IDAHO POWER®

2021 DEMAND-SIDE MANAGEMENT ANNUAL REPORT

MARCH 15 **2022**

SAFE HARBOR STATEMENT

This document may contain forward-looking statements, and it is important to note that the future results could differ materially from those discussed. A full discussion of the factors that could cause future results to differ materially can be found in Idaho Power's filings with the Securities and Exchange Commission.

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EXECUTIVE SUMMARY

Idaho Power, through its energy efficiency programs, its customer education programs, and its focus on the customer experience, fully supports energy efficiency and demand response and encourages its customers to use energy wisely.

In 2021, Idaho Power achieved 143,971 megawatt-hours (MWh) or 16.4 average megawatts (aMW) of incremental energy efficiency savings, including Northwest Energy Efficiency Alliance (NEEA) estimated energy savings, which exceeded the economic technical achievable potential included in the *2021 Integrated Resource Plan* (IRP) of 135,018 MWh or 15.4 aMW. The 2021 savings represent enough energy to power approximately 12,600 average homes in Idaho Power's service area for one year.

However, it was a challenging year due to residual impacts of COVID-19, the resulting supply chain issues, higher labor and material costs, and the maturity of the residential lighting market. The C&I Custom Projects option, which provides approximately half of the portfolio savings, returned savings comparable to 2017 and 2018 as opposed to the record setting years of 2019 and 2020. Consequently, the 2021 savings of 143,971 megawatt-hours (MWh), including the estimated savings from the NEEA, decreased by 54,461 MWh compared to the 2020 savings of 198,433 MWh—a 27% year-over-year decrease. The savings from Idaho Power's energy efficiency programs alone, excluding NEEA savings, was 126,102 MWh in 2021 and 180,818 MWh in 2020—a 30% year-over-year decrease.

In 2021, the company's energy efficiency portfolio was cost-effective from both the total resource cost (TRC) test and the utility cost test (UCT) perspectives with ratios of 2.17 and 2.18, respectively. The portfolio was also cost-effective from the participant cost test (PCT) ratio, which was 2.73.

Energy efficiency and demand response are important aspects of Idaho Power's resources to meet system energy needs and are reviewed with each IRP. Idaho Power successfully operated all three of its demand response programs in 2021. The total demand response capacity from the company's programs was calculated to be approximately 384 megawatts (MW) with an actual load reduction of 312.8 MW.

Total expenditures from all funding sources of demand-side management (DSM) activities were $38.4 million in 2021—$27.9 million from the Idaho Rider, $8.7 million from Idaho Power base rates, and $1.7 million from the Oregon Rider. DSM program funding comes from the Idaho and Oregon Riders, Idaho Power base rates, and the annual power cost adjustment (PCA).

In addition to the education customers get through participation in specific incentive programs for energy efficiency, Idaho Power educates customers on energy efficiency in many other ways. One of these methods is to produce an *Energy Efficiency Guide* with information on

energy efficiency equipment and ways to use energy wisely. The 2021 guide was distributed in June, primarily as an insert in 25 local newspapers. In 2021, despite the pandemic challenges, Idaho Power's education and outreach energy advisors (EOEA) delivered nearly 250 presentations with energy-savings messages to audiences of all ages.

Figure 1. Example graphic from the *2021 Energy Efficiency Guide*

In 2021, the Integrated Design Lab (IDL) scheduled 20 technical training lunches conducted virtually due to COVID-19 restrictions. Fourteen sessions were coordinated directly with architecture and engineering firms and organizations, and six were available to the public. A total of 258 architects, engineers, designers, project managers, and others attended. The IDL also maintains an Energy Resource Library (ERL) with tools for measuring and monitoring energy use and provides training on how to use them. The library includes over 900 individual pieces of equipment; 10 new tools were added in 2021.

Idaho Power continued to provide training to its commercial and industrial customers in 2021, delivering the equivalent of six full days of technical training to over 200 individuals.

Idaho Power provided three virtual and three in-person irrigation workshops promoting irrigation system efficiency and participated in one vendor-hosted workshop promoting the Irrigation Efficiency Rewards program. The company normally exhibits and participates in four agricultural trade shows, but due to COVID-19 restrictions, the shows were cancelled.

The company sponsors significant customer educational outreach and awareness activities, promotes codes and standards, and focuses marketing efforts on saving energy—none of which are quantified or claimed as part of Idaho Power's annual DSM savings, but are likely to result in energy savings that accrue to Idaho Power's electrical system over time.

This *Demand-Side Management 2021 Annual Report* provides a review of the company's DSM activities and finances throughout 2021, outlines Idaho Power's plans for future DSM activities

and satisfies the reporting requirements set out in Idaho Public Utilities Commission's (IPUC) Order Nos. 29026 and 29419. Idaho Power will provide a copy of the report to the Public Utility Commission of Oregon (OPUC) under Oregon Docket UM 1710.

INTRODUCTION

Idaho Power has been locally operated since 1916 and serves more than 600,000 customers throughout a 24,000-square-mile area in southern Idaho and eastern Oregon. The company achieves energy and demand savings objectives in both its Idaho and Oregon service areas through the careful management of current programs, the offering of new cost-effective programs, and through customer outreach and education; collectively, the implementation, operation, tracking, and evaluation of these programs and offerings is called demand-side management (DSM).

Figure 2. Idaho Power service area map

Idaho Power's main objectives for DSM programs are to achieve prudent cost-effective energy efficiency savings and to provide useful and cost-effective demand response (DR) programs as determined by the Integrated Resource Plan (IRP) planning process. Idaho Power strives to offer customers valuable programs and information to help them wisely manage their energy usage. DSM programs and offerings by customer sector (residential, commercial/industrial, and irrigation) are shown in Table 1.

