

# 2021 ANNUAL REPORT





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## EXECUTIVE SUMMARY

If there was a theme for 2021, it was “out with the old, in with the new!” In 2021, Intermountain Gas Company (Intermountain, Company) retired underperforming rebates, updated existing rebates, and added new energy efficiency rebates for residential customers and home builders. The Company also launched the first-ever commercial energy efficiency program for commercial customers, creating the Energy Efficiency Portfolio (EE Portfolio) consisting of a Residential Program and a Commercial Energy Efficiency Program. The Energy Efficiency Stakeholder Committee (EESC) was instrumental in both the Residential Program revisions and designing the Commercial Program offering. In addition to input from the EESC, residential rebate revisions were also based on recommendations from 3rd party Program evaluators, ADM & Associates, who conducted a formal evaluation in 2020. The Commercial Program design was based on the Conservation Potential Assessment (CPA).

The Company managed two Residential Programs in 2021: closing out rebates retired from the “old Program,” as it was affectionately called, and simultaneously launching the new residential rebates and Commercial Program. Residential Program appliance rebates were officially retired March 31, and applications were accepted through June 30 to allow customers ample time to submit final applications. Due to COVID impacts on home building, and supply chain issues causing longer home completion times, Whole Home new construction rebates were accepted through December 31, 2021. The new residential rebates and the commercial rebates went into effect April 1, 2021, no joke.

Customer participation in the Residential Program continued to grow in 2021. Taking into consideration all rebate payments in 2021, (retired Program rebates and new Program combined), the Company paid a total of 5,553 rebates to customers, a 22% increase over the previous year. Of the 5,553 rebates, the high-efficiency furnace and the new construction residential rebates were once again the two most redeemed rebates, followed by smart thermostats, tankless water heaters and storage water heater rebates. The furnace rebate redemption rate was down slightly compared to 2020 levels, while new construction rebates increased by 27% over 2020. Since the storage water heater and tankless water heaters had cost-effectiveness ratios greater than 1.0 in 2020, the Company increased

the rebate incentives for both measures in the April Residential Program revision. Increased incentives increased participation: storage water heater rebates increased by 167%, while tankless water heater rebates increased by 27%. During the nine months of existence for the new rebates added to the Program, there were 596 smart thermostat rebates redeemed, followed by 4 Tier II tankless water heaters (a second tankless water heater option that was added to the Program), 3 combination boiler rebates and 3 boiler rebates.

At the Program level, the Residential Program was cost-effective with a Utility Cost Test (UCT) ratio of 1.5. There were no 70% Fireplace rebates paid, and the combi radiant heat system was not cost-effective with a UCT of 0.7. Low or no uptake of these measures, confusion surrounding the proper application of the combi radiant heat system, and lack of cost-effectiveness, contributed to the retirement of these measures. Based on nine-months of data, the new Program rebates were all cost-effective with UCT ratios of 1.0 or greater, except for the storage water heater. This was the only rebate with a UCT less than 1.0, at 0.9. There were no Whole Home Tier I rebates paid in 2021.

The Commercial Program was launched April 1, 2021. To date, this Program remains in an awareness building stage. The offering was designed to be a modest first step in encouraging commercial customers to pursue energy savings measures. The Commercial Program offers three space heating rebates and three commercial kitchen equipment rebates. With 4 rebates paid, the condensing boiler rebate was the only space heating rebate redeemed out of the three rebates offered. In the commercial kitchen equipment category consisting of fryer, steamer and griddle rebates, there were 4 fryer and 2 steamer rebates paid. There were no rebates paid for commercial griddles.

Due to the newness of the Program, the Commercial Program did not meet the cost-effectiveness threshold of 1.0 or greater with a UCT of 0.4. The high-efficiency condensing boiler was the most cost-effective with a UCT of 0.8, followed by the commercial steamer and fryer at 0.5 and 0.3, respectively. The Company also conducted a pilot program offering commercial customers a complementary energy saving kit (ESK) containing water saving devices to reduce energy consumed for water heating. ESKs were available

starting in October 2021. Initial uptake of ESKs has been slow as the Company builds awareness of the Program with commercial customers. Too few kits have been redeemed to be able to evaluate cost-effectiveness of this pilot program. The ESKs will continue to be offered until the 350 offered under the pilot have been distributed or the Company reevaluates the offering.

The theme of “old and new” also applied to outreach and education activities. The Company continued to promote energy saving opportunities to traditional audiences: customers, contractors, builders, and the community at large, with the addition of commercial customers. “Old” outreach methods such as customer bill inserts and outdoor events like golf hole sponsorships at golf tournaments remained effective and safe outreach activities, while the on-going pandemic continued to limit other indoor, in-person promotional opportunities. Committed to keeping employees and our communities safe, the Company adapted outreach activities to operate within the bounds of safety protocols and tried new outreach methods such as placing advertisements on public buses and in construction trade magazines. The Company also ran a coordinated fall campaign using email, social media, Company website, and bill inserts to promote the launch of a savings calculator

designed to help customers estimate potential savings when installing high-efficient equipment.

To launch the Commercial Program, commercial customers received the commercial program brochure as a bill insert in July. In the spirit of “new,” the Company tried new approaches to outreach: onserts and email. During the month of October, commercial customers received a bill onsert, which is a section of the bill utilized to promote the energy saving kit. Commercial customers also received an email promoting both the new Program and ESKs. The Company sought out promotional opportunities and events with industry groups related to architecture, commercial HVAC, and commercial kitchen suppliers. A webpage dedicated to the Commercial Program was added to the energy efficiency website, which included a commercial food service equipment calculator for estimating energy cost and consumption savings based on upgrades to high-efficiency equipment. The commercial calculator is a tool developed and provided by Gas Technology Institute (GTI), the leading gas industry research, development, and training organization of which Intermountain is a long-term member.

The EESC continues to play an integral role in the evolution of the EE Portfolio. EESC meetings provide



the Company an opportunity to report on Program performance and seek stakeholder input and feedback regarding energy efficiency. The EESC met in June and November of 2021. The June meeting focused on the implementation of changes to the residential program, as well as a preview of the 2020 annual report results. The Company also provided a brief update on the launch of the Commercial Program, energy efficiency activities related to gas heat pump technologies, and participation in the North American Gas Heat Pump Collaborative (Collaborative). In November, the EESC met for a status update on the newly launched revised residential offering and brand-new commercial offering. Paul Glanville, Research and Development Director for GTI, was the special guest speaker at this meeting. Glanville provided a general overview of gas heat pump technology, the exciting developments in cold-climate gas heat pumps, and the role of heat pump technology in decarbonization. He also explained how GTI is working to identify and address potential market barriers to bring gas heat pump technology to the residential market.

Intermountain remains committed to providing energy efficient choices today as well as a clean, energy efficient future. The American Gas Association (AGA) report “Net-Zero Emissions Opportunities for Gas Utilities,” points to “expanded energy efficiency initiatives,” and “negative emissions technologies,” as pathways to net-zero emissions by 2050.<sup>1</sup> As a utility, Intermountain Gas Company, joined the Low-Carbon Resources Initiative, a joint effort by the Electric Power Research Institute (EPRI) and GTI to “address the need to accelerate development and demonstration of low-and-zero carbon energy technologies required for deep decarbonization.”<sup>2</sup> As part of this utility-wide, and industry-wide, effort to provide a clean, energy efficient future, the energy efficiency program participates in organizations working to accelerate commercialization of gas heat pump technologies. Intermountain is a long-time member of GTI, and the energy efficiency team specifically participates in the Emerging Technology Program (ETP) at GTI, a member driven committee working to accelerate market introduction and acceptance of innovative technologies to feed utility energy efficiency programs.” The EE Program is also a charter member of two new collaborations working specifically on new gas heat pump technology:

the Gas Heat Pump Consortium (Consortium), facilitated by the Energy Solutions Center (ESC), and the North American Gas Heat Pump Collaborative.

The Company continues to evaluate Portfolio performance and effectiveness through a cycle of planning, implementation, and evaluation. After implementing a significant revision to the Residential Program and launching a new Commercial Program, the Company will continuously monitor Program performance during the implementation stage. The Company will explore the feasibility of implementing commercial custom projects to secure cost-effective therm savings in addition to the current prescriptive offering. In the fall of 2022, the Company plans to post a Request for Proposal (RFP) for a CPA study, to update estimated therm savings and explore additional energy saving opportunities for residential and commercial customers alike. Continued participation in the Consortium and Collaborative will allow the Company to leverage the cooperative effort to raise awareness about gas heat pumps. As gas heat pump technology nears commercialization, the Company plans to provide information about the technology, explore training opportunities for contractors, and investigate opportunities and partnerships to conduct gas heat pump demonstration sites for both residential and commercial applications.

Customer enthusiasm for energy efficient solutions, an engaged stakeholder group and a dedicated team focused on energy efficiency for today and tomorrow, keep the energy efficiency Programs moving forward and evolving to meet the energy and money saving needs of Intermountain Gas Company customers. This report details 2021 EE Portfolio performance, cost-effectiveness, lessons learned, and early indications based on 9 months of performance of the newly implemented residential changes and newly launched Commercial Program. Process improvements, outreach and promotional activities are also presented in the report, in addition to an explanation of Program activities designed to promote gas heat pump technologies and the future of the EE Portfolio.

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<sup>1</sup> [America's Natural Gas Industry Will Be Essential to Achieve a Net-Zero Emissions Future | American Gas Association \(aga.org\)](#)

<sup>2</sup> [LCRI Research Vision \(epri.com\)](#)

# INTRODUCTION

Intermountain Gas Company, as subsidiary of MDU Resources Group, is a natural gas local distribution company that has been serving customers since 1955. At the end of 2021, Intermountain served approximately 399,000 customers in 76 communities across Southern Idaho.

In addition to reliably providing affordable and safe natural gas for home space and water heating, 2021 marked the fourth year of delivering money and energy saving opportunities through the energy efficiency program at Intermountain. The Program's mission to secure cost-effective therm savings provides a two-fold benefit to customers. Individual customers benefit by reducing energy use and realizing long term savings through lower monthly bills by installing high-efficiency equipment. All customers benefit from the efficient use of natural gas by maximizing today's assets and delaying the need for expensive system upgrades. For

the first time, in 2021, Intermountain also began offering energy saving opportunities for commercial customers; launching a commercial energy efficiency program.

The Residential Program was approved by the Idaho Public Utilities Commission (Commission) and went into effect on October 1, 2017. All customers receiving natural gas through the Company's residential rate schedule were eligible to participate in the Program. The Program offers rebates for natural gas equipment meeting specific high-efficiency requirements and can be applied to replacement equipment, conversions from other fuel sources, and new construction. The Residential Program also offers rebates for the construction of residential homes that meet specific energy efficiency performance targets. The Commercial Program was approved by the Commission on March 8, 2021 and went into effect April 1 of the same year.

## COST-EFFECTIVENESS TESTING METHODOLOGY

Intermountain's objective is for all rebates to have benefit/cost ratios equal to, or greater than, 1.0 when measured by the Utility Cost Test. 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. Rebates undergo cost tests at several stages: preliminary design, implementation, annual review, and during Evaluation, Measurement and Verification (EM&V). The cost-effectiveness of rebates is also evaluated based on the customer's perspective using avoided supply costs, program administration costs, and net participant costs in a test commonly referred to as the Total Resource Cost Test (TRC.) The TRC is not the primary cost test used for decisions regarding the inclusion of rebate offerings. In calculating the UCT and TRC, Intermountain relies on the calculations outlined in the California Standard Practice Manual and the National Action Plan for Energy Efficiency's (NAPEE), Understanding Cost-effectiveness of Energy Efficiency Programs: Best Practices, Technical methods, and Emerging Issues for Policy-Makers.

The energy efficiency team managed both the Residential and Commercial Programs using one pool of administrative costs totaling \$726,622. To conduct cost-effectiveness testing for the respective programs, the Company assigned administration costs to each program through a two-step process. The Company first identified and assigned direct expenses to the respective programs. For example, the Company purchased a mailing list of residential home builders in the Company's service territory. This expense was deducted from total administrative expenses and applied solely to the Residential Program administration expenses. Residential direct expenses totaled \$44,253. In the same way, expenses for the commercial energy savings kits totaling \$349 were directly charged to the Commercial Program.

