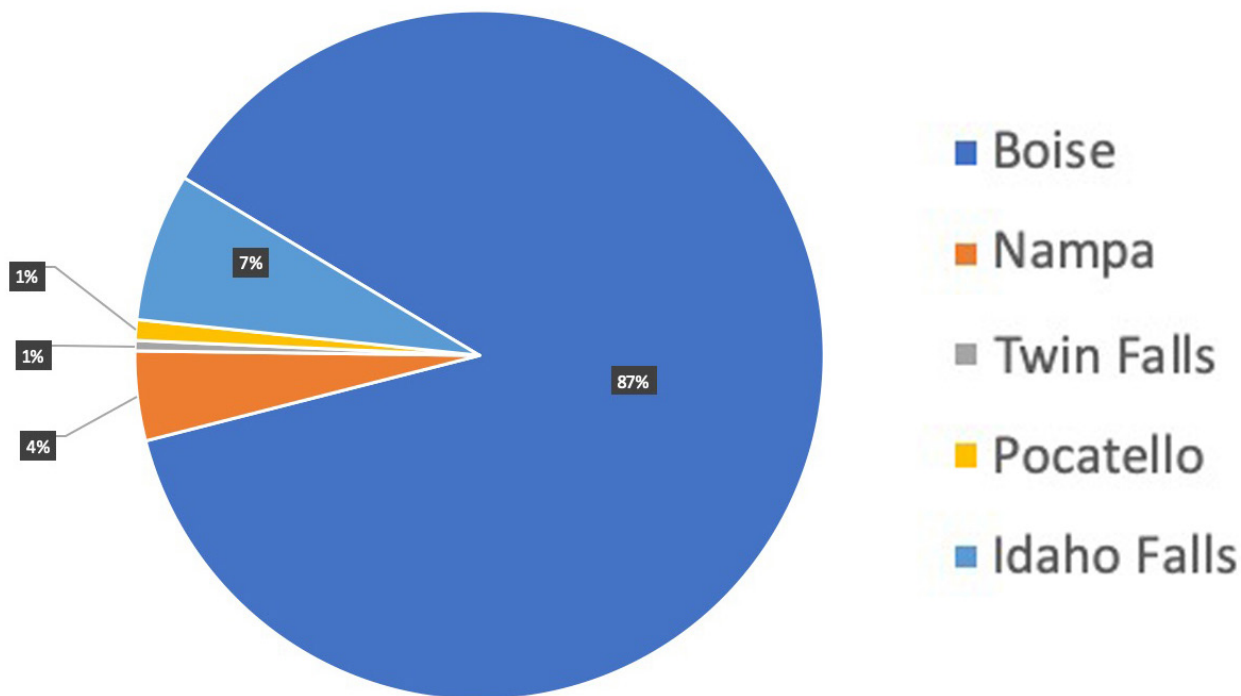


Figure 4. ENERGY STAR Rebates by District



Intermountain Gas Company Program Outreach, Awareness, and Education

2018

To launch the EE Program, IGC focused on three major groups for outreach and education: customers, which included the community at large, contractors (both home energy raters and HVAC contractors) and home builders. A variety of approaches were used to reach these three target groups. The following outlines strategies utilized by Intermountain to raise awareness about the EE Program.

All Sectors:

To introduce the program, brochures were provided as a bill insert (Figures 5 below and 6 on opposite page). On-line bill payers received a digital version of the same insert. Two bill inserts were mailed to customers, one in March 2018 and another in November 2018. The March bill insert was a general EE Program brochure outlining the entire program offering, including minimum required efficiencies and related rebate amounts. In November, customers received a bill insert which included energy saving “pro tips” with associated rebate offerings and directed customers to visit the EE Program’s “Save Energy” website for more information.

NO PLACE LIKE HOME.
Energy Efficiency Program

MAKE YOURSELF AT HOME.

- Replace your furnace with an energy-efficient, gas furnace for warm comfortable air.**
Pro tip: Clean or change your furnace filters monthly during the heating season to keep your furnace operating at peak efficiency.
- Cozy up by a mess-free, high-efficiency gas fireplace.**
Pro tip: Reduce leaks and drafts through comprehensive air sealing, quality-installed insulation, and high-performance windows and doors.
- Enjoy an abundant supply of warm water when you upgrade to a high-efficiency, natural gas water heater.**
Pro tip: Set your water heater temperature to 120 degrees Fahrenheit to maximize energy efficiency.

Find rebate details and more tips at www.intgas.com/saveenergy.

YOUR COMFORT ZONE.
Natural gas provides the amenities that make us feel at home. Installing energy efficient solutions saves you money and makes your home more comfortable year-round. Along with monthly bill savings, you can earn rebates by installing qualified, high-efficiency natural gas appliances.

YOUR NEXT HOME.
Buying a home? Look for the little label with a big message on the circuit breaker box. The ENERGY STAR® Certified label ensures your home has been independently verified to meet high standards for energy efficiency - giving you peace of mind.

www.intgas.com/saveenergy

ENERGY STAR PARTNER

09.18

Figure 5. November Bill Insert

ENERGY CONSERVATION TIPS

Get the most from your hard-earned money! Here are some simple tips that require little to no investment and will help save money.