Table 1. DSM programs by sector, operational type, and location, 2021

Program by Sector	Operational Type	State
Residential		
A/C Cool Credit	Demand Response	ID/OR
Easy Savings: Low-Income Energy Efficiency Education	Energy Efficiency	ID
Educational Distributions	Energy Efficiency	ID/OR
Energy House Calls	Energy Efficiency	ID/OR
Heating & Cooling Efficiency Program	Energy Efficiency	ID/OR
Home Energy Audit Program	Energy Efficiency	ID
Home Energy Report Program	Energy Efficiency	ID
Multifamily Energy Savings Program	Energy Efficiency	ID/OR
Oregon Residential Weatherization	Energy Efficiency	OR
Rebate Advantage	Energy Efficiency	ID/OR
Residential New Construction Program	Energy Efficiency	ID
Shade Tree Project	Energy Efficiency	ID
Weatherization Assistance for Qualified Customers	Energy Efficiency	ID/OR
Weatherization Solutions for Eligible Customers	Energy Efficiency	ID
Commercial/Industrial		
Commercial and Industrial Energy Efficiency Program		
Custom Projects	Energy Efficiency	ID/OR
Green Motors—Industrial	Energy Efficiency	ID/OR
New Construction	Energy Efficiency	ID/OR
Retrofits	Energy Efficiency	ID/OR
Commercial Energy-Saving Kits	Energy Efficiency	ID/OR
Flex Peak Program	Demand Response	ID/OR
Oregon Commercial Audits	Energy Efficiency	OR
Small Business Direct Install	Energy Efficiency	ID/OR
Irrigation		
Irrigation Efficiency Rewards	Energy Efficiency	ID/OR
Green Motors—Irrigation	Energy Efficiency	ID/OR
Irrigation Peak Rewards	Demand Response	ID/OR
All Sectors		
Northwest Energy Efficiency Alliance	Market Transformation	ID/OR

Idaho Power focuses on the customer experience when providing information and programs that ensure customers have opportunities to learn about their energy use, how to use energy wisely, and how to participate in the programs. As necessary, Idaho Power modified DSM activities with respect to COVID-19 to prioritize the safety of customers, contractors, and Idaho Power staff while still balancing opportunities to maintain program performance. Much of the customer in-home or on-location work was suspended for at least part of 2021. The company utilized virtual meetings and leveraged technology to maintain participation.

The tables below summarize the status of individual programs and how they were affected by COVID-19 in 2021.

Table 2. Impact of COVID-19 on residential programs in 2021

Programs	Status
A/C Cool Credit	No impact in 2021
Easy Savings: Low-Income Energy Efficiency Education	In-home work permitted to resume (December)
Energy House Calls	In-home work permitted to resume (November)
Energy-Saving Kits	N/A
Heating & Cooling Efficiency Program	Limited impact in 2021
Home Energy Audit Program	In-home work permitted to resume (October)
Home Energy Report Program	Program not affected
Multifamily Energy Savings Program	In-home work permitted to resume (November)
Oregon Residential Weatherization	In-home work permitted to resume (December)
Rebate Advantage	Program not affected
Residential New Construction Program	Program not affected
Shade Tree Project	Public events replaced with tree mailing option
Student Energy Efficiency Kits (SEEK)	No impact in 2021
Weatherization Assistance for Qualified Customers (WAQC)	Limited impact in 2021
Weatherization Solutions for Eligible Customers	In-home work permitted to resume (November)
Welcome Kits	Program not affected

Table 3. Impact of COVID-19 on commercial, industrial, and irrigation programs in 2021

Programs	Status
Commercial and Industrial (C&I) Custom Projects	Some on-location work affected, including supply chain and labor impacts
New Construction	Some on-location work affected, including supply chain and labor impacts
Retrofits	Some project installations were delayed
Commercial Energy-Savings Kits	Limited program impact 2021
Flex Peak Program	Program affected by customer's ability to participate but less impacted than 2020
Oregon Commercial Audits	Program not affected
Small Business Direct Install	Limited program impact 2021
Irrigation Efficiency Rewards—Custom	On-location work affected
Irrigation Efficiency Rewards—Menu	Program not affected
Irrigation Peak Rewards	Program not affected

Energy efficiency and demand response funding comes from multiple sources: Idaho Power base rates, the Idaho and Oregon Energy Efficiency Riders (Rider), and the annual power cost adjustment (PCA) in Idaho. Idaho incentives for the company's demand response programs are recovered through base rates and the annual PCA, while Oregon demand response incentives

are funded through the Oregon Rider. Total expenditures on DSM-related activities from all funding sources were $38.4 million in 2021 (Figure 3).