After assigning direct expenses to the appropriate programs, the remaining pool of administrative expenses was allocated between the two programs, 80% to the Residential Program and 20% to the Commercial Program. A total of \$545,888 was allocated to the Residential Program, and \$136,472 to the Commercial



Program. Program administration expenses used for cost-effectiveness testing consisted of the sum of direct expenses and the respective percentage of administrative expenses, or \$590,141 for the Residential Program and \$136,481 for the Commercial Program.

Program outreach and education activities for both the Residential and Commercial energy efficiency programs are contained in this report. Together, the Residential Program and the Commercial Program make up the energy efficiency Portfolio. Any Program level discussion or reporting will specify Residential or Commercial Program. For simplicity, Program reporting is separated into two distinct sections which will cover program funding, program cost-effectiveness, individual measure cost-effectiveness, lessons learned as well as program outreach, awareness, and education.



# RESIDENTIAL ENERGY EFFICIENCY PROGRAM

The residential energy efficiency program (Residential Program) is funded by the Energy Efficiency Charge (EEC-RS) rider, a monthly per therm charge to residential customers. In 2021, the Company did not seek a change to the \$0.02093 EEC-RS approved by the Commission in Order No. 34454. The Residential Program began 2021 with an overfunded balance of \$1,318,197. Despite once again paying out the highest annual total rebate payout in Residential Program history in 2021, a total of \$3,287,716, Residential Program growth simply did not keep pace with EEC-RS collections. The EEC-RS ended the year with an over-collected balance of \$2,834,164 as shown in Table 1. There are several potential factors contributing to higher than expected revenues: slower

than expected uptake in new Residential Program offerings due to a learning curve for the updated new construction rebates, and global supply chain issues impacting building supplies and appliance inventories. The Company will continue to monitor fluctuations in the rider balance and carefully consider any adjustments to keep rates as stable as possible and avoid excessive over or under collections balances.

In this section, 2021 performance, cost-effectiveness, and lessons learned will be covered for each rebate. Program outreach and promotional activities by target audience are also included.

## RESIDENTIAL ENERGY EFFICIENCY PROGRAM

Cost-effectiveness testing was conducted on all rebates paid in 2021. This included rebates that were either retired or revised, which were only in effect January through March 31, and the updated or new rebate offerings added to the Residential Program, effective beginning April 1, 2021.

The Residential Program, as an entire portfolio, shown in Table 2, was cost-effective based on the UCT analysis with a benefit-to-cost ratio of 1.5. The TRC benefit-to-cost ratio was 0.6.

## INTERMOUNTIAN GAS COMPANY

### Residential Energy Efficiency Program

#### 2021 Rider Balance

Revenue	\$ 5,393,824
Program Expenses	
Residential Rebates	\$ 3,287,716
Labor	511,077
Program Delivery	59,464
Market Transformation	19,600
Total Program Expenses	\$ 3,877,857
2021 Rider Deferral	
Over/(Under) Collection	\$ 1,515,967
Prior Year Rider Balance	
Over/(Under) Collection	\$ 1,318,197
Rider Account Balance	
Over/(Under) Collection	\$ 2,834,164

Table 1. Residential 2020 Rider Balance

## INTERMOUNTIAN GAS COMPANY

### Residential Energy Efficiency Program

2021 UCT Results

Rebate	Residential Program					UCT Ratio
	Therm Savings	Annual Therm Savings	UCT Benefits	UCT Costs		
Whole Home	274	461,690	\$ 3,619,083	\$ 2,194,169		1.6
Combi Radiant Heat System	113	339	\$ 2,382	\$ 3,307		0.7
70% Fireplace	10	-	\$ -	\$ -		-
.67 EF Water Heater	38	152	\$ 751	\$ 609		1.2
Tankless Water Heater	65	8,710	\$ 68,276	\$ 33,792		2.0
Whole Home I	161	-	\$ -	\$ -		-
Whole Home II	128	33,664	\$ 263,884	\$ 233,723		1.1
Furnace	87	235,248	\$ 1,599,739	\$ 1,222,688		1.3
Combi boiler	155	465	\$ 3,367	\$ 2,707		1.2
Boiler	159	477	\$ 3,739	\$ 2,707		1.4
Water Heater	38	456	\$ 2,253	\$ 2,606		0.9
Tankless I	65	9,230	\$ 72,352	\$ 60,659		1.2
Tankless II	58	232	\$ 1,819	\$ 1,609		1.1
Smart Thermostat	44	26,224	\$ 113,436	\$ 119,284		1.0
		<b>776,887</b>	<b>\$ 5,751,082</b>	<b>\$ 3,877,857</b>		<b>1.5</b>

Table 2. Residential UCT Results 2021

## RESIDENTIAL REBATES

### WHOLE HOME INCENTIVE (RETIRED)

The Whole Home incentive provided residential customers a \$1,200 rebate for new construction homes that were Energy Star Certified and achieved a Home Energy Rating System (HERS) Score of 75, or lower. There were 1,685 rebates issued during the 2021 Program year. This is a 10% increase over the previous Program year. This offering was retired effective April 1, 2021, in accordance with Order No. 34980. It was updated with a two-tiered incentive, Whole Home I and Whole Home II.

The Whole Home incentive was cost-effective under the UCT with a cost-effectiveness ratio of 1.6. The incentive was also cost-effective under the TRC with a ratio of 1.0.

### LESSONS – WHOLE HOME

Intermountain originally intended to sunset this incentive as of September 30, 2021; however, builders and home energy raters stated supply chain issues were impacting the completion of their builds. Due to this development, Intermountain extended the deadline through December 31, 2021 for this incentive, if the construction permit for the home was issued prior to April 1, 2021. Homes that had a permit issued on and after April 1, 2021, were

measured against the updated Whole Home incentive targets. Multiple communications were sent to builders to notify them of the updated deadline.

### WHOLE HOME TIER I INCENTIVE (NEW)

The Whole Home Tier I incentive provided residential customers a \$900 rebate for new construction homes that met the following criteria:

- HERS rated
- Air sealing at or below 3 ACH at 50 Pa
- Ceiling insulation at or above R-49
- Ducts and air handler located inside conditioned space or duct leakage to outside of less than 4 CFM25/100 ft<sup>2</sup> CFA
- Furnace efficiency at or above 97% AFUE

The updated Whole Home incentives no longer require Energy Star Certification for incentive eligibility. While homes are still required to be HERS rated, there is no longer a HERS threshold requirement. Builders are also able to “stack-on” their savings by combining incentives for qualifying smart thermostats and water heaters with the Whole Home rebate. This change was suggested by

the EESC and is a program improvement that was not offered under the previous iteration of the Program.

The Company received 0 qualifying applications for this incentive during the 2021 Program Year.

### WHOLE HOME TIER II INCENTIVE (NEW)

The Whole Home Tier II incentive provided residential customers a \$700 rebate for new construction homes that met the following criteria:

- HERS rated
- Air sealing at or below 4 ACH at 50 Pa
- Ducts and air handler located inside conditioned space or duct leakage to outside of less than 4 CFM25/100 ft2 CFA
- Furnace efficiency at or above 95% AFUE

The updated Whole Home incentives no longer require Energy Star Certification for incentive eligibility. While homes are still required to be HERS rated, there is no longer a HERS threshold requirement. Builders are also able to “stack-on” rebates for qualifying smart thermostats and water heaters, which was not offered under the previous Program. There were 263 rebates paid for this incentive, the majority of those occurring in fourth quarter, 2021.

The incentive was cost-effective under the UCT analysis, with a benefit-to-cost ratio of 1.1. The TRC ratio was 0.4.

### LESSONS – WHOLE HOME TIER I & II

The requirements for this incentive are stretch goals above building code requirements and may present a significant learning curve for builders. Idaho Code requirement for air changes per hour (ACH) was reduced from 7 to 5 in 2021. Intermountain’s Program requires an additional reduction to 3 and 4 ACH respectively for Whole Home I & II, to qualify for the rebate. The additional ceiling insulation requirement and supply chain issues affecting the availability of the higher efficiency furnaces may be causing additional barriers to participation.

In addition to an increased learning curve to meet lower ACH targets, supply chain issues due to COVID-19 also impacted Whole Home rebates by causing longer turnaround times for new construction. Build times increased from five months to eight months, and sometimes even a year, for completion. There may be continued slowdown in Whole Home rebates if supply chain issues persist.

Home energy raters use an energy rating software to evaluate and verify home energy performance. Ekotrope is a home energy rating software provider that offers a service, called Ekotrope Rater, which allows a rebate incentive, such as Whole Home I & II, to appear in the modeling software. This is similar to how one might see a model for LEED certification or Net Zero building requirements. Intermountain contracted with Ekotrope to integrate the updated Whole Home rebate requirements into the home rating software for energy raters in the Company’s service territory. Raters now see the Intermountain Gas rebate incentive in the modeling software. It also allows energy raters to use Ekotrope’s platform to submit applications directly to the Company. The platform has quality assurance and quality control checks in place to ensure that non-qualifying homes cannot be submitted, as well as displaying the qualifying rebates in real-time. The ability to submit through Ekotrope is available to all raters, regardless of the rating software they use, by creating a free Ekotrope account. Implementing Ekotrope Rater brings the Intermountain incentive to the forefront for home energy raters, as they will see the incentive as a “model” in their rating software along with the incentive amount (see Figure 1). The software also creates alerts for the home energy rater when a requirement is not met and requires further attention. The ability for raters to submit applications directly to Intermountain eliminates the administrative

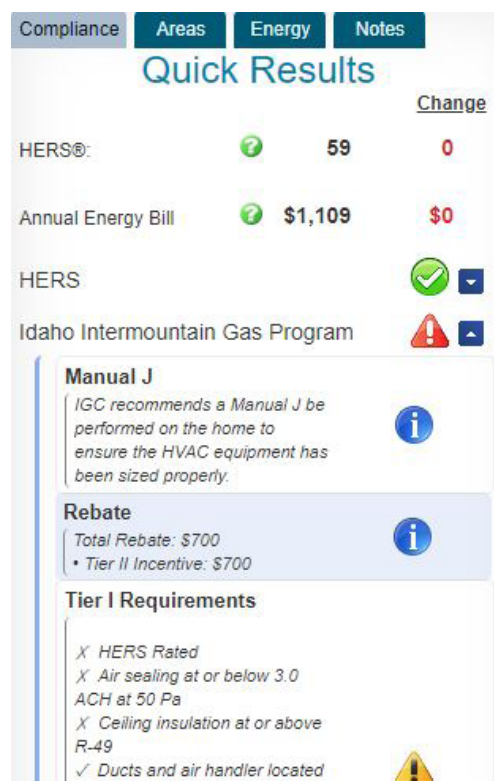


Figure 1. Ekotrope Rater Sample Whole Home Rebate

burden of filling out a separate rebate application for builders, simplifying the process to participate in the Residential Program.

Due to the new above code requirements of the incentive, builders often do not realize until the end of the build process, when the required changes would be too costly to pursue, that they do not qualify for the Whole Home rebate. For this reason, builders and raters alike have requested that the Ekotrope platform be revised to allow builders to submit rebates on all qualifying equipment, when they do not meet the Whole Home criteria. Based on this feedback, Intermountain is pursuing software changes to accommodate appliance rebate submissions when Whole Home requirements are not met, simplifying the application process in these instances as well. Builders can still earn rebates for qualifying appliances, while they continue to work towards meeting the next level energy efficiency targets required for the Whole Home incentives.

### ***FURNACE INCENTIVE***

The furnace incentive provides residential customers a \$350 rebate for the installation of a high-efficient natural gas furnace with a minimum efficiency rating of 95% AFUE. A total of 2,704 furnace rebates were issued by the Company, down slightly from the 2,744 rebates the previous year.

The incentive was cost-effective under the UCT analysis, with a benefit-to-cost ratio of 1.3. The incentive was not cost-effective under TRC analysis, with a benefit-to-cost ratio of 0.4.