- Adjust thermostats: Set your thermostat to your personal comfort zone and when you are away from home, reduce the temperature by 5-8 degrees Fahrenheit. For homes with elderly people or children, warmer temperatures are recommended.
- Install a programmable set-back thermostat to do the work for you.
- Clean or change your furnace filters monthly during the heating season.
- Set your water heater temperature to 120°F.
- Wash clothes in cold water.
- Close drapes and blinds at night in winter to insulate against cold air.
- Reduce heat loss by sealing drafts in windows or doors with weather stripping or caulk.
- Install water flow restrictors in faucets and shower heads.
- Install tempered glass doors on fireplaces.
- Close dampers on fireplaces when not in use.

HAVE QUESTIONS?

CONTACT OUR ENERGY EFFICIENCY DEPARTMENT
saveenergy@intgas.com
 208-377-6840—Treasure Valley
 1-800-548-3679—All other areas



2/18

Figure 6. March Bill Insert

ENERGY EFFICIENCY PROGRAM



When it comes to saving energy and conserving resources for the future, Intermountain Gas wants to partner with you by offering rebates for installing high-efficiency equipment in your home. Whether you are upgrading from a less efficient natural gas appliance, converting to natural gas from a more expensive energy source, or preparing to build the home of your dreams, we are here to help!



WHOLE HOME REBATE

Consider building an ENERGY STAR® home that uses natural gas for space and water heating. ENERGY STAR® Verified homes with a Home Energy Rating Score (HERS®) of 75 or less are eligible for a \$1,200 rebate.

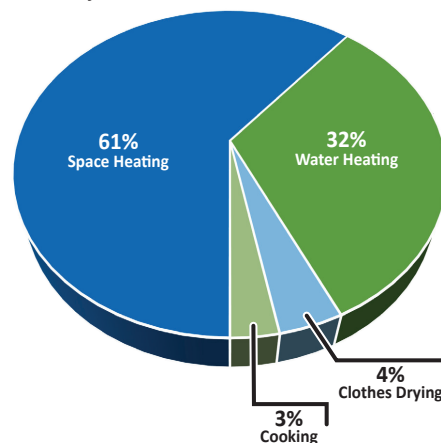
AVAILABLE EQUIPMENT REBATES

Eligible Appliance*	Rebate
95% AFUE Natural Gas Furnace	\$350
90% Efficiency Combo Radiant System	\$1,000
80% AFUE Natural Gas Fireplace Insert	\$200
70% FE Natural Gas Fireplace Insert	\$100
.67 EF/ .68 UEF Natural Gas Water Heater	\$50
.91 EF/ .92 UEF Condensing Tankless Water Heater	\$150

*Minimum Efficiency

HOME ENERGY USAGE

The energy dollar in a typical northwestern home is divided as follows:



ELIGIBILITY REQUIREMENTS

- Available only to new or existing residential customers of Intermountain Gas Company.
- Fuel for home's heat and water heating needs must be exclusively provide by Intermountain Gas.
- Equipment must be installed according to current code and approved by local or state inspection.
- Eligible equipment must meet current requirements of Intermountain Gas' "EE Rebate Program" tariff as approved by the Idaho Public Utilities Commission.
- See our website for complete terms and conditions.

intgas.com/saveenergy

Efficient. Clean. Reliable. Domestic.

A new energy efficiency section was integrated into the Company website, and an energy efficiency dedicated web address, www.intgas.com/saveenergy, was created (Figures 7, 8, and 9 below). Webpages consisted of an energy efficiency tips page, as well as individual pages dedicated to the two respective program categories: Appliances and Whole Home. The pages also included a downloadable rebate application, brochure, and complete program terms and conditions.

Intermountain Gas Home » Energy Efficiency » Energy Efficiency Program

ENERGY EFFICIENCY PROGRAM

Installing high-efficiency natural gas appliances in your home is a smart investment that will save you money and improve your comfort. Energy-efficient equipment makes your energy dollars go farther.

When it comes to saving energy and conserving resources for the future, Intermountain Gas wants to partner with you by offering rebates for installing high-efficiency equipment in your home. Whether you are upgrading from a less efficient natural gas appliance, converting to natural gas from a more expensive energy source, or preparing to build the home of your dreams, we are here to help!

For questions or more information, please contact our Energy Efficiency Department.
 Email: saveenergy@intgas.com
 Treasure Valley: 208-377-6840
 All other areas: 800-548-3679

The energy dollar in a typical northwestern home is divided as follows:

WHOLE HOME PACKAGE (for new construction)	DESCRIPTION	REBATE AMOUNT
Energy Star® Certified Home with a Home Energy Rating Score (HERS) of 75 or less	Energy Star Verified Home with Natural Gas Space and Water Heat	\$1,200

[Learn More](#)

APPLIANCE REBATES (for new & existing construction)	DESCRIPTION	ENERGY EFFICIENCY REBATE
95% AFUE Natural Gas Furnace	95% or Greater Thermal Efficiency Rating	\$350
High-Efficiency Combination Radiant Heat System	90% or Greater Efficiency Condensing Tankless System for Space and Water Heat	\$1,000
80% AFUE Natural Gas Fireplace Insert	80% AFUE Rating or Greater	\$200
70% FE Natural Gas Fireplace Insert	70% Fuel Efficient Rating or Greater	\$100
.67 EF/.68 UEF Natural Gas Water Heater	.67 Energy Factor or Greater	\$50
.91 EF/.92 UEF Condensing Tankless Water Heater	.91 Energy Factor or Greater	\$150

[Energy Efficiency Program Brochure](#)

Figure 7. Energy Efficiency Program Webpage

FOR QUESTIONS OR MORE INFORMATION, PLEASE CONTACT OUR ENERGY EFFICIENCY DEPARTMENT.