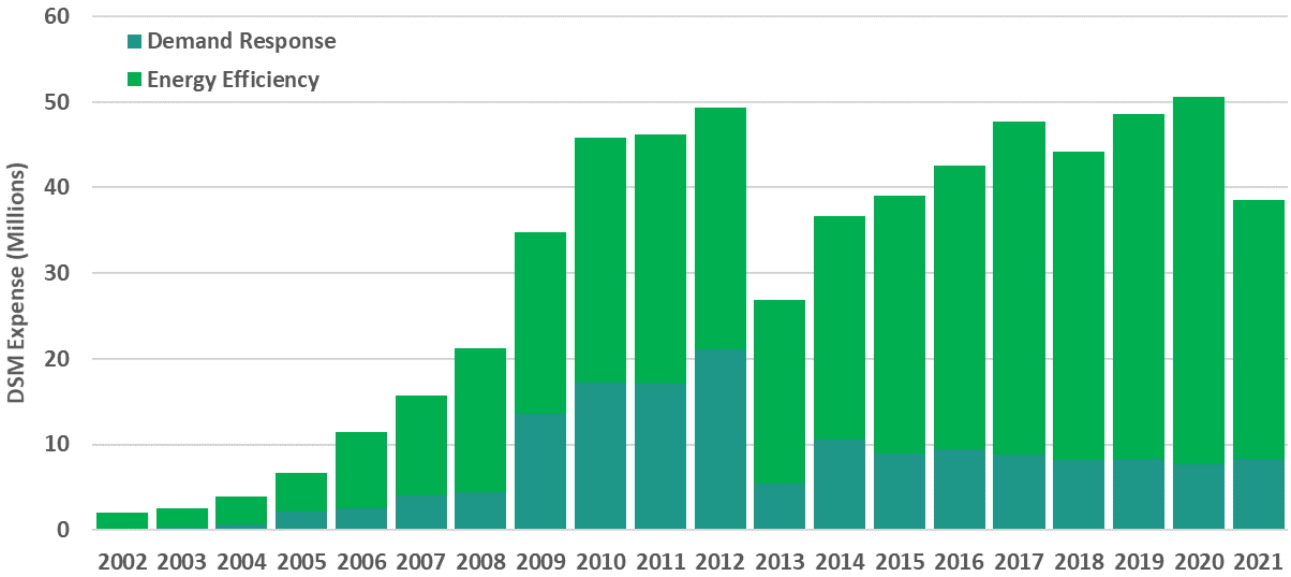

Figure 3. DSM expense history by program type, 2002–2021 (millions [$])

DSM Program Performance

A summary of the energy efficiency and demand response program performance metrics is presented in this section and in individual program sections later in this report. Appendices 1 through 4 provide additional details on the funding, expenditures, and savings at the program and sector levels.

Energy Efficiency

Energy efficiency programs are available to all customer sectors in Idaho Power's service area and focus on reducing energy use by identifying homes, buildings, equipment, or components for which an energy-efficient design, replacement, or repair can achieve energy savings. Some energy efficiency programs include behavioral components. For example, the Residential Energy Efficiency Education Initiative (REEEI), the seasonal contests, the School Cohort, Water and Wastewater Cohorts, and the Home Energy Report (HER) Program primarily focus on behavioral energy savings.

Savings from energy efficiency programs are measured on a kilowatt-hour (kWh) or megawatt-hour (MWh) basis. Programs can supply energy savings throughout the year or at different times, depending on the energy efficiency measure. Idaho Power shapes the energy-savings profile based on how end use equipment uses energy to estimate energy reduction at specific times of the day and year. The company's energy efficiency offerings

include programs in residential and commercial new construction (lost opportunity savings), residential and commercial retrofit applications, and irrigation and industrial system improvement or replacement. Idaho Power's incentives are offered to its irrigation, industrial, large-commercial, small business, government, and school customers to promote a wide range of energy-saving projects.

Idaho Power invests significant resources to maintain and improve its energy efficiency and demand response programs; however, due to continued impacts and extensive disruptions to many programs from COVID-19, savings were impacted in 2021 as compared to previous years. The 2021 total savings of 143,971 MWh, including savings from the Northwest Energy Efficiency Alliance (NEEA), decreased by 54,461 MWh compared to the 2020 savings of 198,433 MWh—a 27% year-over-year decrease. The 2021 savings represent enough energy to power over 12,500 average homes in Idaho Power's service area for one year. The savings from Idaho Power's managed energy efficiency programs, excluding NEEA savings, were 126,102 MWh in 2021 and 180,818 MWh in 2020—a 30% year-over-year decrease (Figure 4).

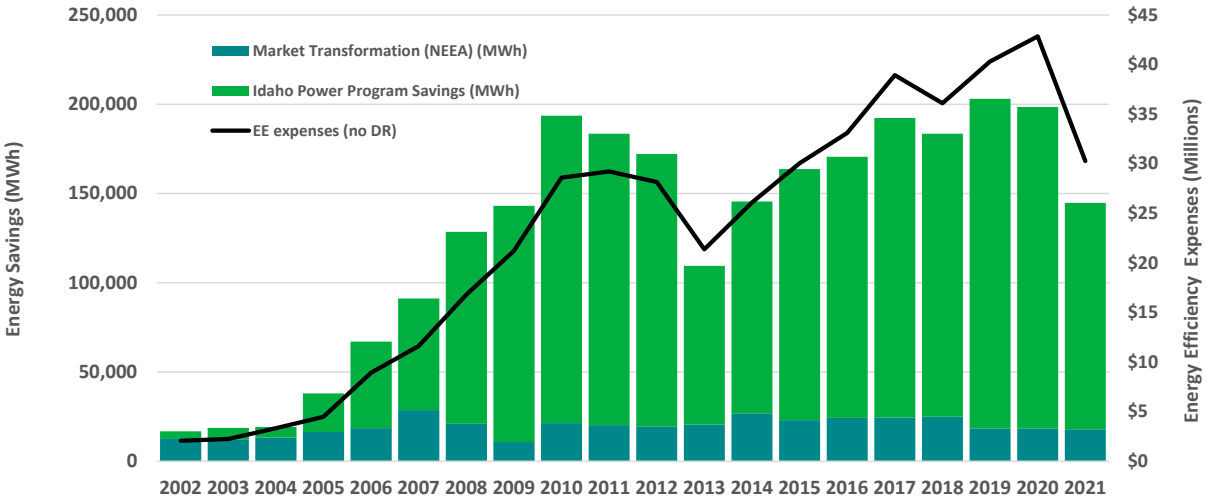

Figure 4. Annual energy savings and energy efficiency program expenses, 2002–2021 (MWh and millions [$])

The 2021 savings results consisted of 21,218 MWh from the residential sector, 95,184 MWh from the commercial/industrial sector, and 9,700 MWh from the irrigation sector. The C&I programs contributed 75% of the direct program savings. In the residential sector, Home Energy Reports contributed the largest savings at 75%, and Educational Distributions contributed the second largest savings at 14%, for a combined total savings of 89%. See Appendix 3 for a complete list of programs and sector-level savings.