### ***LESSONS – FURNACE***

Overall, furnace rebates accounted for 49% of the total number of rebates issued. New construction homes accounted for 35% of all furnace rebates, down from 39% the previous year. The decrease probably reflects the impact that supply chain issues had on builders.

### ***COMBI RADIANT HEAT SYSTEM INCENTIVE (RETIRED)***

The Combi Radiant Heat System provided residential customers a \$1,000 rebate for the installation of a 90% or greater efficiency condensing tankless combo system used for space and water heat. There were 3 rebates paid in the final year of this offering. This incentive was retired effective April 1, 2021, in accordance with Order No. 34980.

The incentive was not cost-effective in its final year under the UCT analysis, with a benefit-to-cost ratio of 0.7. It

was also not cost-effective under the TRC analysis, with a benefit-to-cost ratio of 0.2.

### ***LESSONS – COMBI RADIANT HEAT SYSTEM***

From its inception, this incentive was complicated. Customers and contractors alike either did not understand what equipment qualified for the rebate, or they assumed this was a custom incentive offering. To aid in reducing this confusion the Company updated Residential Program terms and conditions to require pre-qualification prior to installation. This change took effect on February 1, 2021. Pre-qualification messaging was also added to the Company website. The Company did not deny applications without pre-qualification if the equipment met minimum requirements.

### ***BOILER – 95% AFUE INCENTIVE (NEW)***

The Boiler incentive provides customers an \$800 rebate for the installation of a 95% AFUE or greater efficiency boiler. There were 3 incentives issued in 2021.

The incentive was cost-effective under the UCT analysis, with a benefit-to-cost ratio of 1.4. The incentive was also cost-effective under the TRC analysis, with a benefit-to-cost ratio of 1.0

### ***LESSONS – BOILER***

The Boiler incentive was added to the offering based on customer and contractor feedback. Because a combination boiler cannot be installed in certain retrofit situations, the Company added this offering to complement the addition of the combination boiler.

### ***COMBINATION BOILER – 95% AFUE INCENTIVE (NEW)***

The Combination Boiler incentive provides customers an \$800 incentive for the installation of a 95% AFUE or greater efficiency combination boiler (combi-boiler.) There were 3 incentives issued in 2021.

The incentive was cost-effective under the UCT analysis, with a benefit-to-cost ratio of 1.2. The incentive was not cost-effective under the TRC analysis, with a benefit-to-cost ratio of 0.3.

### ***LESSONS – COMBINATION BOILER***

This incentive replaced the Combi Radiant Heat System incentive. This offering is more specific than the previous combi radiant heat system rebate and clarifies the combination boiler as a specific piece of equipment used for both space and water heating, with a minimum efficiency requirement and a standardized efficiency rating.

**FIREPLACE INCENTIVE (RETIRED)**

The fireplace incentive provided residential customers a \$100 rebate for the installation of a high-efficient fireplace insert with a minimum efficiency of 70% FE. This incentive received no qualifying applications for the 2021 Program year. It was retired effective April 1, 2021, in accordance with Order No. 34980.

**LESSONS – FIREPLACE**

While some customers may use a fireplace insert as a substitute heat source, fireplace inserts are designed to be a decorative feature and are not typically rated for energy efficiency. Although some inserts are rated, there is no standard efficiency rating currently applied to all fireplace inserts on the market. The CPA found the estimated annual savings to be lower than previous estimates. This reduction in savings resulted in a minimal incentive for fireplace inserts. The above factors, coupled with historically low participation, led the Company to retire this ineffective incentive.

**SMART THERMOSTAT INCENTIVE (NEW)**

The smart thermostat incentive provided residential customers a rebate of up to \$100 for the installation of a Wi-Fi enabled and Energy Star Certified smart thermostat. There were 596 rebates issued during 2021.

The incentive was cost-effective under the UCT, with a benefit-to-cost ratio of 1.0. It was not cost-effective under the TRC analysis, with a benefit-to-cost ratio of 0.6.

**LESSONS – SMART THERMOSTAT**

In late 2021, a qualifying thermostat that retails for less than \$100 entered the market. The Company updated the Residential Program Terms & Conditions to state rebate amounts would not exceed the price paid for the equipment and installation.

**WATER HEATER INCENTIVE (RETIRED)**

The storage water heater incentive provided residential customers a \$50 rebate for the installation of a storage water heater with a minimum efficiency rating of 0.67 EF. A total of 4 rebates were issued during 2021. The incentive received declining submissions year over year from its inception in 2018, with 2021 being the lowest redeemed year.

The incentive was cost-effective under the UCT analysis, with a benefit-to-cost ratio of 1.2. The incentive was not cost-effective under the TRC analysis, with a benefit-to-cost ratio of 0.4.

**STORAGE WATER HEATER INCENTIVE (UPDATED)**

Based on updated estimated therm savings from the CPA, the Storage Water Heater incentive was increased from \$50 to \$115. In the 9 months of availability there were 12 rebates issued, the most of any program year.

The revised Storage Water Heater was not cost-effective under the UCT analysis, with a benefit-to-cost ratio of 0.9. It was not cost-effective under the TRC analysis, with a benefit-to-cost ratio of 0.4.

**LESSONS – WATER HEATER**

High Efficiency storage water heaters that require power venting may present a potential barrier to participation if the installation of an electrical outlet is also required. A new high-efficiency storage water heater that does not require power venting is now available on the market.

In just the limited time the revised rebate was available, the rebate demonstrated improved performance. It is anticipated the increased incentive and market introduction of a storage water heater that does not require power venting will continue to increase participation. The Company will monitor future performance and cost-effectiveness of this incentive.

**TANKLESS WATER HEATER INCENTIVE (RETIRED)**

The Tankless Water Heater incentive provided residential customers a \$150 rebate for the installation of a condensing tankless water heater with a minimum efficiency of 0.91 EF. There were 134 rebates paid January-April 2021. This is a 41% decrease compared to 2020.

The retired tankless water heater incentive was cost-effective under the UCT analysis, with a benefit-to-cost ratio of 2.0. It was not cost-effective under the TRC analysis, with a benefit-to-cost ratio of 0.3.

**TANKLESS WATER HEATER TIER I INCENTIVE (UPDATED)**

Based on increased estimated annual therm savings from the CPA, the tankless water heater incentive was increased from \$150 to \$325 for the installation of a tankless water heater with a minimum efficiency of 0.91 UEF. There were 142 incentives paid from April through December 2021.

The updated Tankless Water Heater Tier I was cost-effective under the UCT analysis, with a benefit-to-cost ratio of 1.2. The incentive was not cost-effective under the TRC analysis, with a benefit-to-cost ratio of 0.3.

## **TANKLESS WATER HEATER TIER II INCENTIVE (NEW)**

The Tankless Water Heater Tier II incentive provided residential customers a \$300 rebate for the installation of a condensing tankless water heater with a minimum efficiency rating of 0.87 UEF, and a maximum efficiency rating of 0.90 UEF. Based on recommendations from the EM&V and EESC, the Company offered an additional tankless water heater rebate with a slightly lower minimum efficiency requirement, and lower corresponding rebate amount as well as a lower initial purchase price. There were 4 rebates issued in 2021.

The Tankless Water Heater Tier II incentive was cost-effective under the UCT analysis, with a benefit-to-cost ratio of 1.1. It was not cost-effective under the TRC analysis, with a benefit-to-cost ratio of 0.4.

## **LESSONS – TANKLESS WATER HEATER**

Tier I -The installation of tankless water heaters in new construction is growing. New construction accounted for 49% of all Tier I Tankless Water Heater rebates, compared to 43% in 2020. Builders and consumers are choosing high-efficiency water heating options. Installation of a tankless water heater is often easier in new construction than in a retrofit situation.

Tier II – Although this rebate has been offered for a limited time, initial uptake has been low. The difference between the initial purchase price of a Tier I and a Tier II tankless water heater may be inconsequential relative to the higher-efficiency option with a higher incentive. The Company will continue to monitor performance of this rebate offering.

## **LESSONS – RESIDENTIAL PROGRAM**

The online form was made available to all residential customers when the Company's website was updated on April 1, 2021. This led to a 125% increase in the number of applications submitted via the online form, compared to the previous year when the online form was only available through the Contractor Portal. It was a very popular way for customers to submit smart thermostat applications. On average, there were 90 online applications submitted via the online form per month, compared to 50 applications per month on average the prior year.

The application form went through a redesign that went beyond updating the incentives offered on the application. The Company simplified application options to one single form, rather than offering two separate

application formats. The redesign of the application form included adding data fields that were recommended by EM&V evaluators. The addition of these fields will allow the Company to identify equipment installation due to replacement, or for new construction, as well as the BTU input of the previous equipment for furnaces. New data collection will also track whether the equipment was operational at the time of replacement, and the age of the equipment that was replaced. Initially, these data fields were just added to the building information section, but to provide a more robust picture of energy savings for all equipment, these fields were added to each incentive section as of September 2021.

Once released into cyberspace, information tends to persist beyond usefulness. Old, outdated versions of the rebate application are no exception. Upon revising the rebate application, the Company discovered customers were directed to the outdated version of the form when using a search engine to find the Intermountain Gas Rebate Application. To lessen the chance applicants could access an outdated form, the Company engaged in search engine optimization (SEO). SEO influences search results. In this case, it placed the current rebate application, the version that is available on the EE website, in the top position of the results of a web search. The Company will continue to work on identifying contractors who have bookmarked old links or printed the outdated applications to ensure they are using the most up-to-date versions of the form.

## **ADDITIONAL INTERNAL ANALYSIS**

In 2020, Intermountain commissioned a 3rd party to conduct the first Program Evaluation, Measurement and Verification. Figure 2 from the SEE Action Energy Efficiency Program Impact Evaluation Guide, December 2012 (SEE Action Guide) illustrates the critical role of EM&V in energy efficiency program planning and improvement. As the SEE Action Guide notes, EM&V has “three primary objectives: document the benefits of a program, identify ways to improve current and future programs, and support energy demand forecasting and resource planning by understanding the historical and future resource contributions of energy efficiency as compared to other energy sources.” Evaluations are often a means for applying retroactive energy savings to a program to demonstrate prudent investment of customer funds, but beyond the retroactive view, evaluation plays an important role in improving programs. Evaluation, according to the SEE Action Guide, therefore, “both fosters more effective programs

and justifies increased levels of investment in energy efficiency as a long-term, reliable energy source.”

EM&V studies performed by independent 3rd party consultants are comprehensive and informative, but due to significant investment of time and funds required, it is not cost-effective to conduct such a study on an annual basis for each measure. In between formal evaluations, the Company conducted an in-depth EM&V type analysis to gain important insights without a huge cost to its customers. The primary focus of the study was to investigate the difference between furnace therm saving estimates from previous studies. The study also contained analysis of Home Energy Rating Score (HERS) data as well as database validation.

Intermountain attempted to investigate the estimated therm savings difference between the CPA study and the 2020 EM&V for the 95% AFUE furnace measure. The CPA study estimated annual therm savings of 87 per unit while the EM&V estimate suggested therm savings as high as 134. Given the popularity of the furnace program, the difference between these numbers can significantly impact program planning. Intermountain analyzed the bills of 819 program participants and found the average participant’s annual gas usage decreased by approximately 81.1 therms upon upgrading from a baseline furnace of 80% AFUE to a 95% AFUE high-efficient unit. These results shown in Table 3 lend support to the estimate prescribed in the Company’s original CPA. The EM&V annual therm saving estimate of 134 was based on newly constructed homes which may explain why it is higher than analysis based on retrofit units in generally older homes. These findings provide context that will be useful as Intermountain commissions a 3rd party CPA study to be conducted in 2023.

Based the data available for the 2020 EM&V study, evaluators recommended the Company collect additional data from rebate applicants to construct a more robust savings picture. After the study revealed that useful information such as installation type and prior unit efficiency were frequently being left blank on rebate applications, Intermountain updated the wording and layout of the forms in April of 2021 to make these fields clearer to applicants. The update was a success and improved the response rate on prior unit efficiency from just 42% to now nearly 90%. This data will greatly improve the reliability of future billing analyses.

RESNET provided the Company with HERS data for virtually all the homes constructed since 2016 in the



Figure 2. SEE Action Energy Efficiency Program Impact Evaluation Guide, EM&V.