Email: saveenergy@intgas.com
 Treasure Valley: 208-377-6840
 All other areas: 800-548-3679

[Twitter](#)

July 09, 2019
 Seal duct connections with mastic to improve your cooling system's efficiency

[LEARN MORE AT energystar.gov](#)

What is the **WHOLE HOME** rebate from Intermountain Gas?
 What is **ENERGY STAR**?
 What is the **ENERGY STAR** certified home difference?
 What is a **HERS** score?
 What is the difference between an energy rating and an energy audit?
 Find an **ENERGY STAR** certified builder or **RESNET** home rater.

What is the **WHOLE HOME** rebate from Intermountain Gas?
 Intermountain Gas is offering a \$1,200 **WHOLE HOME** rebate for homes that are **ENERGY STAR** certified and have a HERS (Home Energy Rating System) score of 75 or less. (The home must use natural gas for space and water heating, see complete terms and conditions at intgas.com/saveenergy)

July 09, 2019
 Seal duct connections with mastic to improve your cooling system's efficiency

[LEARN MORE AT energystar.gov](#)

What is the **Intermountain Gas Energy Efficiency Rebate program**?
 What appliances are eligible for a rebate?
 Do I have to install a specific brand of equipment to qualify for a rebate?
 Does the 90% combo radiant system qualify for a rebate if used for a snowmelt system?
 Why is snowmelt on an interruptible rate schedule?
 Does Intermountain Gas recommend equipment or installers?
 How to find **ENERGY STAR** certified products.
 Choosing a contractor – Help!
 Who is eligible to apply for a rebate? Are rebates only for conversion customers?
 Are there any deadlines for applying for a rebate? When does the program end?

What is the **Intermountain Gas Energy Efficiency Rebate program**?
 An energy-efficient home can save you money season after season. The Intermountain Gas rebate program will put cash in your pocket after you install energy efficient appliances.

What appliances are eligible for a rebate?

Here is a complete list of current rebate offerings:		
95% AFUE Natural Gas Furnace	95% or Greater Thermal Efficiency Rating	\$350
High-Efficiency Combination Radiant Heat System	90% or Greater Efficiency Condensing Tankless Combo System for Space and Water Heat	\$1,000
80% AFUE Natural Gas Fireplace Insert	80% AFUE Rating or Greater	\$200
70% FE Natural Gas Fireplace Insert	70% Fuel Efficient Rating or Greater	\$100
.67 EF/.68 UEF Natural Gas Water Heater	.67 Energy Factor or Greater	\$50
.91 EF/.92 UEF Condensing Tankless Water Heater	.91 Energy Factor or Greater	\$150

Did you know?

- More than **41 MILLION** water heaters in the U.S. are over 10 years old and rickety.
- A water heater is typically the **SECOND BIGGEST** household energy user.
- A new **ENERGY STAR** certified water heater could save up to **\$330 PER YEAR** in energy costs.

Figure 8. Whole Home Rebate Webpage

Figure 9. Appliance Rebates Webpage

IGC also promoted the program using social media, including Facebook, Instagram, Twitter, and YouTube (see Figure 10 below). Social media outreach efforts focused on energy efficiency tips, program promotion and education. Posts highlighted customers receiving their rebate checks and information about related rebates, home energy efficiency features on ENERGY STAR certified homes, and opportunities to visit ENERGY STAR certified homes. The EE Program was also recognized on social media by home builders for promoting ENERGY STAR, and by RESNET, the national standards making body for building energy efficiency, for the WHOLE HOME new construction rebate requiring a HERS score.