Demand Response

Idaho Power started its modern demand response programs in 2002 and now has a capacity of over 10% of its all-time system peak load available to respond to a system peak load event during the summer. The goal of demand response at Idaho Power is to minimize or delay the need to build new supply-side peaking resources. The company estimates future capacity needs through the IRP planning process and plans resources to mitigate predicted system deficits. Demand response program results are measured by the amount of demand reduction in MW achieved by the company during called events.

In summer 2021, Idaho Power utilized all or portions of the programs on 11 different days between June 15 and August 15. The 2021 actual maximum non-coincidental load reduction from all three programs was 312.8 MW. The total capacity for all three programs was estimated to be approximately 384 MW at the generation level (Figure 5). The amount of capacity available for demand response varies based on weather, time of year, and how programs are used and managed. The actual non-coincidental load reduction (312.8 MW) is calculated using interval meter data from participants. The maximum capacity (384 MW) is calculated using the total enrolled MW from participants with an expected maximum realization rate for those participants. The maximum capacity for the Irrigation Peak Rewards program is based on the maximum reduction possible during the hours within the program season. For the Flex Peak Program, the maximum capacity is the maximum nominated amount of load reduction. For the A/C Cool Credit program, the capacity is calculated based on the number of active participants multiplied by the maximum per-unit reduction ever achieved.

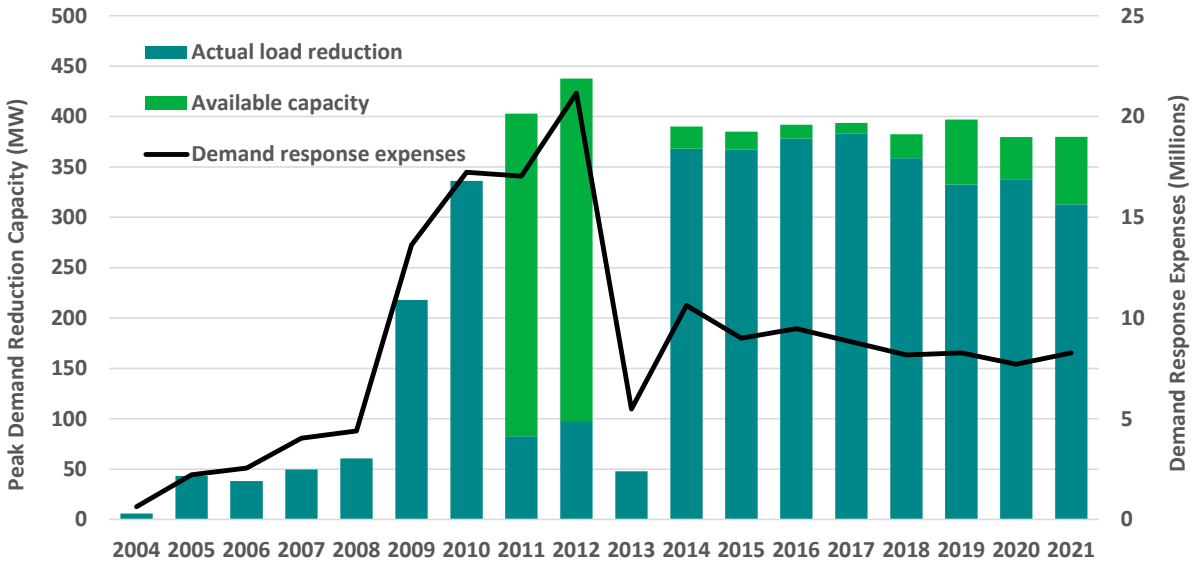

Figure 5. Peak demand-reduction capacity and demand response expenses, 2002–2021 (MWh and millions [$])

The 2021 program season will be the final season the company operates the programs under the terms of the Idaho Public Utilities Commission (IPUC) Order No. 32923 and Public Utility Commission of Oregon (OPUC) Order No. 13-482, which previously established operating parameters for the programs. As a result of Idaho Power's analysis, while developing its 2021 IRP, the company proposed operational and incentive changes to the demand response programs. These changes were approved by IPUC Order No. 35336 (IPC-E-21-32) and OPUC ADV 1355. These changes will supersede the terms of the 2013 settlement agreement.

Table 4. DSM programs by sector summary and energy usage/savings/demand reduction, 2021

	Energy Efficiency Program Impacts [a]			Idaho Power System Sales		
	Program Expenses	Energy Savings (MWh)	Peak-Load Reduction (MW)[b]	Sector Total (GWh)	Percentage of Energy Usage	Year-End Number of Customers
Residential	$ 4,256,869	21,217		5,645	37%	505,774
Commercial/Industrial	16,233,498	95,184		7,635	50%	76,147
Irrigation	2,607,200	9,700		2,126	14%	21,832
Market Transformation	2,977,678	17,870				
Demand Response	8,267,278	n/a	313			
Direct Overhead/Other Programs	2,714,377	n/a				
Indirect Program Expenses	1,296,605					
Total	**$ 38,353,505**	**143,971**	**313**	**15,406**	**100%**	**603,753**

[a] Energy, average energy, and expense data have been rounded to the nearest whole unit, which may result in minor rounding differences.
[b] Includes 9.7% peak line loss assumptions.