Therm Savings Per Furnace - 80% AFUE Baseline	
Program Year	Therm Savings
2017-2018	83.3
2019	76.6
2020	81.0
2021	92.9
<b>Grand Total</b>	<b>81.1</b>

Table 3. Therm Savings Estimated per 80% AFUE replacement

Intermountain service territory, including both program participants and non-participants. The EM&V study analyzed these homes’ billing data and found an overall strong and significant correlation between HERS Index and home energy usage, as can be seen in the Table 4. The analysis found that in a typical newly constructed home in Idaho, a HERS decrease of 10 points correlated with a cumulative reduction of 1,418 therms over a 25-year forecast period. As of 2020, approximately 15% of newly constructed homes in Idaho received a HERS score, over half of these homes participated in Intermountain’s rebate program. As these numbers continue to grow the Company will be able to expand this analysis further to gain insights on the specific building attributes that promote energy savings. For now, it is promising to see that the HERS index provides a comprehensive and reliable overview of the house’s energy profile, and the Program will continue to require a HERS certificate for the Whole Home incentive.



The database validation component of the internal EM&V consisted of a series of checks to verify that program tracking sheet data aligns with external sources including CC&B and county assessor data. The program tracking sheet records information from all rebate applications including rebate type, serial numbers, and house address. It is critical to ensure this data is accurate as many of these items will be key variables used in the development of the upcoming CPA study. The internal EM&V review checked for consistencies in address spelling, zip codes, and square footages. Out of the more than 15,000 records contained in the program tracking sheet, only 23 entries were found to require correcting, mostly regarding square footage.

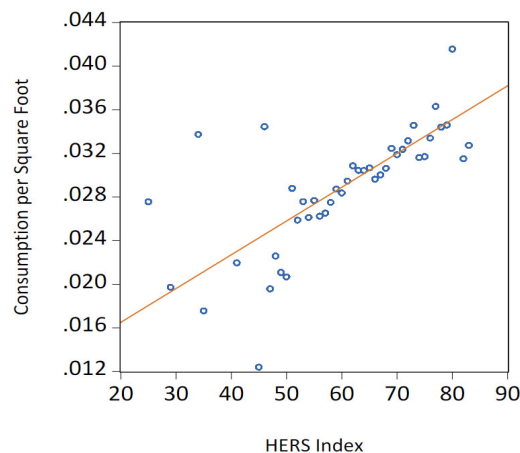


Table 4. Gas Usage per Square Foot by HERS Index

## PROGRAM OUTREACH, AWARENESS AND EDUCATION – RESIDENTIAL

### ENERGY EFFICIENCY TEAM

The theme of “old and new” also applied to Residential Program outreach and awareness in combining reliable outreach approaches with new efforts to deepen engagement and collaboration. Intermountain continued to build on the partnership between Energy Efficiency and Energy Services Representatives (ESR) to raise energy efficiency awareness throughout the service territory. The Company relied on traditional outreach approaches like bill inserts and social media while incorporating new outreach methods as well.

The ESR team of 10 representatives located throughout the Intermountain Gas Company service territory, provide a one-stop-shop experience for builders, contractors, and customers. In their dual role of business development and energy efficiency, ESRs field questions about natural gas service, while also promoting the efficient use of resources and money saving opportunities with rebates for high-efficiency equipment. ESRs also participated in a wide range of events such as building contractor associations (BCA), chamber of commerce and industry trade shows. Not only are ESRs promoting energy efficiency and providing information outside of the Company, but they are also part of an important feedback loop, providing valuable insight and feedback from the field to the Energy Efficiency team.

This year, the Company implemented a standing monthly meeting to update the ESR team on energy efficiency trends, address challenges, raise awareness about frequently asked questions and to provide energy efficiency resources for the team. A portion of the meeting was dedicated to sharing any notable

interactions related to energy efficiency, such as addressing a builder’s objection to energy efficiency, or discussing trends emerging across the service territory, including appliance shortages, or common homeowner misconceptions about energy efficiency. These discussions allowed the group to brainstorm approaches to address challenges, share successful strategies and collaborate directly with the energy efficiency team on energy efficiency issues.

Two significant actionable items resulted from the monthly meetings. ESRs identified the Company employee base as one of the best and most under-utilized energy efficiency word-of-mouth promotional opportunities. The EE team has always provided training sessions and reference materials to the Customer Experience Team, to ensure they are able to answer basic Program questions coming to the customer call center. The ESR team identified additional employees who interface with customers but do not specifically have energy efficiency related duties. To raise awareness with employees in their regions, ESRs led an informational energy efficiency presentation at the mandatory district safety meetings. Presentations focused on raising awareness about the Program, highlighting available rebates, and recommending the energy efficiency website.

To also leverage word-of-mouth promotion by Company employees, the energy efficiency team tested out an employee referral program as shown in Figure 3. Employees received an entry into a quarterly raffle drawing each time their name was listed on a rebate application in the “How did you hear about this program” field. The energy efficiency team was not eligible



**Spread the word!**

Help your friends, family and neighbors save money and save energy with energy efficiency **REBATES**. Make sure they mention learning about it from you...savings for them, money for you! You will be entered in a drawing for a **\$50 VISA gift card** every time your name appears in the "How did you hear about us" section of a rebate application (See sample below). Drawing to take place each quarter. Next drawing January 3, 2022.

Visit [www.intgas.com/saveenergy](http://www.intgas.com/saveenergy) for a complete list of rebates.



Figure 3. Spread the Word Employee Engagement

for this promotion. The employee referral program was implemented in Q4 of 2021 and participation was low. One raffle drawing was held for a \$25 gift card before the referral program was discontinued. The Company will continue to fine-tune employee engagement opportunities to raise Program awareness.

**CUSTOMERS AND COMMUNITY**

The Company continued to leverage successful, tried-and-true strategies as well as incorporate new strategies and tools for energy efficiency messaging. The target audiences remained the same in 2021: Intermountain customers, home builders, contractors, and the community at large. Maintaining health and safety is always a priority for employees and those we serve, but even more so during COVID. The Company adapted outreach methods to promote EE while operating within safety protocols.

The Company endeavors to engage customers in energy efficiency from the moment they become a customer. All new customers receive a welcome letter with an energy efficiency brochure after starting gas service. In 2021, Intermountain sent over 40,000 new customer letters and EE brochures.

Maintaining a digital presence continues to be an important and cost-effective way to share information and promote energy efficiency. Social media posts focused on several themes. Of the 12 monthly posts, three posts promoted the Program in general, and three posts highlighted the benefits of specific high-efficiency equipment along with the related rebate, like smart thermostats and tankless water heaters, as shown in Figure 4. Six posts provided energy efficiency tips for the home such as caulking for air sealing and weather stripping, and adjusting ceiling fan directions for the season. Additional posts leveraged related national days like Earth Day, Energy Efficiency Day, and Energy Star Day to raise awareness about the Program, as shown in Figure 5.

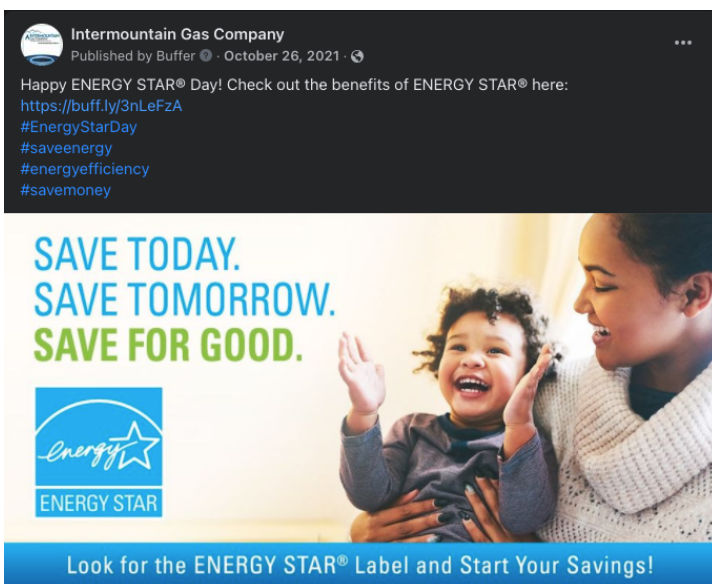


Figure 4. Energy Efficiency Social Media Post

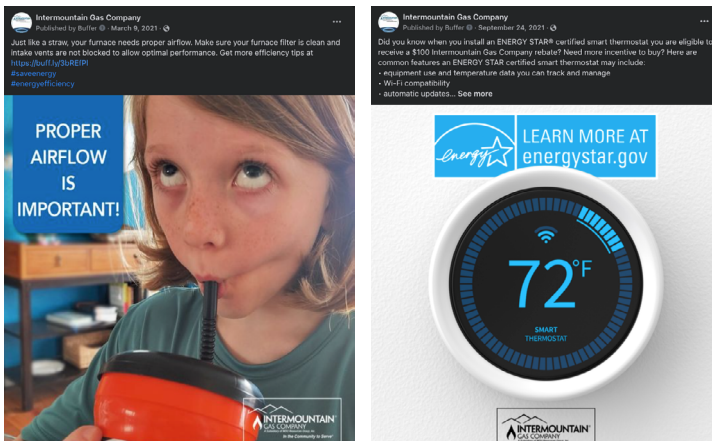


Figure 5. Energy Efficiency Social Media Posts

In addition to providing information about rebates and energy efficiency tips, the Company uses a mix-and-match communications approach, always seeking the magic combination to reach and engage customers in energy efficiency. In 2021 the Company tried pairing social media outreach and the website, bill insert and customer email and website, and new this year, city buses and the EE website.

In the Spring of 2021, the energy efficiency team partnered with business development in a marketing campaign. The Company contracted with public transportation provider Valley Regional Transit (VRT). Energy Efficiency themed ads wrapped the exterior of four different buses fueled by compressed natural gas. The ads varied in size, the largest ad measured over 18 feet long, and all ads featured the tagline, "Save Energy, Save Money," as shown in Figure 6. The Company worked with VRT to select routes that would maximize ad exposure. To engage customers, the Company simultaneously ran the "Launch into Spring" sweepstakes. To enter the sweepstakes, customers were asked to visit a sweepstakes entry page on the energy efficiency website and submit the nearest cross street where they saw the bus featuring the "Save Energy, Save Money" ad. The Company promoted the sweepstakes on social media using "boosted" posts, which optimized Facebook posts geographically in the zip codes of the four bus routes. There were two goals for this activity: engagement and awareness. Customer engagement was exceptionally low, receiving very few sweepstake entries. By conducting an after-action review, the Company learned a valuable lesson in simple vs. easy. The concept of asking customers to enter the location of where they saw an Intermountain Gas bus wrap for a sweepstake entry, was simple, but entering the sweepstakes was not easy. Customers had to remember seeing the bus, go to a computer or phone, go to the website, and enter the closest intersection in the entry form...not easy. On the other hand, the goal of raising awareness was deemed successful. Metrics provided by VRT estimated each bus averaged more than 300,000 impressions per month. Four Intermountain energy efficiency wrapped busses traveling around the Treasure Valley for nine months resulted in an estimated 10 million plus impressions. And that, as they say in the business, is a wrap.

For the annual fall campaign, the Company combined several outreach methods in an educational customer engagement activity: bill insert, customer email, social media posts and a web banner. The Company added a savings calculator to the energy efficiency website that allows customers to estimate the potential savings of upgrading a furnace or water heater. The user can select the efficiency of their current equipment and compare the savings estimates of several upgraded energy efficiency options currently rebated by the Company. To raise awareness of this tool, the Company tied the launch of the calculator into a comprehensive campaign and sweepstakes opportunity with the October residential



Figure 6. VRT Bus Advertising

Appliance Rebates		
Rebate	Minimum Efficiency	Incentive Amount
Combination Boiler for Space and Water Heat	95% AFUE	\$800
Furnace	95% AFUE	\$350
Boiler	95% AFUE	\$800
Storage Water Heater	.68 UEF	\$115
Tankless Water Heater Tier I	.91 UEF	\$325
Tankless Water Heater Tier II	.87 UEF	\$300
Smart Thermostat	ENERGY STAR® Certified	\$100

Find rebate details and more tips at [www.intgas.com/saveenergy](http://www.intgas.com/saveenergy).