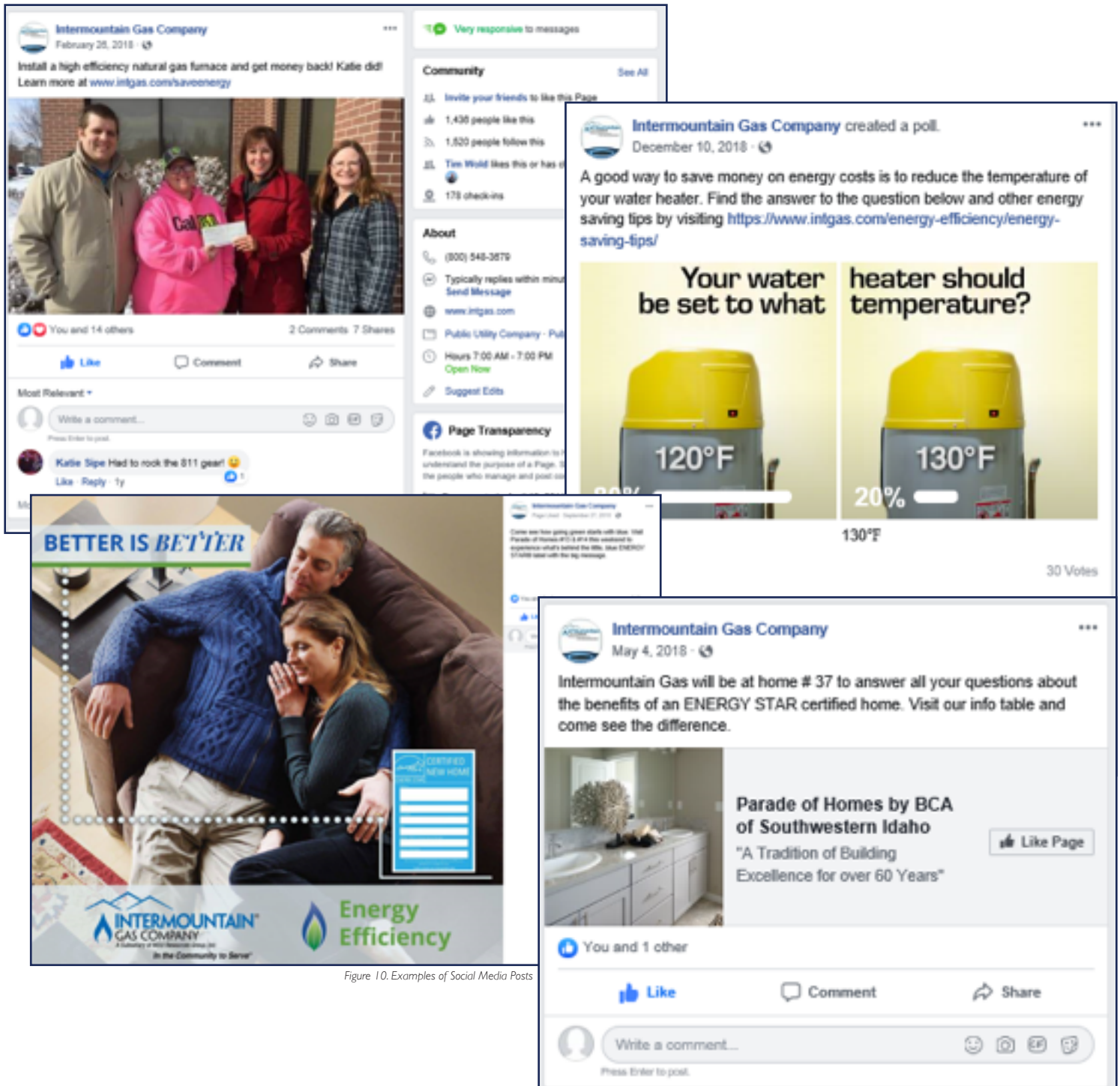


Figure 10. Examples of Social Media Posts

Outreach efforts to the community included promoting energy efficiency rebates at trade show booths, events such as Buy Idaho at the Capitol, home and garden shows, and remodel shows. IGC participated in trade shows throughout the Company's service territory and targeted various audiences including the general public, environmental audiences, youth, and low income.

To raise awareness of the introduction of an energy efficiency program, IGC also targeted outreach efforts with specific industry related conferences and shows, such as the annual ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) conference and the American Institute of Architects Idaho Chapter.

Additionally, IGC reached out to the business community by hosting information booths at events with the City of Meridian, Boise Valley Economic Partnership, the Boise Metro Chamber of Commerce, and the Greater Pocatello Association of Realtors.

Home Builders

IGC leveraged existing memberships with regional Building Contractor Associations (BCA) to promote the Whole Home rebate program with the home building community, as well as related home building industries, such as realtors, HVAC contractors, home mortgage providers, and appraisers. Typical builder outreach efforts included title sponsorships of general membership meetings, which included podium time, and exclusive opportunities to distribute marketing materials, or host information tables at general membership meetings. The Company also promoted the rebate program at BCA builder's expo events, which are designed to showcase products and promotions exclusively to Parade of Homes builders. This is typically a mandatory event for Parade of Home builders.

The Parade of Homes, sponsored by regional BCAs, provided a particularly effective outreach strategy with both builders and community members at large. Intermountain offered additional promotional opportunities to builders whose homes earned the IGC Whole Home rebate. This included showcasing ENERGY STAR and HERS marketing materials at the home, hosting an information table in the home, and offering a raffle opportunity to visitors to the ENERGY STAR certified home. To highlight the energy efficiency of the home, the raffle entry form was designed as a



Figure 11. Trade Show Booth

home energy efficiency quiz. The Company also ran a Facebook awareness campaign encouraging followers to visit ENERGY STAR homes to "see the ENERGY STAR difference" by highlighting home energy efficiency benefits. IGC also provided co-branded ENERGY STAR marketing materials to assist in educating and raising awareness about home energy efficiency, as pictured below.

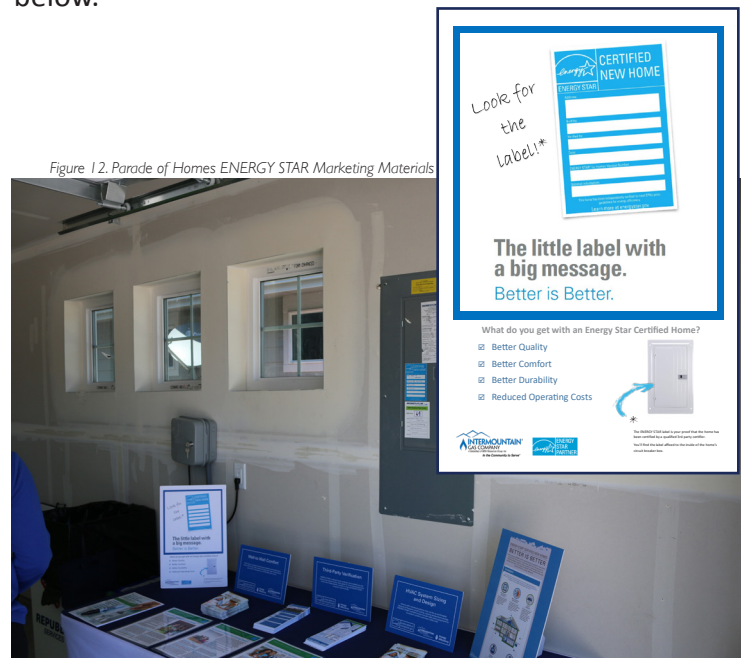


Figure 12. Parade of Homes ENERGY STAR Marketing Materials

IGC took advantage of another event related to the Parade of Homes to reach out to realtors. Each BCA hosted a parade tour bus, which visited each home in the parade. The tour is a ticketed event that is primarily attended by realtors, builders, and BCA members. Intermountain participated as co-host, in partnership with the builder, for tour visitors at an ENERGY STAR certified home and provided energy efficiency promotional materials.