Customer Education

Idaho Power produced an *Energy Efficiency Guide* in 2021 and distributed it in June, primarily as an insert in 25 local newspapers. Due to the continuing impacts resulting from COVID-19, Idaho Power participated in only a few public-facing events; however, the company continued its enhanced digital communication efforts to bring a variety of energy and money-saving tips to customers. Idaho Power also distributed 1,160 copies of the *30 Simple Things You Can Do to Save Energy* booklet directly to customers. In 2021, despite the pandemic challenges, Idaho Power's EOEAs delivered nearly 250 presentations with energy-savings messages to audiences of all ages.

Idaho Power supports the Integrated Design Lab (IDL), which conducted Lunch & Learn sessions to educate architects, engineers, and other design and construction professionals about various energy efficiency topics. In 2021, the IDL scheduled 14 virtual technical training sessions with 104 architects, engineers, designers, project managers, and other interested parties. Also, IDL hosted six virtual Building Simulation Users Group (BSUG) sessions with 154 professionals attending.

The IDL also maintains an Energy Resource Library (ERL) with tools for measuring and monitoring energy use and provides training on how to use them. The ERL includes over 900 individual pieces of equipment and 10 new tools added in 2021. In 2021, the ERL home page had 1,483 visitors.

Over the course of 12 days in 2021, Idaho Power delivered six equivalent full-time days of live technical online training sessions at no cost to the customers. Topics included the following:

- Industrial Refrigeration
- Motors
- Variable Frequency Drives (VFD)
- Introduction to Unitary Air Conditioning
- Advanced Unitary Air Conditioning
- Harmonics

The level of participation in 2021 remained high, with 221 individuals signing up for the sessions and 208 unique logins. Due to the virtual nature of the course, in some cases, there were multiple attendees at a single login location.

Aside from the classes listed above, Idaho Power also partnered with Northwest Energy Efficiency Council (NEEC) to administer a Building Operator Certification Level I Course which began in November 2021 and continues through May 2022. Idaho Power sponsored 17 customers who signed up for the training by paying $900 of the $1,895 tuition cost.

Idaho Power provided three virtual and three in-person irrigation workshops promoting irrigation system efficiency in 2021 and participated in one vendor-hosted workshop promoting the Irrigation Efficiency Rewards program. The company normally exhibits and participates in four agricultural trade shows, but the shows were cancelled due to COVID-19 restrictions.

Surveying Customer Satisfaction

Relationship surveys measure the satisfaction of several aspects of a customer's relationship with Idaho Power, including energy efficiency, at a very high level. As such, the surveys are not intended to measure all aspects of the energy efficiency programs.

The 2021 survey asked two questions related specifically to satisfaction with Idaho Power's energy efficiency programs: 1) Have you participated in an Idaho Power energy efficiency program? 2) Overall, how satisfied are you with the energy efficiency program? In 2021, 35% of the survey respondents across all sectors indicated they participated in an Idaho Power energy efficiency program, and 94% were "very" or "somewhat" satisfied with the program they participated in.

Results for the sector-level, program-level, and marketing-related customer satisfaction surveys can be found later in this report.

Program Evaluation Approach

Idaho Power considers program evaluation an essential component of its DSM operational activities. The company uses third-party contractors to conduct impact, process, and other evaluations on a scheduled and as-required basis. In some cases, research and analyses are conducted internally and managed by Idaho Power's Research and Analysis team within the Customer Relations and Energy Efficiency (CR&EE) department. Third-party contracts are generally awarded using a competitive-bidding process managed by Idaho Power's Corporate Services department.

Idaho Power uses industry-standard protocols for its internal and external evaluation efforts, including the National Action Plan for Energy Efficiency—Model Energy Efficiency Program Impact Evaluation Guide, the California Evaluation Framework, the International Performance Measurement and Verification Protocol (IPMVP), the Database for Energy Efficiency Resources, and the Regional Technical Forum's (RTF) evaluation protocols.

The company also supports regional and national studies to promote the ongoing cost-effectiveness of programs, the validation of energy savings and demand reduction, and the efficient management of its programs. Idaho Power considers primary and secondary research, cost-effectiveness analyses, potential assessments, and impact and process evaluations to be important resources in providing accurate and transparent program-savings estimates. Idaho Power uses recommendations and findings from the evaluations and research to continuously refine its DSM programs.

For a summary of evaluation results, recommendations, and responses of evaluations completed in 2021, see each program section. For copies of 2021 program evaluation reports and the evaluation schedule, see *Supplement 2: Evaluation*.

Cost-Effectiveness Goals

Idaho Power considers cost-effectiveness of primary importance in the design, implementation, and tracking of the energy efficiency and demand response programs. Prior to the actual implementation, Idaho Power performs a cost-effectiveness analysis to assess whether a potential program design or measure will be cost-effective. Incorporated in these models are inputs from various sources that use the most current and reliable information available.

Idaho Power strives for all programs to have benefit/cost (B/C) ratios greater than one for the total resource cost (TRC) test, utility cost test (UCT), and participant cost test (PCT) at the program and measure levels, where appropriate. Each cost-effectiveness test provides a different perspective, and Idaho Power believes each test adds value when evaluating overall

program performance. In 2020, Idaho Power transitioned to using the UCT as the primary cost-effectiveness test for energy efficiency resource planning as directed by the IPUC in Order No. 34503. The company plans to continue to calculate the TRC and PCT because each perspective can help inform the company and stakeholders about the effectiveness of a particular program or measure. Additionally, programs and measures offered in Oregon must use the TRC as the primary cost-effectiveness test as directed by the OPUC in Order No. 94-590.

There are many assumptions when calculating the cost-effectiveness of a given program or measure. Savings can vary based on several factors, such as participation levels or the participants' locations. For instance, heat pumps installed in the Boise area will have lower savings than those installed in the McCall area. If program participation and savings increase, fixed costs, such as labor and marketing, are distributed more broadly, and the program cost-effectiveness increases.