Figure 7. Fall Smoker Sweepstakes

customer bill insert, shown in Figure 7. The fall customer engagement activity was called the “Fall Smoker Sweepstakes,” which promoted the savings calculator and urged customers, “Don’t let your money go up in smoke!” By visiting the savings calculator page of the energy efficiency website, customers could enter a drawing for a sweepstakes prize: a Traeger smoker. In addition to the paper bill insert, the Company also sent an email to over 290,000 email subscribers, shown in Figure 8, announcing the savings calculator and Fall Smoker Sweepstakes. Both Facebook and banners on the “front page” of the Intermountain Gas Company website were also used to promote the fall sweepstakes. The combination of email, bill insert and social media was a successful combination to raise awareness and engagement. The residential email campaign had an open rate of 42%, and a click-thru rate of 35%. The savings calculator page received over 9,000 views during the promotion and there were over 2,000 sweepstakes entries. This was a significant increase compared to a total of 390 sweepstake entries in the 2020 engagement activity.

**CONTRACTORS**

Contractors continue to be essential partners to the Program and 2021 was no exception. Communication with these partners was vital to the successful implementation of the revised residential offering. The Company was deliberate in communicating the deadline for submitting rebates under the old offering, and promoting the effective date of the new offering, in addition to raising awareness about new incentives and increased incentive amounts. The Company sent both email communications and mailed postcards with the relevant information, see Figure 9.

As the rebates were retired and the new offering was implemented, the energy efficiency team turned to personalized, individual communications with contractors. Most communications were to address Program changes, such as reminding contractors to use the updated form which required them to fill out the new data fields added to the form, and to ensure contractors did not miss new incentives.

The number of contractors participating in the Program in 2021 remained flat relative to 2020. There were 73 contractors that participated in 2020 but did not return in 2021. On the other hand, there were 72 new contractors participating in 2021 that did not participate in 2020. Anecdotal evidence suggests that contractors lag in participation more than leave the Program. There are instances of smaller “mom

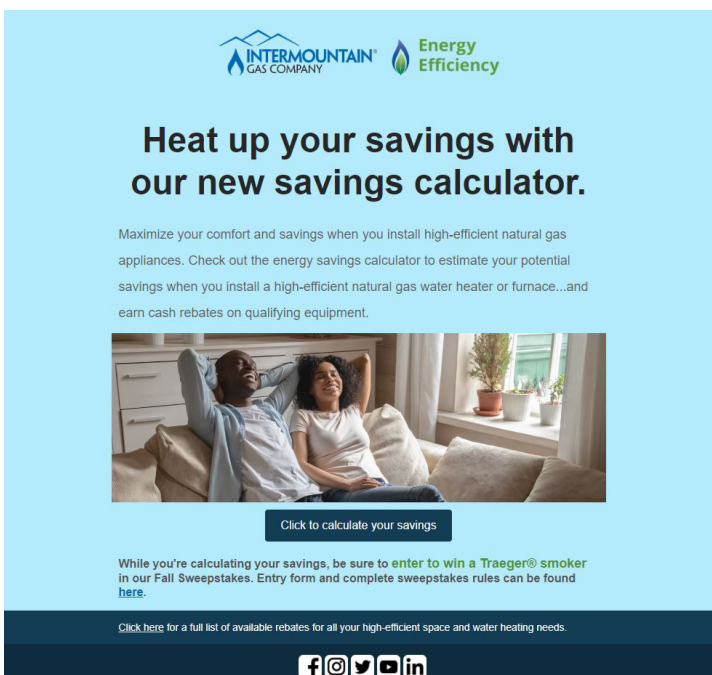


Figure 8. Residential Customer Email

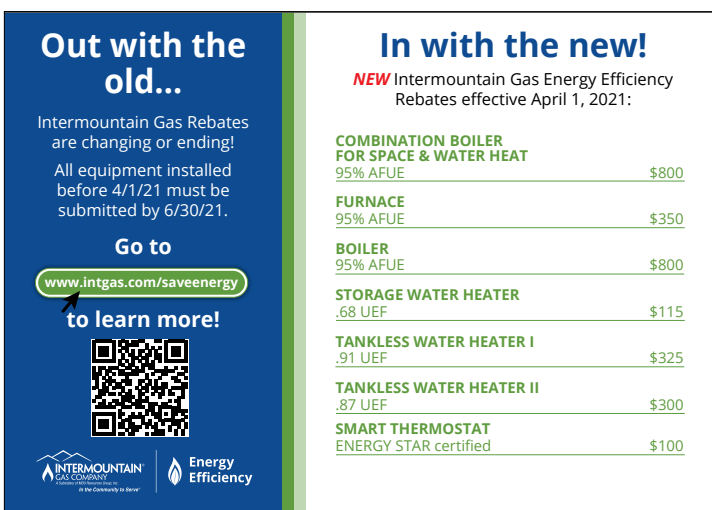


Figure 9. Out with the Old, In with the New Postcard

& pop” HVAC contractors that do much smaller volume and are only identified on rebate applications occasionally, versus larger HVAC companies that participate in the Program on a consistent basis due to the volume of business. Contractor engagement and retention continues to be a focus of the Program.

Home energy raters are often lumped into the category of contractors but play an especially unique role in the success of the Residential Program. Energy raters truly have their finger on the pulse of the home building industry as they are conducting code compliance testing along with energy code compliance verification and above code program verification, such as the Company’s Whole Home rebate program verification. They work routinely with home builders day in and day out, and they

are experts in building code and intimately understand current building practices. Home energy raters often provide more candid feedback regarding builder attitudes around energy efficiency, as well as concerns and satisfaction about the Residential Program than could otherwise be obtained. Home energy raters are an important part of the feedback loop from the frontlines of residential home building and stay in frequent contact with the energy efficiency team. In 2021, an energy rater alerted the energy efficiency team to a meeting that was being hosted by Ammon Building Inspectors. Alongside local power provider, Rocky Mountain Power, the Company was asked to present an overview of the Residential Program to builders and contractors attending the meeting. The Company provides marketing materials to energy raters to help promote the Residential Program and they are included in all builder communications as well. The Company maintains regular, although informal, communications with energy raters to solicit feedback and market updates.

## HOME BUILDERS

Along with the growing in-migration to Idaho and the requisite boom in home building, the number of builders participating in the Program also increased. In 2020, 65 home builders participated in the Residential Program, securing either Whole Home rebates or appliance rebates, in 2021, there were 74 combined Whole Home and appliance rebate builder participants. Several issues had an impact on local builders such as increased permitting times, world-wide supply chain issues and Intermountain's own revision of the Whole Home new construction rebate. The Company took steps to accommodate for these challenges and provided an "easy button" for rebate submissions to help make energy efficiency easier for new construction builders.

To ease the transition from the retiring Whole Home rebate to the new revised rebate, the Company set, what was thought to be at the time, a generous timeline for final rebate submissions for the retired Whole Home rebate: homes started before April 1 were initially required to be submitted by September 30, 2021. Feedback from home energy raters and home builders reported home completion times were taking far longer due to longer permitting times and material delays due to supply chain issues. In some cases, builders reported delayed home completions due to waiting on a single part for a furnace, which delayed code compliance testing, energy performance testing, and home occupancy. To accommodate these

unique circumstances, the Company managed both the retired and new Whole Home rebate programs simultaneously, by implementing the new program April 1, as planned, and extending the final submission deadline for old Whole Home rebates to December 31, 2021. As a result, there were 1,685 old Whole Home rebates paid in 2021, the highest number of Whole Home rebates in Program history. There were also 263 Whole Home Tier II rebates paid in the 9 months since the new Whole Home rebate went into effect. Figure 10 is an example of deadline reminders sent to builders.

There were several changes implemented in the revision of the Whole Home Rebate. As a result of the EM&V and discussions with the EESC, the Whole Home Rebate was redesigned to focus on energy saving measures that directly impact therm savings. This was achieved by eliminating some requirements and adding others. The Energy Star Certification requirement and the HERS score threshold of HERS score of 75 or lower were both eliminated. Instead, specific energy performance targets for air change per hour (ACH) and duct leakage limits were implemented, and a high-efficiency heating equipment requirement was added. To give builders more options to participate, the redesigned rebate offered two tiers of participation, Tier I, and Tier II, with Tier II requiring slightly lower efficiency targets, but still above-code requirements.

Taking into consideration all Whole Home rebates, both the retired and revised versions of the rebate, builder participation increased 31% in 2021, with 35 builders participating in 2020 and 46 participating in 2021. In 2021, there was an 18% increase in the number of builders claiming appliance rebates, 33 appliance builders in 2021, over 28 appliance builders in 2020. In previous years, Whole Home rebates and appliance rebates were mutually exclusive, the revised Whole Home rebate now allows builders to "stack-on" rebates for qualifying equipment for water heating and smart thermostats. After 9 months of availability, 15 Whole Home builders have exercised this



WHOLE HOME REBATE PROGRAM

**ATTENTION BUILDERS,**

**Last Call!** If your home was permitted before April 1, 2021 and you are planning to apply for the \$1,200 Whole Home rebate, all applications **must** be received by Intermountain Gas by **December 31, 2021**.

We still have rebates for new construction! The **NEW** Whole Home rebate program was restructured as **Whole Home Tier I** (\$900) and **Whole Home Tier II** (\$700), effective April 1, 2021. The new rebate structure offers more options including the option to layer on water heating and smart thermostat rebates.

Learn more at [www.Intgas.com/SaveEnergy](http://www.Intgas.com/SaveEnergy)

INTERMOUNTAIN GAS COMPANY  
IN THE COMPANY'S BEST

Energy Efficiency

Figure 10. Last Call! Deadline notification

option to claim additional rebates by including high-efficiency water heating and/or smart thermostats in combination with their Whole Home rebate.

Early indicators suggest builders are transitioning from the retired Whole Home rebate program to the new tiered Whole Home rebate. Based on feedback from home energy raters, the ACH energy performance target is one of the biggest challenges for builders. This is not surprising given the current building trends and code requirements. The Idaho Code Board anticipated that the 2018 Energy Code would present home builders with a learning curve of how to meet the 5 ACH code requirement, and the regional lack of professionals trained to conduct air leakage testing and verification would present additional challenges. The 2018 Residential Energy Code was amended to reduce testing and verification of air leakage limits to only 20% of all new single-family homes constructed by each builder. It is too early to know if energy performance targets will impact builder participation in the Residential Program. The Company will continue to monitor participation and feedback and will explore educational opportunities to assist builders in meeting the new energy efficiency rebate requirements.

The Company continued to utilize participation in Building Contractor Association (BCA) events as one of the most effective outreach methods to reach builders. As COVID restrictions eased, the Company returned to participating in the usual BCA events to promote energy efficiency with the home building community. The Company participated in the Parade of Homes, a signature BCA event, in 5 different associations across the service territory. Levels of participation varied from title sponsorships which promoted the Residential Program on all POH marketing materials, to interactive promotions. To promote the Residential Program, the Company utilized QR codes on Parade of Home ads; which, when scanned with the camera of a smartphone, would take the reader directly to the energy efficiency website. In Eastern Idaho, the garage space of parade homes is available to vendors to promote products with parade visitors. This is an excellent opportunity to talk about home energy efficiency while standing in an energy efficient home. The Company took advantage of this opportunity for the second year in a row. The energy efficiency team and local ESRs shared booth hosting duties over the two weekends of the parade.

Prior to the Parade of Homes, each association typically hosts a builder showcase event, pictured in Figure 11.

**No place like home.**  
Warm, energy-efficient, affordable natural gas turns your house into a home.

When you choose natural gas, you're getting safe and reliable energy now that is leading the way to a bright future.

**Save energy. Save money.** Rebates available for both new construction and appliance replacement when you choose high-efficiency, natural gas appliances. Go to [www.intgas.com/saveenergy](http://www.intgas.com/saveenergy) to learn more, or scan the QR code with your mobile device.