A key part of the Parade of Homes promotion focused on raising awareness about the authenticity of home energy efficiency claims. Parade of Homes visitors were encouraged to “Look for the Label,” the ENERGY STAR label affixed to the breaker box once a home has been verified by an independent, third party. Since the WHOLE HOME rebate requires a home to be both ENERGY STAR certified and earn a HERS score of 75 or less, the campaign also highlighted the meaning and significance of a HERS score as a measure of home energy efficiency performance. To clarify the difference between modeling and certification, IGC encouraged

builders and parade visitors alike to visit the publicly available RESNET national database of HERS scored homes.

While Parade of Homes was effective in reaching parade builders and parade visitors, outreach to builders who may not participate in the Parade of Homes required a more creative and customized outreach approach. After being advised to “go where they go...the golf course”, IGC went to golf course events high in builder attendance. Each BCA hosts at least one golf tournament per year. As an active hole sponsor at the golf tournament, Intermountain was able to promote the EE Program to each team participating in the tournament. IGC hosted a golf game called the “efficiency hole”. Golf teams were timed from tee off to hole out, competing for the title of “most efficient team”; determined by the fastest time, thereby proving their “efficiency”. The few minutes of one-on-one face time with home builders proved extremely beneficial in raising awareness about both the Appliance and Whole Home rebate incentive.



Figure 13. Energy Efficiency Hole

Contractors

The initial launch of the EE Program was introduced to contractors through a mail campaign. Program brochures were mailed to HVAC contractors throughout the Company's service territory. Individual visits with contractors (sales teams, installers, and new construction specialists) also provided opportunities to promote the program, answer questions and collect feedback from contractors.

IGC participated in a joint meeting with Rocky Mountain Power's EE Program (RMP) for HVAC contractors. Together, IGC and RMP promoted their respective program offerings, specifically the opportunity for customers in the overlapping IGC and RMP territories to take advantage of IGC's \$350 high-efficient furnace rebate in combination with the RMP \$200 high efficiency furnace with Electronically Commutated Motor (ECM) rebate. The combined incentives allowed customers to maximize both incentives and energy savings, encouraging increased participation in both programs.

Home Energy Raters

Brochures about the EE Program were also mailed to home energy raters in Intermountain's service territory. Several personal meetings were conducted with home energy raters to explain IGC's rebate program, and for the Company to better understand general home energy rating processes, the builder perspective, and common hurdles to building an ENERGY STAR certified home. Home energy raters have been great partners in raising awareness about the EE Program and answering specific builder questions in "builder speak." Raters are best able to identify how builders need to change the build process in order to qualify for the program.

Special Partnership Project - Boise Valley Habitat for Humanity

To help both consumers and home builders better understand the energy efficiency benefits of an ENERGY STAR certified home, IGC entered into a special project with Boise Valley Habitat for Humanity (BVHFH). What started as a conversation about the appliance rebate program quickly evolved into a discussion about the energy efficiency measures BVHFH was incorporating into their everyday building practices. Further conversations revealed an opportunity for IGC to partner with BVHFH and to highlight their mission to provide affordable housing, while also raising awareness of the role energy

efficiency plays in keeping long term home operations affordable.

Someone aptly commented that an energy efficient home, "looks like any other house". Since so much of what makes a home energy efficient takes place during the build process, IGC sought a way to bring customers to the build site, without actually bringing them to the build site. Through the partnership with BVHFH, Intermountain was granted permission to video document the build process of the first BVHFH ENERGY STAR certified home. The educational videos are focused around the five main feature and benefit categories of an ENERGY STAR certified home:

- high efficiency heating and cooling
- complete thermal enclosure
- water protection
- efficient lighting and appliances
- independent inspections and testing

The videos capture the many ENERGY STAR attributes that can only be seen during the active build process. Short video segments were released in an on-going ENERGY STAR certified home awareness campaign on Facebook. The completed videos live on a dedicated page in the EE Program website, "The ENERGY STAR Difference," as a resource for all to reference. Videos highlighting different aspects of the build related to ENERGY STAR certification, were released as they occurred in the real-time build process.



Figure 14. The ENERGY STAR Difference

IGC and BVHFH also joined forces with DBS Manager, Jerry Peterson, to produce an instructional video on proper air sealing. Air sealing is one of the most effective energy saving measures that does not require additional investment of time or materials, when proper technique is used. At the critical time of air sealing in the build, BVHFH allowed Jerry Peterson to use the Habitat home for a live instructional demo that was captured on video for future educational purposes.

The IGC/BVHFH partnership was launched with an official groundbreaking that included the Mayor of Meridian, the Meridian Chamber, and leadership of IGC and

BVHFH, Figure 15 below. Completion of BVHFH's first ENERGY STAR certified home will be celebrated with an official ribbon cutting ceremony to coincide with Earth Day 2019. For the first time in BVHFH history, BVHFH will allow the community to tour the home. This will provide an opportunity for the community to view, not only a Habitat for Humanity home, but an ENERGY STAR certified home. Like the Parade of Homes promotion, IGC will highlight the ENERGY STAR features and HERS score of the home, as well as the role of energy efficiency in comfort, affordability and energy savings.