When an existing program or measure is not cost-effective, Idaho Power works with its Energy Efficiency Advisory Group (EEAG) to obtain input before making its determination on continuing, discontinuing, or modifying an offering. The company must demonstrate why a non-cost-effective measure or program continues to be offered and communicate the steps the company plans to take to improve cost-effectiveness. This aligns with the expectations of the IPUC and OPUC.

As part of the public workshops on Case No. IPC-E-13-14, Idaho Power and other stakeholders agreed on a specific method for valuing demand response. The settlement agreement, as approved in IPUC Order No. 32923 and OPUC Order No. 13-482, defined the annual value of operating the three demand response programs for the maximum allowable hours. This value has been updated with each IRP reflecting changes to the assumed capital cost of the deferred resource and the financial assumptions. As a result of the analysis completed in preparation for the 2021 IRP, changes to this approach were approved by IPUC Order No. 35336 (IPC-E-21-32) and OPUC ADV 1355. These changes will supersede the terms of the 2013 settlement agreement and include a different cost-effectiveness methodology that Idaho Power will rely on going forward.

Details on the cost-effectiveness assumptions and data are included in *Supplement 1: Cost-Effectiveness*.

Energy Efficiency Advisory Group

Formed in 2002, EEAG provides input on enhancing existing DSM programs and on implementing energy efficiency programs. Currently, EEAG consists of 12 members representing a cross-section of Idaho Power customers from the residential, industrial, commercial, and irrigation sectors, as well as individuals representing low-income households,

environmental organizations, state agencies, city governments, public utility commissions, and Idaho Power.

EEAG meets quarterly, and when necessary, Idaho Power facilitates additional meetings and/or calls to address special topics. In 2021, four regular virtual EEAG meetings and one special webinar were held. The meetings were on February 10, May 5, August 12, and November 10, and the webinar was on March 24. EEAG meetings are generally open to the public and attract a diverse audience. Idaho Power appreciates the input from the group and acknowledges the commitment of time and resources the individual members give to participate in EEAG meetings and activities.

During these meetings, Idaho Power discussed new energy efficiency program ideas and new measure proposals, marketing methods, and specific measure details. The company provided the status of energy efficiency expenses and Idaho and Oregon Rider funding, gave updates of ongoing programs and projects, and supplied general information on DSM issues and other important issues occurring in the region.

Idaho Power relies on input from EEAG to provide a customer and public-interest view of energy efficiency and demand response. Additionally, Idaho Power regularly provides updates on current and future cost-effectiveness of energy efficiency programs and how changes in the IRP will impact DSM alternate costs, which Idaho Power uses in calculating cost-effectiveness. In the meetings, Idaho Power frequently requests input and feedback from EEAG members on programmatic changes, marketing tactics, and incentive levels. EEAG often recommends presentation ideas for future meetings.

Throughout 2021, Idaho Power relied on input from EEAG on the following important topics. For complete meeting notes, see *Supplement 2: Evaluation*.

COVID-19 Impacts

The continued effects of the COVID-19 pandemic had broad impacts on the company's energy efficiency efforts. Idaho Power worked diligently to seek new ways to maintain activity while prioritizing the safety of customers, contractors, and employees. At each meeting, Idaho Power informed EEAG of the status of each program. Much of the in-home or on-location work was suspended most of the year, but as state safety guidelines were developed, more on-location work resumed. The company continued its efforts from 2020 to explain program availability and guided customers to participation opportunities.

As the pandemic continued in 2021, the company shared with EEAG how it updated marketing material to provide energy efficiency tips for customers who may be spending more time at home and continued to successfully market virtual training sessions resulting in high trade ally participation.

WAQC

The company continued discussions with EEAG throughout 2021 on the WAQC program. Weatherization managers transitioned to a new state auditing tool, and because Idaho Power had built-in integration with the existing auditing tool for job cost calculations, the company has been working with weatherization managers and the Community Action Partnership Association of Idaho (CAPAI) to develop and improve a new job cost calculator. In the November EEAG meeting, Idaho Power presented several ideas/options on how to use the WAQC carryover funds accrued over primarily the last couple of years and solicited feedback on those options.

Welcome Kits

In 2021, the Welcome Kits became the largest kit program, with goals of marketing energy efficiency programs and educating customers about ways to save energy at home. Although the program was well-received by Idaho Power customers, changes in deemed savings values reduced the kits' overall savings. Idaho Power discussed new savings assumptions, ways to lower kit costs and the educational, and cross-marketing benefits with EEAG in the August and November meetings. This collaboration yielded a new kit configuration with higher energy savings and a decision that kits would not need to be entirely cost-effective due to the difficulty in measuring the educational benefits.

Shade Tree Project

At the August meeting, Idaho Power brought alternatives to EEAG on possible modifications to the Shade Tree Project. There was support for continuing in 2021 with a hybrid model for getting trees to customers. The selected hybrid model includes an option for receiving a smaller tree by mail or picking up a larger tree in person. The company proposed a method to space out pick-ups—and should there be a need to cancel events, the company would have the ability to find alternatives for the trees.

ETO Pilots

As a result of an OPUC directive (OPUC Order No. 21-184) to review all energy-efficient measures piloted by the Energy Trust of Oregon (ETO) between 2018 and 2020, the company reviewed these measures in detail with EEAG at the August meeting. Prior to the EEAG meeting, Idaho Power contacted ETO staff and reviewed each measure and program to gain an understanding of the details of each pilot. During the EEAG meeting, Idaho Power presented its analysis of the 14 pilots, shared learnings, and discussed recommendations. This resulted in the determination that the higher kWh savings measures are already included in Idaho Power's programs. A few measures, such as commercial smart thermostats, ductless heat pump (DHP) controllers and wall heaters for multifamily applications, that Idaho Power is continuing to view

data and information on to determine if they could be added to Idaho Power's programs in the future.