INTERMOUNTAIN GAS COMPANY  
At the Community in Better

Energy Efficiency

[www.intgas.com](http://www.intgas.com)

811  
Know what's below. Call before you dig.

ENERGY STAR PARTNER

Figure 11. Parade of Homes ad



Figure 12. BCA Builder Showcase Event

This is an opportunity for non-builder members to showcase their products to builders, specifically for the Parade of Homes. This event is usually mandatory for parade builders, as part of the event is dedicated to signing parade contracts. Event formats range from a "speed-dating" type of event where builders rotate through all the showcase booths two minutes at a time, to "Around the World Passport" structured events where builders win prizes in exchange for "stamps" received for visiting information booths, and standard presentations over lunch. These events provide an excellent opportunity to engage with

builders about incorporating energy efficient design, and rebates, into their showcase parade homes while they are in the planning and development stage.

In addition to the Parade of Homes, the Company followed the 'go where they go' approach to builder engagement through BCA Golf tournament sponsorships. The Company hosted active hole sponsorships in four different BCA golf tournaments throughout the service territory as an active hole sponsor. Of all the BCA events, golf tournaments garner the highest builder attendance. Hole sponsorship, pictured in Figure 13, provides an opportunity to visit each golfer as they progress through the tournament. As an active hole sponsor the energy efficiency team coordinates an energy efficiency themed golf game to raise awareness about rebates and home energy efficiency. This year the Company participated in the BCA of South-Eastern Idaho in Pocatello for the first time.

Intermountain Gas Company has long been a major sponsor of the statewide Idaho Building Contractor Association (IBCA). The energy efficiency program leveraged the sponsorship benefits and provided information tables, see Figure 14, at the two state board meetings. Statewide meetings provide an opportunity to network with BCA associates from across the service territory all in one location. In 2021, the energy efficiency team was invited to present to IBCA members at the summer board meeting. The presentation included an overview of the revised program offering, new incentive amounts, and highlighted the straightforward application process.

The BCAs are valuable partners in sharing the energy efficiency message with builders and contractors, but not all residential home builders belong to an association. To reach this group, the Company purchased a mailing list of residential home builders filtered by zip codes within the Company's service territory. A "menu-themed" flyer, shown in Figure 15, outlining both the builder appliance rebate program and the Whole Home program was mailed to 2,200 residential home builders. Leveraging another opportunity to remind builders about the Residential Program, the list did not filter out known BCA builders, but instead included both BCA and non-BCA builders.



Figure 13 Golf Hole Sponsorship



Figure 14. IBCA Sponsor Info Booth

**Check out our specials!**

**Builder Incentive Menu**

**Builder Appliance Rebates**

95% AFUE Furnace	\$350
95% AFUE Boiler	\$800
Smart Thermostat (ENERGY STAR Certified)	\$100
95% AFUE Combi Boiler (for space & water heat)	\$800
.68 UEF Tanked Water Heater	\$115
.91 UEF Tankless Water Heater I	\$325
.87 UEF Tankless Water Heater II	\$300

**Whole Home (New Construction) Rebates**

<b>Whole Home Tier I</b> HERS Rated, ACHs3, 97% Furnace, Duct leakage<4 CFM, R-49 Ceiling Insulation	\$900
<b>Whole Home Tier II</b> HERS Rated, ACHs4, 95% Furnace, Duct leakage<4 CFM	\$700

**Combination: Whole Home, Water Heater, Smart Thermostat**

**Example 1:**

Whole Home Tier I	\$900
Smart Thermostat	\$100
Tanked Water Heater	\$115
<b>Rebate Total:</b>	<b>\$1,115</b>

**Example 2:**

Whole Home Tier II	\$700
Smart Thermostat	\$100
Tankless Water Heater I	\$300
<b>Rebate Total:</b>	<b>\$1,100</b>

Choose from **Whole Home Tier I** or **Whole Home Tier II** new construction rebates.

Earn additional savings when you **stack rebates** for a smart thermostat, or high-efficiency water heater (or both!) in addition to your Whole Home rebate.

Where to start? Talk to your home energy rater, or contact John Fisk at 208-377-6043.

Visit [www.intgas.com/saveenergy](http://www.intgas.com/saveenergy) for program details, rebate forms, and terms and conditions.

**www.intgas.com**  
Boise & Treasure Valley: 208-377-6840 | All Other Areas: 800-548-3679

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Boise & Treasure Valley: 208-377-6840 | All Other Areas: 800-548-3679

Figure 15. Whole Home "Menu" Promotional Flyer

## COMMERCIAL ENERGY EFFICIENCY PROGRAM

The Commercial Program was approved by the Commission and went into effect as of April 1, 2021. All customers receiving natural gas through the Company's GS-1 rate class were eligible to participate in the Program through 2021. The Commercial Program offers rebates on natural gas equipment meeting specific high-efficiency requirements and can be applied to replacement equipment, conversion from other fuel sources, and new construction.

The Commercial Program is funded by the Energy Efficiency Charge (EEC-GS) rider, a monthly per therm

### COMMERCIAL ENERGY EFFICIENCY PROGRAM

The Commercial Program was, not cost-effective under the UCT analysis, with a benefit to cost ratio of 0.4 (see Table 6). The portfolio was also not cost-effective under the TRC analysis, with a benefit to cost ratio of 0.3.

charge of \$0.00320 to commercial customers. The EEC-GS went into effect at the launch of the program April 1, 2021. The EEC-GS ended the year with an over-collected balance of \$84,589 as illustrated in Table 5. In its first year, the Company paid out \$13,836 directly to customers in the form of incentive rebates. In this section, 2021 performance, cost-effectiveness, and lessons learned will be covered for each rebate. Commercial Program outreach, promotion and education activities are also included.

### INTERMOUNTIAN GAS COMPANY

#### Commercial Energy Efficiency Program

##### 2021 Rider Balance

Revenue	\$	234,906
Program Expenses		
Commercial Rebates	\$	13,836
Labor		127,770
Program Delivery		3,811
Market Transformation		4,900
Total Program Expenses	\$	150,317
2021 Rider Deferral		
Over/(Under) Collection	\$	84,589
Prior Year Rider Balance		
Over/(Under) Collection	\$	-
Rider Account Balance		
Over/(Under) Collection	\$	84,589

Table 5. Commercial 2021 Rider Balance.



## INTERMOUNTIAN GAS COMPANY

### Commercial Energy Efficiency Program

2021 UCT Results

Rebate	Commercial Program					
	Therm Savings	Annual Therm Savings	UCT Benefits	UCT Costs	UCT Ratio	
Condensing Unit Heater	409	-	\$ -	\$ -	-	-
Boiler Reset Control	1,212	-	\$ -	\$ -	-	-
High-Efficiency Condensing Boiler	1,036	4,145	\$ 32,492	\$ 42,204		0.8
Fryer	508	2,032	\$ 9,428	\$ 37,318		0.3
Steamer	1,054	2,108	\$ 9,781	\$ 19,259		0.5
Griddle	76	-	\$ -	\$ -	-	-
ESK	53	318	\$ 1,163	\$ 51,535		0.0
		<b>8,603</b>	<b>\$ 52,864</b>	<b>\$ 150,317</b>		<b>0.4</b>

Table 6. Commercial 2021 UCT Results

## REBATES

### CONDENSING UNIT HEATER INCENTIVE

The Condensing Unit Heater incentive offers customers a \$1,500 rebate for the installation of a high-efficient unit heater with a minimum efficiency rating of 90% AFUE. The Company received no applications for the installation of this piece of equipment in 2021.

### BOILER RESET CONTROL INCENTIVE

The Boiler Reset Control incentive offers customers a \$350 rebate for the installation of a boiler reset control. The Company received no applications for the installation of this piece of equipment in 2021.

### HIGH EFFICIENCY CONDENSING BOILER INCENTIVE

The High Efficiency Condensing Boiler incentive offers customers a \$4.50/kBTUh incentive for the installation of a high-efficient condensing boiler with a minimum efficiency rating of 90% Thermal Efficiency (TE) and a minimum input of 300,000 BTU. The Company issued 4 rebates in the 9 months of the Commercial Program's existence. Three of the rebated boilers were in the education sector, and one in the lodging sector.

The incentive was not cost-effective under the UCT analysis, with a cost-effectiveness ratio of 0.8. The incentive was also not cost-effective under the TRC analysis, with a cost-effectiveness ratio of 0.6.

### FRYER – ENERGY STAR CERTIFIED INCENTIVE

The Fryer incentive offers customers an \$800 incentive for the installation of an Energy Star Certified Fryer. The Company issued 4 rebates during 2021.

The incentive was not cost effective under the UCT analysis, with a cost-effectiveness ratio of 0.3. The incentive was also not cost-effective under the TRC analysis, with a cost effectiveness ratio of 0.3.

### STEAMER – ENERGY STAR CERTIFIED INCENTIVE

The Steamer incentive offers customers a \$1,100 incentive for the installation of an Energy Star Certified Steamer. The Company issued 2 rebates during 2021.

The incentive was not cost-effective under the UCT analysis, with a cost-effectiveness ratio of 0.5. The incentive was also not cost-effective under the TRC analysis, with a cost-effectiveness ratio of 0.5.

### GRIDDLE – ENERGY STAR CERTIFIED INCENTIVE

The Griddle incentive offers customers a \$200 incentive for the installation of an Energy Star Certified Griddle. The Company received 0 applications for this incentive.

### LESSONS – COMMERCIAL PROGRAM

Condensing Unit Heaters require special collection of the condensate generated from the operation of the unit, which poses a potential barrier to participation for the incentive. The Company is exploring a pilot program for high temperature and heating ventilation unit heaters as another unit heater energy saving option.

The Company is exploring another high-efficiency unit heater as a possible additional rebate offering.

Contractor and customer feedback revealed commercial customers are interested in a tankless water heater rebate option. This measure was not included in the CPA but will be explored in the next CPA study.

Like the Residential Program, contractors and installers will be key to promoting energy efficient commercial options, as contractors are present at the point of decision and considered subject matter experts by their customers. Most of the commercial kitchen equipment rebates in 2021 were attributed to one equipment installer. The Company will continue to pursue outreach with commercial contractors and installers to raise awareness about the Commercial Program.

### COMMERCIAL PROGRAM OUTREACH, AWARENESS AND EDUCATION

The Commercial Program is organized like the Residential Program with webpages dedicated to commercial rebates, promotional materials, and an energy saving calculator for commercial food service. Additionally, the energy efficiency team rolled out brand new outreach efforts to help the Commercial Program enter a new marketplace.

Before launching the Commercial Program with customers, the Company attempted to first prepare commercial contractors. The Company mailed the commercial brochure to over 550 contractors in June. Over 30,000 commercial customers received the program brochure as a bill insert, shown in Figure 16, in July 2021.

The Company also created webpages dedicated to the Commercial Program. The commercial website mirrors the residential website by outlining all rebate offerings and including links to the rebate application, with both paper and on-line options. There is also a commercial food service equipment calculator to help commercial food service customers estimate how much can be saved by upgrading to high-efficiency natural gas cooking equipment. This calculator is in a “build your restaurant” format. It allows customers to compare the energy usage and cost estimates of standard equipment to high efficiency equipment, based on the type and volume of food preparation. The calculator was developed by GTI.

The ESRs have been important partners in the launch of the Commercial Program. Similar to the Residential Program, the ESRs are able to discuss the program with every commercial customer they contact

**Energy Efficiency**  
Commercial Energy Efficiency Program

Installing high-efficiency natural gas appliances in your business is a smart investment that will save you money.

One easy to submit application, cash in your pocket, and savings on energy costs ... what's not to love?

**Commercial Kitchen Equipment Incentives**

Eligible Appliance	Efficiency Rating	Rebate
Fryer	ENERGY STAR® Certified	\$800
Steamer	ENERGY STAR® Certified (≥38% cooking eff/≤2,083 BTU/hr/pan idle rate)	\$1,100
Griddle	ENERGY STAR® Certified (≥38% cooking eff/≤2,650 BTU/hr/SQ FT idle rate)	\$200

**Commercial Heating Incentives**

Eligible Appliance	Efficiency Rating	Rebate
Condensing Unit Heater	90% AFUE or Greater Efficiency	\$1,500
Boiler Reset Control	N/A	\$350
High-Efficiency Condensing Boiler	90% or Greater Thermal Efficiency and ≥300kBTU/h	\$4.50/kBTU/h

**Eligibility Requirements**

- Commercial customers of Intermountain Gas Company (IGC) served on its General Service (GS-1) rate schedule in the state of Idaho.
- Rebates apply only to the purchase and installation of new equipment, used equipment does not qualify.
- Customer must solely heat the property with natural gas provided by IGC to qualify for all space heating rebates.