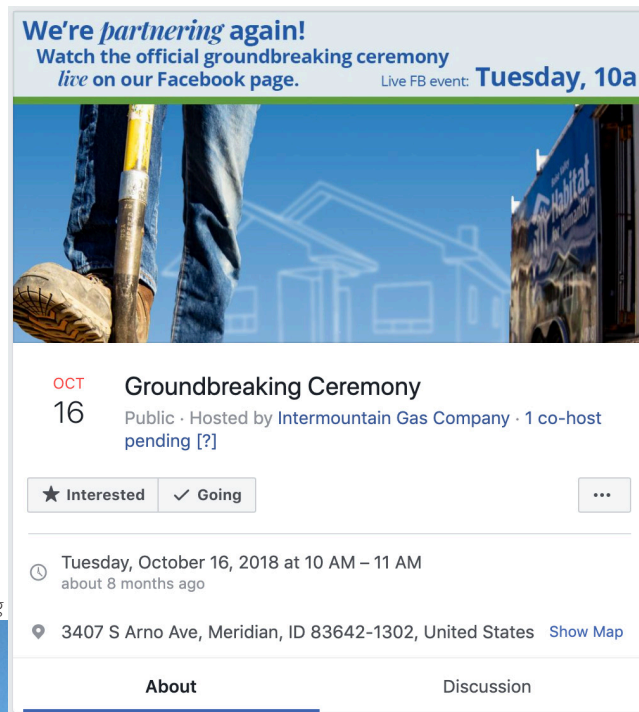


Figure 15. BVHFH Groundbreaking



IGC also coordinated volunteer build days at the BVHFH ENERGY STAR home. The Building Contractors Association of Southwest Idaho (BCASWI) assembled a build team that volunteered their time and talents to help build the BVHFH home. Orientation meetings for build teams provided an opportunity to explain the role of home energy efficiency in keeping long term home operations affordable, and specifically, the ENERGY STAR difference in building processes.



Figure 16. BVHFH Build Volunteers



Stakeholder Input

IGC Energy Efficiency hosted a meeting in November 2018 to provide an update about the program and an opportunity for stakeholders to provide feedback. IGC reviewed program design, the budget and collection mechanism, common terms, and the cost-effectiveness tests that would be applied to program tracking.

The meeting discussion covered information on rebates paid out by measure for the first three quarters of the year, as well as budget balances. A review of education and awareness activities was also provided, along with lessons learned, and IGC's observed successes and challenges around outreach strategies.

Participants of the program provided positive feedback and suggestions for future changes or considerations. Participants like the straightforwardness of rebate qualifications and ease of use of the rebate application. Home energy raters identified the lack of credentialed HVAC contractors as a roadblock to builder participation in the Whole Home rebate program. Participants asked about the potential for the development of a trade ally program for contractors, and a seasonal newsletter. It was also suggested that general home maintenance may be a potential outreach opportunity for first-time homeowners, as upkeep can have an impact on home energy efficiency. IGC agreed to consider all suggestions for future program development and promotions.

The Future

The Company intentionally designed the initial offerings of the EE Program to provide cost-effective offerings that would be less complicated to ramp up and promote. With the program under way, IGC prepared for the next phase of the program by securing a third-party consultant to conduct the first CPA.

In April of 2018, IGC sent an RFP to 30 companies. Intermountain received 6 proposals and interviewed 3 companies. Dunsky Energy Consultants were selected to conduct Intermountain's first CPA. The completed project will be a tool for EE Program planning and provide energy saving inputs to the Integrated Resource Plan. The CPA will review the commercial market, as well as the residential market which will provide the foundation for the eventual launch of commercial program offerings for Intermountain's EE Program. The estimated project completion is June 2019.

In addition to the CPA study, in the Fall of 2019, IGC will solicit an RFP for an evaluation, measurement and verification (EM&V) study to assess the performance of energy efficiency activities and assure the certainty and effectiveness of future activities.

ENERGY EFFICIENCY



NUMBER OF REBATE APPLICATIONS PROCESSED: **2,406**



THERMS SAVED: **283,067** - ENOUGH FOR 386 HOMES (BASED ON AVERAGE ANNUAL USAGE OF 732 THERMS)



LARGEST REBATE CATEGORY: HIGH-EFFICIENT FURNACES AT **53%** OF ALL REBATES



NUMBER OF WHOLE HOME REBATES FOR NEW HOME CONSTRUCTION:

- **619** ENERGY STAR CERTIFIED HOMES WITH A HERS SCORE OF 75 OF LESS
- **18** DIFFERENT ENERGY STAR CERTIFIED BUILDERS
- AVERAGE HERS SCORE OF IGC REBATED HOMES: **61**



33 YEARS OLD: THE AVERAGE AGE OF HOMES REPLACING EQUIPMENT (BUILT IN 1986)

Intermountain Gas Company

Supplement I: Draft Avoided Costs



Avoided Costs

Overview

The avoided cost is the estimated cost to serve the next unit of demand with a supply side resource option at a point in time. This incremental cost to serve represents the cost that could be avoided through energy conservation. The avoided cost forecast can be used as a guideline for comparing energy conservation with the cost of acquiring and transporting natural gas to meet demand.