Demand Response Programs

At the May and August EEAG meetings, Idaho Power presented the analysis of DR programs completed to date as part of the 2021 IRP. The company described how the 2021 analysis determined a need to change the focus of Idaho Power's demand response programs from supplying peak needs to supplying *net* peak needs that happen later in the evenings as solar energy generation drops off. The company sought input and shared its plan to seek regulatory approvals for modifications that could be in place prior to the 2022 demand response season.

Future Plans for DSM Programs

Idaho Power will continue to pursue all prudent cost-effective energy efficiency and the amount of demand response identified in each future IRP. The forecasted level of energy efficiency is informed by a third-party potential study and reviewed with each IRP. Idaho Power will be completing a potential study in 2022 for demand response that will inform potential future demand response programs and the IRP planning process. The IRP is developed in a public process that details Idaho Power's strategy for economically maintaining the adequacy of its power system into the future.

In 2019, the IPUC issued Order No. 34503 directing Idaho Power to use the UCT for energy efficiency resource planning. In 2020, the company contracted with a third party to develop a new energy efficiency potential study, and Idaho Power also updated its third-party Commercial/Industrial Technical Reference Manual (TRM) to include the 2018 International Energy Conservation Code (IECC) information.

The company continuously searches for new measures for its programs through a membership in E Source, contacts with other utilities, participation in the NEEA Regional Emerging Technology Advisory Committee (RETAC), and from the RTF. Idaho Power representatives also attend national conferences and participate in webinars hosted by organizations interested in advancing energy efficiency savings.

Idaho Power will continue to work in consultation with EEAG to expand or modify its energy efficiency portfolio. Plans for individual programs are included under each program's 2022 Program and Marketing Strategies section.

In 2022, Idaho Power will continue to enhance its marketing and outreach efforts as described in the Marketing section of this report and within each program section. Idaho Power will continue to work with NEEA on its market transformation activities during its 2020–2024 funding cycle and, as directed by the IPUC (Order No. 35270), will conduct an independent evaluation of NEEA energy savings to review methodologies NEEA employs for claiming energy

savings, for the allocation method, and for assessing cost-effectiveness for Idaho Power customers.

Below is a summary highlighting activities Idaho Power is actively engaged in for 2022 and beyond. Programs and offerings on this list are developing and may not all be implemented:

- My Account: In early 2022, the company will launch a new version of its My Account online customer tool. As part of this upgrade, customers can view improved energy-use insights and energy-efficiency options, including the option to set energy-savings goals and follow steps to achieve them
- Online Marketplace: Idaho Power is actively working with a vendor to potentially implement an online marketplace to encourage and enable residential customers to make energy efficient purchases. The marketplace would allow Idaho Power residential customers to explore and compare appliances and other products to determine which would save the most energy, be the most cost-effective, and qualify for Idaho Power energy-efficiency incentives.
- Energy Efficient Lighting: Idaho Power launched a new retail lighting buy-down program in early 2022 to replace the Bonneville Power Administration (BPA)-sponsored program, Simple Steps, Smart Savings™ that ended in 2020 due to overall market transformation in residential lighting. The new program focuses on fixtures and efficient lightbulbs that are not fully transformed in Idaho Power's service area. Savings from this program will begin in 2022.
- Heating & Cooling Efficiency (HCE) Program: Idaho Power plans to add air conditioning (A/C) units and ground-source heat pump measures to the HCE program. Incentives for the new measures should be available mid-year 2022.
- Multifamily New Construction Offering: Idaho Power is re-exploring options for a multifamily new construction offering to determine if it could be cost-effective.
- Industrial Wastewater Cohort: Idaho Power is actively working to design a new cohort for Industrial Wastewater facilities to focus on the technical opportunities to give operators skills they can use immediately to save energy by means of webinars, treasure hunts, and creating energy models. Idaho Power's key account energy advisors are actively gauging interest from potential customers.
- Find n' Fix Offering: Idaho Power has implemented a Find n' Fix offering under the C&I Energy Efficiency Custom Projects option. The Find n' Fix offering is a service for commercial and industrial customers that will identify and implement potential low-cost energy savings opportunities during an onsite visit.

- Compressed Air Leaks Offering: Idaho Power designed a compressed air leak offering under the C&I Energy Efficiency Custom Projects option where savings will be realized in 2022 and beyond as customers participate.
- New C&I Energy Efficiency Program Measures: Idaho Power updated the Retrofits and New Construction options in 2021 by adding several new measures and expanding the eligibility requirements of existing measures. Savings will be realized in 2022 and beyond as customers participate.
- 50001 Ready: This is a Department of Energy (DOE)-sponsored Technical Assistance Program where Idaho Power helped in recruiting. In 2022, Idaho Power will perform an independent Measurement and Verification (M&V) for participating customers to understand the potential savings and incentivize customers through the C&I Energy Efficiency Custom Projects option.
- Integrated Design Lab: Idaho Power has engaged with the IDL to add three new tasks in 2022. This includes assessing the energy savings potential for Power over Ethernet (PoE) lighting, Luminaire Level Lighting Controls (LLLC) demonstration workshops, and updating several digital design tools for use by architects and engineers.

The company will complete its evaluation, measurement, and verification (EM&V) projects included in the evaluation plan in *Supplement 2: Evaluation*.

DSM Annual Report Structure

The *Demand-Side Management 2021 Annual Report* consists of this main document and two supplements.