Other Terms and Conditions may apply. Go to [www.intgas.com/saveenergy](http://www.intgas.com/saveenergy) for complete details.

[www.intgas.com](http://www.intgas.com)  
Boise & Treasure Valley: 208-377-6840 | All Other Areas: 800-548-3679

Figure 16 Commercial Program Brochure

Free Energy Saving Kit + Rebates

# Commercial Energy Efficiency Program

**Save money with rebates.**

Natural gas appliances for your business is a smart move that will save you money. Intermountain Gas offers a wide variety of rebates for the installation of qualifying energy-efficient, natural gas appliances.

Check out our rebates.

Figure 17 Commercial Customer Email

helping to promote uptake of the new program.

To raise awareness about the Commercial Program, the Company launched a pilot program to distribute commercial ESKs. The kits contained items to help save on water heating, such as a pre-rinse spray valve used in commercial cooking establishments, and kitchen and bathroom aerators that could be easily installed by customers. The ESK pilot program began in October. They were featured prominently on the commercial website and promoted through a new format not previously used by the Program, the onsert (see Figure 18). The onsert allowed information regarding the ESK promotion to be printed on each commercial customer bill and maximized unused space on the bill. The ESK onsert showed up on customer bills throughout October. Between October 1, and December 1, the Company received 16 ESK applications. After sending a promotional email to over 9,300 commercial customer email subscribers (see Figure 18), the Company received 49 ESK applications in the five business days following the email promotion, with a 36% open rate, and a 2.6% click thru rate. Although the email promotion achieved a significant open rate for a first-time email communication, follow through requests for the ESKs were quite low.

The Company surveyed ESK recipients approximately 6 weeks after receipt of the ESK. Of the 9 survey responses, 67% said they installed the pre-rinse valve. Those that did not install this device stated they already had one, or it did not fit their appliance. For the kitchen aerators, customers specified they either installed both, installed one or did not install the kitchen aerators. Of the respondents, 44% reported both aerators were installed, and an equal number stated at least one was installed. The 11% that did not install the kitchen aerator said the device did not fit. The same percentages were reported for the 2 complimentary bathroom aerators, 44% installed both, 44% installed one, and the 11% that did not install the bathroom aerator stated they only had one bathroom faucet, or they already had a high-efficiency aerator. The digital water thermostat was the most used device with 89% confirming they used the thermometer to measure water temperature. For the remaining kits, the Company plans to take a more targeted marketing approach focusing on commercial kitchen/restaurant customers in conjunction with promoting incentives for commercial kitchen cooking equipment.

Customers were also asked to rate their satisfaction with

### Have you received your FREE Energy Savings Kit?

Hurry while supplies last to receive an Energy Savings Kit delivered directly to your business!

Scan the QR code with your smart device to access the simple kit request form.

You may also request a kit by visiting [www.intgas.com/esk/](http://www.intgas.com/esk/)

Energy Savings Kit includes:

- 1 pre-rinse spray valve
- 2 kitchen aerators
- 2 bathroom aerators
- 1 roll of pipe tape
- 1 digital water & refrigerator thermometer

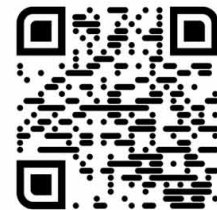


Figure 18 Commercial ESK bill "onsert"



Figure 19 Commercial Program Magazine Ad

their ESK. A total of six customers rated their satisfaction a "10," meaning very satisfied, and added, "Thank you for helping the businesses on these hard times!" A singular rating, also the lowest satisfaction rating of a 5, stated, "most items were not applicable or did not apply to our building." Through awareness building strategies like the ESK pilot program, the Company continues to learn about Commercial customers and how they use natural gas.

Intermountain Gas Company has long been a supporter of industry related organizations like the Idaho Chapters of the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) and the American Institute of Architects (AIA). Like the existing BCA memberships, these established relationships provided the perfect outreach opportunity to promote the new Commercial Program. Unfortunately, with the challenges

related to COVID, the timing was less than perfect as neither organization was able to host the traditional in-person conferences, events, or golf tournaments. The Company was able to place advertisements about the Program and attend one in person event (see Figure 19). The Company sponsored the annual AIA Design Awards event which provided an excellent opportunity to connect with both commercial and residential architects and engineers and raise awareness about both programs. The Company also worked to establish relationships with previously uncontacted industry related organizations like the Idaho Lodging and Restaurant Association, which includes hotels and restaurants.

To quickly get the word out, The Company literally sent word about the Commercial Program to customers via bill inserts. To continue to raise awareness and participation in the Program, the Company is exploring ways to market the Program by segment. Specific information about commercial customers in the existing customer database is limited. Standard Industrial Classification (SIC) codes describe the primary business activity of a company with more than 10,000 unique classifications. Using a SIC Code Lookup, the Company is currently working on verifying, or assigning if not yet identified, the SIC codes of commercial customers to be able to send customized program promotions. For example, any customer with an SIC code of 5812 -Eating Places, could be sent a program flyer for commercial kitchen equipment rebates. On the other hand, a customer with an SIC code 3556 - Food Products Machinery would receive a different EE communication. Current commercial rebate offerings are only for space heating. Identifying customers that use natural gas for processes will be valuable as the Company explores the possibility of a custom commercial program.

Building something from the ground up takes time, and that is certainly the case with the new Commercial Program. COVID Protocols continued to limit the Company's ability to attend in person events to promote the Program for most of the year, making the Commercial Program launch even more challenging than it would be under normal circumstances. COVID impacts on world-wide supply chain suggest equipment costs for both HVAC and commercial kitchen equipment are on the rise, and high-efficiency equipment will be on demand. Material costs like commercial fryer oil costs are also increasing making high efficiency option even more practical. The Company will seek to expand efforts to raise awareness of the new Commercial Program and promote energy saving options for commercial customers.





## ENERGY EFFICIENCY STAKEHOLDERS

The contribution of the Energy Efficiency Stakeholder Committee is important to the success of the Program. The Committee meets regularly for Program updates. Meetings are also an opportunity for the Company to seek feedback and guidance from industry experts, vet ideas, and hear from special guest speakers on energy efficiency related topics. In the spirit of efficiency, rather than conduct two separate Committee meetings for residential and commercial, there is one EESC which includes representatives from both sectors to provide expertise in their respective fields.

### **AVOIDED COST SUBCOMMITTEE**

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The work of the Avoided Cost Subcommittee (Subcommittee) is on-going. Interested EESC members joined the Subcommittee specifically to address the avoided cost model used by the Company for cost-effectiveness testing. The Company's current avoided cost calculation includes avoided commodity and transportation costs. The Subcommittee agreed to leave a placeholder for the potential inclusion of distribution costs in the future.

Inputs from the Company's Integrated Resource Plan (IRP) were utilized to develop a model to identify and capture related distribution costs for use in the avoided cost calculation. The Company presented the model to the Subcommittee for review and input. That review is still underway, but the lack of distribution costs in the avoided costs does not impact any cost effectiveness testing contained in this report. In fact, the future inclusion of any distribution costs in the avoided cost calculation will only improve program cost-effectiveness.

## ENERGY EFFICIENCY STAKEHOLDER COMMITTEE

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Intermountain conducted two EESC meetings in 2021. The first meeting was held on June 2, 2021. The Company provided a brief review of impact and process recommendations from the third-party Evaluation, Measurement and Verification (EM&V) study conducted by ADM & Associates, and the actions taken by the Company to implement those recommendations. The energy efficiency team provided the EESC with program updates on overall Program performance, in addition to status updates on rebates, education and community outreach activities. An overview of participation in GTI's Emerging Technology Program (ETP) and the North American Gas Heat Pump Collaborative (Collaborative) was also provided. The EE team walked through the plan to launch the Commercial Program.

The second EESC meeting was held on November 4, 2021. Most of the meeting focused on Program activities and status updates following the April 1 launch of the revised residential offering and the brand-new commercial offering. The energy efficiency team presented the details of a community wide awareness campaign advertising on Valley Regional Transit buses, and a residential builder mailing. The Company also discussed plans for a fall campaign to launch a savings calculator in conjunction with the annual bill insert and outlined the ESK program deployed in October 2021. Intermountain expressed an interest in exploring a pilot type program for high temperature heating and ventilation (HTHV) unit heaters for the Commercial Program, which would first require an energy savings analysis to verify savings. Continued rebate growth was reported year-to-date for rebates, but the Company acknowledged the potential for some

slowdown in rebate redemptions due to world-wide supply chain impacts on the local markets, especially as Intermountain experienced its own impacts in the form of material delays for new service line installs and increased times to complete new builds.

To continue to raise awareness about gas heat pump technology, the Company arranged for a special guest presentation from Paul Glanville, the R & D Director at the Gas Technology Institute. Glanville presented information on gas fired heat pumps. He provided an overview of how gas heat pumps work and the different types of heat pumps. Glanville also outlined the role for energy efficiency coupled with decarbonized fuels to drive greenhouse gas reductions. The presentation provided an overview of gas heat pump technology successfully being utilized in commercial buildings, as well as the product demonstrations, and steps that are being taken to reduce market barriers to gas heat pump technology adoption for residential use.

The commitment, expertise, and input of the EESC and Subcommittee is an integral part of the energy efficiency program cycle of planning, implementation, and evaluation. All EESC meetings were conducted virtually. While meeting virtually started as a necessity during the world-wide pandemic, the virtual meeting format provided a level of convenience that facilitates participation from stakeholders throughout the service territory.

# SECURING AN ENERGY EFFICIENT FUTURE

Intermountain is continually exploring cost-effective energy saving solutions that can be implemented today, in addition to seeking the energy saving measures of tomorrow. The Company participated in several member driven groups, each focused on different stages and efforts of bringing new innovative energy saving products to market. This endeavor often feels like trying to solve the riddle of which came first, the chicken or the egg. Manufacturers do not want to build products if there is not a market for the product. Consumers cannot demand a product they do not know about or do not know they want. This is the crux of the work in securing an energy efficient future, to influence both the market push and market pull. The strategy is to attack the “riddle” from all sides, influencing market push, by getting manufactures to bring new products to market, and prompting market pull, by raising awareness and educating customers to create demand for new energy efficient solutions. Organizations like GTI and the Collaborative are working to address the development of cost-effective, commercially viable energy efficient technologies, and to prep the market to receive these products through customer and contractor education, product demonstrations and providing support for energy saving incentives.

Energy Efficiency specifically, continued participation on the member-driven collaborative, the Emerging Technology Program. ETP is focused on the introduction and acceptance of new emerging technologies for energy efficiency programs. Intermountain virtually attended the Spring and Winter ETP meetings. Presentations covered a range of technologies like micro cogeneration (mCHP) and gas heat pump technology requisite applications, water heating, HVAC, laundry, food service, for the various sectors, commercial, industrial, and residential. Meetings provided updates on the status and findings of product testing to verify savings and performance, as well as addressing market readiness and potential market barriers.

Through its membership in GTI, Intermountain was one of six sponsors of the “Residential Thermally-driven Heat Pump Combi-Demonstration” Phase I & II, during the 2019-2020 heating season. The project was designed to establish a low-cost thermally driven gas heat pump (THP).<sup>3</sup> The demonstration was a pre-production design of the gas heat pump,

custom air-handler, and other system components.