This section presents IGC's avoided cost forecast and explains how it was derived. While the IRP is only a five-year plan, avoided costs are forecasted for 45 years to account for the full measure life of some conservation measures, such as ENERGY STAR certified homes, which have lives much longer than five years. The avoided cost forecast is based on the performance of IGC's portfolio under expected conditions.

Costs Incorporated

The components that go into Intermountain's avoided cost calculation are as follows:

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

Where:

- $AC_{nominal}$ = The nominal avoided cost for a given year.
- TCF = Fixed Transportation Costs
- TCV = Variable Transportation Costs
- CC = Commodity Costs
- DSC = Distribution System Costs

The following parameters are also used in the calculation of the avoided cost:

- The most recent forecast of commodity prices by gas hub utilized in the 2019 IRP.
- The inflation rate used is tied to the Consumer Price Index (CPI) and is 2.0%.
- The nominal discount rate of 6.68% is IGC's tax effected cost of capital.
- Northwest Pipeline rates are utilized since these are used for the majority of Intermountain's transport and are most transparent.
- Standard present value and levelized cost methodologies are utilized to develop a real and nominal levelized avoided cost by year.

Understanding Each Component

Fixed Transportation Costs

Fixed transportation costs are the cost per therm that Intermountain pays for the right to move gas along an interstate pipeline. As is implied by the name, this cost is incurred whether gas flows along a pipeline or not. This rate is set by the various pipelines and can be changed if the pipeline files a rate case. The final rates filed at the conclusion of a rate case (whether reached through settlement or hearing) must be approved by the Federal Energy Regulatory Commission (FERC). To model rate increases in its forecast, Intermountain multiplies its transportation costs by the CPI escalator. For its 2019 IRP, Intermountain assumes that contracts thru 2025 are already committed and so not avoidable. Starting in 2026, the unit cost of the NWP capacity inflated to nominal cost by the inflation rate is utilized.

Variable Transportation Costs

Variable transportation costs are the cost per therm that Intermountain pays only if the Company moves gas along a pipeline. This rate is set by the various pipelines and can be changed if the pipeline files a rate case. The final rates filed at the conclusion of a rate case (whether reached through settlement or hearing) must be approved by FERC. The current rates for NWP TF-1 variable costs are utilized and escalated by the inflation rate.

Commodity Costs

Commodity costs are the costs of acquiring one therm of gas. Since Intermountain does not know where it will purchase the next therm of gas, the max from all three basins from which Intermountain purchases gas is utilized (AECO, Sumas and Rockies). The price forecast went through 2036 and then an escalator was applied through the remainder of the forecast period.

Distribution System Costs

Distribution system costs capture the costs of bringing gas from the transportation pipeline's citygate to Intermountain's customers. For this IRP cycle, IGC calculates distribution system costs as its system weighted average of its authorized margins. These costs are inflated by the CPI escalator every year.

Intermountain Gas Company
Supplement 2: Energy Efficiency Open House
Meeting Notes



In the Community to Serve®

Energy Efficiency Open House

Meeting Notes

November 29, 2018

Attendees:

Bruce Walter – Boise Valley Habitat for Humanity
Katie Pegan – Office of Energy & Mineral Resources
Brian Bennett – The Energy Auditor, Inc.
Emily Bennett – The Energy Auditor, Inc.
Lars Hansen – Brighton Corporation
Ben Otto – Idaho Conservation League
Connor Grossman – Building Energy, Inc.
Heath Chisholm – Building Energy, Inc.
Tom Lay – Boise Valley Habitat for Humanity
Calvin Howell – TML Service Experts

John Chatburn – Office of Energy & Mineral Resources
Scott Pugrud – Office of Energy & Mineral Resources
Donn English – Idaho Public Utilities Commission
Ingo Stroup – Building Energy, Inc.
Cassie Koerner – Idaho Public Utilities Commission

Intermountain Gas Representatives:

Mark Chiles
Lori Blattner
Kathy Wold
Kody Thompson
Mike McGrath
Ben Marconi

Note Taker: Kody Thompson

10:00 am – Meeting Convened

Mark Chiles opened the meeting, by welcoming the group to Intermountain Gas Company's first meeting regarding the Energy Efficiency Program. The intent of the meeting is to provide information on the program, its goals, and to obtain feedback from those present.

10:15 am – Energy Efficiency 101 – Lori Blattner

Lori highlighted the program goals, which were as follows:

- Ensure the most efficient use of current infrastructure and available resources
- Keeping consumer prices low
- Provide a positive customer experience.

Lori then discussed the different methodologies that exist to accomplish these goals:

- Conservation – Encouraging consumers to adopt behaviors that will result in using less energy
- Demand Side Management (DSM) – Targeted usage reduction at constraint points, which are accomplished by time of use pricing and interruptible rate schedules.
- Energy Efficiency – Encouraging the best use of energy by using technology that will perform the same function, while using less energy.

An overview of how the program began, which customers are eligible for the program, how the program is funded, and program cost effectiveness was presented.

10:30 am – Program Design – Lori Blattner

Lori provided background on the design of the current Energy Efficiency program, and what is being done to help inform and design the program going forward. The following key points were presented:

- Conservation Potential Assessment (CPA) results from Intermountain’s sister company were used to create the framework for the program as it currently exists.
- Intermountain selected measures that performed well in other utility’s programs, were more simple to implement and that were cost effective. A couple of stretch measures were also included in the portfolio. The 80% AFUE Fireplace Insert rebate was the least successful measure. It was considered emerging technology at the time the program was designed but did not become available in the market as anticipated. The Company received feedback on the lack of available product in this category and plans to eliminate this offering when the new portfolio is designed.
- The program is in a ramp up phase. Current measures were selected to help ensure the program could be implemented effectively and would create a solid foundation to build the program.
- Dunsky Energy Consulting has been retained to perform a new CPA for the program to provide insight into the potential that is available for the future. They have been asked to include a review of potential commercial programs that could be offered.

- The Idaho Public Utilities Commission is given reports on the progress of the program quarterly, with the first annual report pending completion of the current program year.

There were questions regarding whether the CPA results are going to be provided as a dynamic model that will allow adjustment of assumptions, measures that should be considered as part of the assessment, and whether the program was IPUC mandated. A comment attributed quick turn-around time for rebates as helping promotion and interest in the program.

10:45 am – Program Update – Lori Blattner

Lori provided an update on the performance of the program through third quarter actuals, as this information is publicly available. The following key points were presented:

- Due to the first year of the program being fifteen months, rather than twelve as it will be going forward, the program collected more funds than were originally planned in the annual budget.
- Through the end of September, the program has spent slightly more than the revenue generated to fund it.
- The whole home and furnace rebates are the most popular measure in the program, with the furnace providing the most deemed therm savings.
- When customers are surveyed about how they heard of the program there are mainly two responses. For appliance rebates the installer is the most frequent response and for the whole home rebate the energy rater is the most frequent response.

There were questions and comments regarding the distribution of the whole home rebates paid across IGC's service territory, and how many new installations versus retrofit furnaces were installed, and recommendations that IGC explore an offering to low income populations.

11:15 am – Boise Valley Habitat for Humanity Energy Star Home – Kathy Wold

Kathy provided an update on the partnership with Boise Valley Habitat for Humanity. The following key points were presented:

- The partnership is a great education opportunity. It was an opportunity to combat misperceptions regarding quality and affordability of home energy efficiency.
- Habitat for Humanity reached out to IGC initially seeking the appliance rebates, but through additional discussion with them it was discovered that they were close to meeting the criteria for the whole home rebate.
- Videos documenting the process of the build are being created to use as an education resource for both Energy Star certified homes and Habitat for Humanity homes. Segments of these videos are being published to the IGC Facebook page and website coinciding with the real-time build process.
- Tom Lay, with Boise Valley Habitat for Humanity, was given time to discuss their history of building efficient homes and their thoughts on the TGC whole home rebate.

There were comments given regarding barriers that exist for builders to construct efficient homes, specifically the lack of ENERGY STAR credentialed subcontractors that are required for ENERGY STAR home certification and a HERS only based program was discussed.

11:45 am – Lunch

12:30 pm – Online Form Prototype – Kody Thompson

Kody previewed an online rebate form that is being developed for the appliance rebates in the program.

The following key points were presented:

- The form will be hosted on the IGC website and will be optimized for mobile devices, with the idea that rebate forms could be filled out in the field during the install to help streamline the submission process.

- Rebates submitted through this format will reduce data entry time for rebate applications, which will help keep the turn around time for rebate payouts within the stated 6 – 8 week timeframe as the program grows.
- The online form will be tested with a few contractors before being made available on IGC's website.

There were questions and comments as to whether IGC was considering creating an online form for the whole home rebate, and the importance of testing this new technology before release was mentioned.

12:45 pm – Promotion & Education Update – Kathy Wold

Kathy provided details of what has been done to promote and provide education about the program. The following key points were discussed:

- A booth kit was developed to be used at trade shows. A conscious effort was made to visit trade shows across IGC's service territory, with mixed results.
- Builders are busy and difficult to reach, because of this, IGC hosted a hole at golf tournaments. This hole was designed around efficiency and provided time to speak with the builders about the program.
- Partnerships were sought during multiple Parade of Homes events with builders that had met the whole home requirement. Co-branded signs were provided during the time of the parade to highlight efficient features in the home, and IGC hosted a table in the home to talk about Energy Star and HERS ratings.
- IGC partnered with Idaho Department of Building Safety (DBS) to facilitate education of code changes and plan review of Manual J. IGC provided a course subsidy to help contractors offset training fees, partnering with DBS Wrightsoft, a software provider.
- A collaborative presentation was done with Brian Bennett to highlight the shared savings that can be achieved in Southeastern Idaho service territory with Rocky Mountain Power.

- A mailer is being prepared to send out to contractors that have participated in the program throughout the year so far. This mailer highlights frequent errors on the form in an effort to help ease the process for customers and contractors, with a raffle held at the end of the program.

Comments were given that a newsletter highlighting simple upkeep items that retain equipment efficiency, would be worth exploring to get basic information in front of first-time home buyers.

1:30 pm – Open Discussion/Wrap-up

- Participation is coming mainly through contractors, which is a great marketing tactic. It is hard to gauge other media leading to someone participating in the program.
- Has any consideration been given to limiting measures to specific contractors, similar to what Idaho Power currently does? Lori answered IGC will continue to review this option, but it is not planned for the immediate future.
- Highlight a customer or trade ally that had the biggest or most projects during the year, as this can be a subtle marketing message to their peers.
- As the program matures and expands into commercial programs, the Office of Environmental and Mineral Resources expressed a desire to see more Idaho Energy Efficiency awards applications sent in for gas savings. They requested that field reps encourage companies to fill out applications for the Governor's award.
- It would be nice to be able to have tangible data showing a comparison of homes built in the 1950's compared to a new construction build.

1:45 pm Meeting Adjourned