To follow up on the important work of this demonstration, Intermountain was one of 14 U.S. and Canadian utility sponsors of the white paper finalized in 2019, “The Gas Heat Pump Technology and Market Roadmap,” (Roadmap).<sup>4</sup> The purpose of the Roadmap was to “identify opportunities, information gaps, impediments and strategies to accelerate the commercialization and market acceptance of gas heat pumps in North America.” The goals included: gathering and sharing high-level stakeholder input from manufacturers, developing a technical assessment summary of domestic and international gas heat pump products, market conditions and market barriers and identifying next steps. GTI focused on working with manufacturers to get from pre-production design to commercialization. The Roadmap identified the barriers and challenges the industry might face on that road to commercialization and identified the next steps to be taken down said road. The North American Gas Heat Pump Collaborative was the group to act beyond the identification of next steps and put in motion the actual implementation of those steps.

In 2021, the Company continued its membership in the Collaborative since joining as a charter member in 2019. The Collaborative has evolved from a collection of utilities and energy efficiency program administrators working together through the facilitation by a third party, to a well-organized, 501(c)(3) entity working to accelerate the adoption of innovative gas technologies through strategic intervention.” Resource Innovations (RI), formerly the facilitator, is now the contracted administrator of the Collaborative. An official board of directors has been formed, as well as a communications committee in addition to the committees focused on the initiative work: residential HVAC gas heat pump committee and gas heat pump water heater committee. The Collaborative has completed the initial work of conducting supply chain and consumer research and identified a 2022 scope of work for both committees. Scoped activities identified include manufacturer outreach and engagement, establishing the gas heat pump in technical reference manuals. The scope of work also includes accelerating codes and standards and product certifications, and developing installer support materials, to name a few. The Collaborative coordinated an outreach schedule to promote the Collaborative at industry related conferences and events



and continues to recruit new members to join this collective effort. The Collaborative has also launched a website, [www.gasheatpumpcollab.org](http://www.gasheatpumpcollab.org), to share gas heat pump resources such as technology overviews, results of field demonstrations, as well as a white paper outlining the benefits of gas heat pumps: sustainable, affordable, feasible and reliable. These are the types of activities that will accelerate adoption of gas heat pump technology, but it is collaboration, the true purpose of the Collaborative, that will influence adoption more quickly than Intermountain could achieve working alone.

MDU Resources Group is a corporate member of the Energy Solutions Center (ESC). ESC is a non-profit organization that promotes energy-efficiency natural gas solutions for use by residential, commercial, and industrial energy users. ESC also creates educational and marketing materials, case studies and training manuals to “enhance the success of those utility customer service professionals responsible for enhancing customer productivity, efficiency, reliability and comfort.”<sup>5</sup> In 2021, the energy efficiency team leveraged the corporate membership and participated on the ESC Gas Heat Pump Consortium (Consortium), whose objective is “to more effectively alert and educate end users, engineers, architects, consultants, installers, contractors and trade allies about this higher efficiency, lower carbon HVAC option.” In December 2021, the Consortium produced a gas heat pump guide (see Figure 20) that can be branded with the Intermountain Gas logo, which will be valuable to share with contractors and customers. The Consortium also plans to launch a half-day gas heat pump workshop designed for utility employees, and a separate workshop for contractors. Intermountain will leverage these resources to raise awareness and education for groups critical to the advancement of gas heat pumps, including the energy efficiency team, the ESR team and HVAC and plumbing contractors.

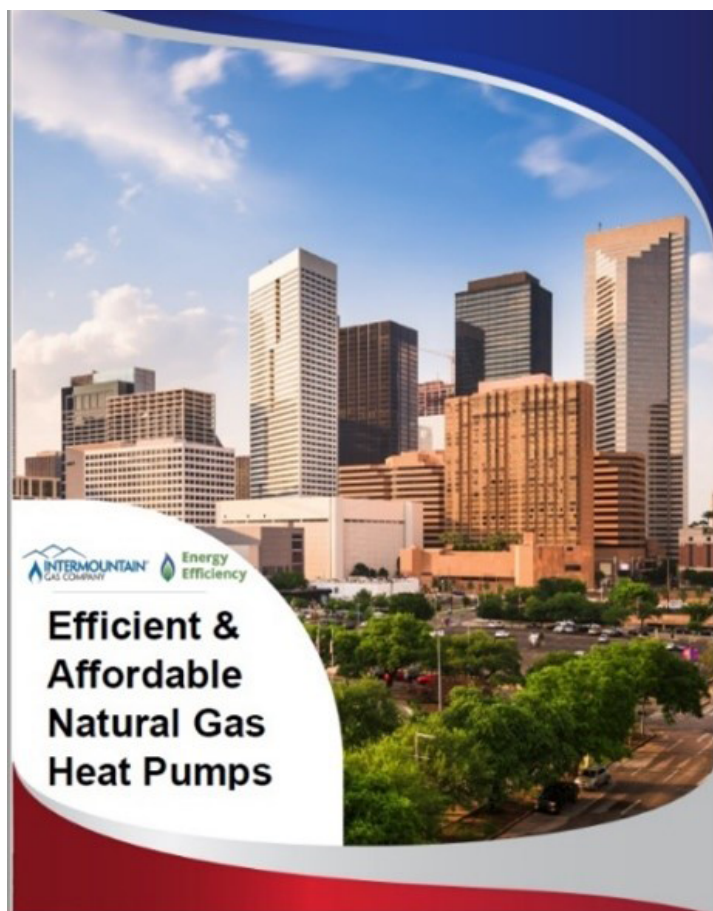


Figure 20 Gas Heat Pump Guide

<sup>3</sup> [https://www.gti.energy/wp-content/uploads/2021/12/Gas-Absorption-Heat-Pump-Combi\\_2-Page\\_2021-12-03.pdf](https://www.gti.energy/wp-content/uploads/2021/12/Gas-Absorption-Heat-Pump-Combi_2-Page_2021-12-03.pdf)

<sup>4</sup> [https://www.gti.energy/wp-content/uploads/2020/09/Gas-Heat-Pump-Roadmap-Industry-White-Paper\\_Nov2019.pdf](https://www.gti.energy/wp-content/uploads/2020/09/Gas-Heat-Pump-Roadmap-Industry-White-Paper_Nov2019.pdf)

<sup>5</sup> <https://www.energysolutionscenter.org/default.aspx>



## ENERGY EFFICIENCY: NEXT STEPS

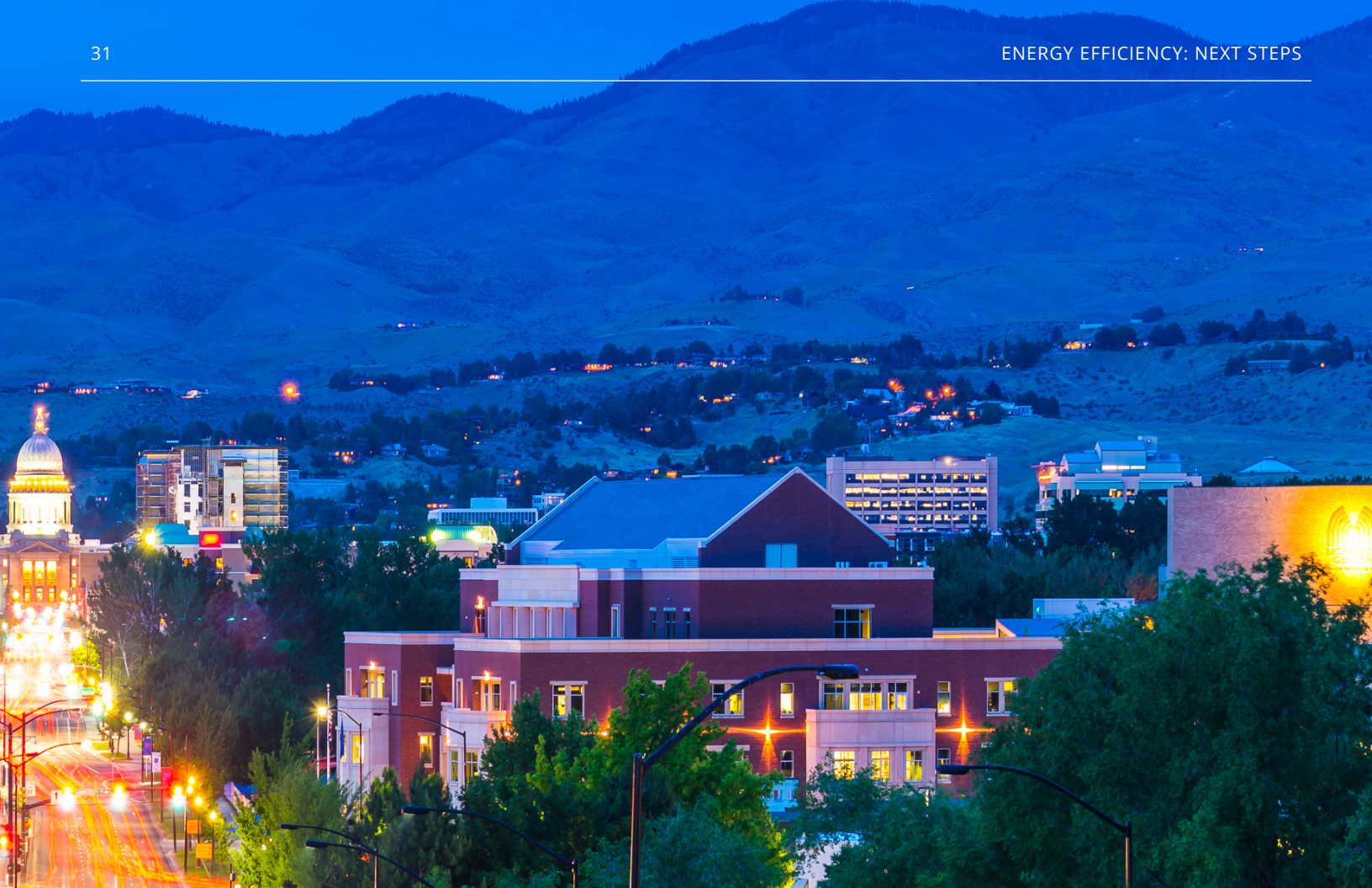
The Program has finally settled into a cycle of planning, implementation, and evaluation. After implementing a pilot-like first time residential energy efficiency program in 2018, and receiving overwhelming customer response that continues to grow, the Company conducted its first formal EM&V study in 2020. The Company used the recommendations from EM&V for planning the Program revisions and implemented the recommended changes.

To continue delivering cost-effective energy savings to customers, the Company plans to submit an RFP to contract for another CPA in preparation for the next IRP cycle, and to continue to put forth the best energy efficient solutions for Intermountain's customers.

In case No. INT-G-21-03, the Company submitted a proposed EM&V schedule for 2021-2024. An impact evaluation for residential water heaters, both storage and tankless, was planned for all water heating rebates paid through 2022. From Program inception in 2017 through 2020 there have only been 27

storage water heater rebates and 610 tankless water heater rebates. Both incentives were increased in the Program revision that went into effect April 2021 and are showing signs of increased participation in the first 9 months of availability. These rebates would not be eligible for evaluation since they have less than 1 year of history to evaluate and would not provide significant data to justify a formal evaluation. For this reason, the Company plans to revise the EM&V schedule to include a process evaluation and impact evaluation of all residential measures through 2023.

Similarly, an impact evaluation was planned for commercial kitchen equipment rebates paid through 2022. With only 4 fryers and 2 steamer rebates paid, there has not been enough participation to warrant the investment in a formal EM&V study. The Company will continue to monitor Commercial Program participation and plans to conduct a process evaluation of the Commercial Program for all activity through 2022.



Case intervenors in INT-G-21-04, recommended the Company evaluate the feasibility of targeted digital behavioral EE programs to “derive significant savings without the usual overhead of customer costs associated with equipment replacement rebates.” The Company will explore ways to provide customers with cost-effective energy saving measures beyond equipment replacement.

In order No. 35313, issued in case No. INT-G-21-03, the Idaho Public Utilities Commission deemed the 2020 Program expenses as prudently incurred. The Commission commended the Company “for continuing to adjust its young EE Program to deliver cost-effective energy savings to customers.” The Company will continue to evaluate its effectiveness in securing cost-effective savings and meeting the energy saving needs of Intermountain Gas customers as the energy efficiency program continues to grow.



## **Intermountain Gas Company**

555 S Cole Road  
Boise, ID 83709

Tel: 800-548-3679

Fax: 208-377-6081