The main document contains the following sections related to 2021 DSM activities: 1) program activities by customer sector (residential, commercial/industrial, and irrigation), including marketing efforts, cost-effectiveness analysis, customer satisfaction survey results, and evaluation recommendations and responses for each program; 2) other program and activity details, including market transformation; and 3) four appendices of data related to payments, funding, and program-level costs and savings. Where appropriate, plans for 2022 are also discussed.

Supplement 1: Cost-Effectiveness describes the standard cost-effectiveness tests for Idaho Power programs and reports current-year program-level and summary cost-effectiveness and expenses by funding source and cost category.

Supplement 2: Evaluation includes an evaluation and research summary, an evaluation plan, EEAG meeting notes, links to NEEA evaluations, copies of IDL reports, research and survey reports, evaluation reports, and other reports.

2021 DSM PROGRAM ACTIVITY

DSM Funding and Expenditures

Funding for DSM programs comes from several sources. The Idaho and Oregon Rider funds are collected directly from customers on their monthly bills. Effective Jan 1, 2021, pursuant to IPUC Order No 34871, the 2021 Idaho Rider was 3.1% of base rate revenues. The 2021 Oregon Rider was 4% of base rate revenues. Additionally, Idaho demand response program incentives were funded through base rates and the annual PCA mechanism. DSM expenses not funded through the Rider are included in Idaho Power's ongoing operation and maintenance (O&M) costs.

Table 5 shows the total expenditures funded by the Idaho and Oregon riders and Idaho Power base rates resulting in Idaho Power's total DSM expenditures of $38,353,505. The non-rider funding category includes the company's demand response incentives in Idaho, WAQC expenses, and O&M costs.

Table 5. 2021 funding source and energy savings

Funding Source	Expenses [a]	MWh Savings
Idaho Rider	$27,943,096	136,995
Oregon Rider	1,721,091	6,684
Idaho Power Base Rates	8,689,318	291
Total	**$38,353,505**	**143,971**

[a] Totals may not sum due to rounding.

Table 6 and Figure 6 indicate 2021 DSM program expenditures by category. While the Incentive Expense category illustrates the amount paid directly to customers for their participation in an energy efficiency or demand response program, the other categories include items or services that directly benefited customers. Most of the expenses in the Materials & Equipment category were for various kit programs ($618,575) and direct-install weatherization measures ($125,000). Most expenses in the Other Expense category include marketing ($1,225,686), Custom Projects energy audits ($240,461), program evaluation ($177,297), program training ($62,180), and program expenses ($24,218). The Purchased Services category includes payments made to NEEA ($2,977,678), WAQC CAP Agency ($1,117,434), and third-party contractors who help deliver Idaho Power's programs.

Table 6. 2021 DSM program expenditures by category

Program Expenditure Category	Total [a]	% of Total
Incentive Expense	$23,361,078	60.9%
Labor/Administrative Expense	3,713,778	9.7%
Materials & Equipment	816,610	2.1%
Other Expense	1,746,655	4.6%
Purchased Services	8,715,384	22.7%
Total	**$38,353,505**	**100%**

[a] Dollars are rounded to the nearest whole unit, which may result in minor rounding differences.

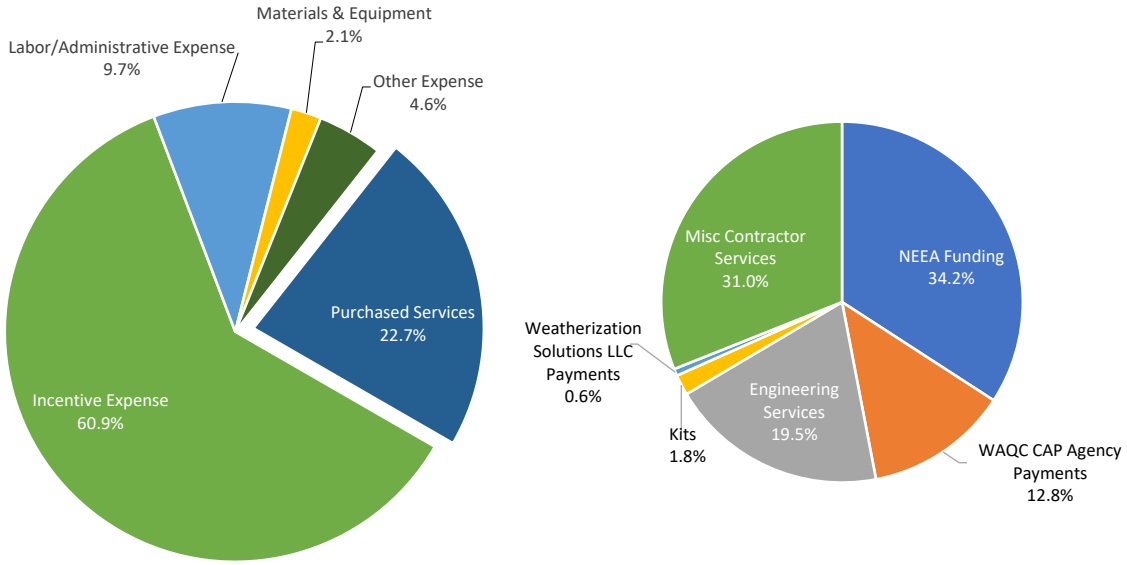

Figure 6. 2021 DSM program expenditures by category

Table 7. 2021 DSM program incentive totals by program type and sector

Program Type—Sector [a, b]	Total [c]	% of Total
DR—Residential	$309,899	1.3%
DR—Commercial/Industrial	$395,372	1.7%
DR—Irrigation	$6,755,596	28.9%
EE—Residential	$1,533,232	6.6%
EE—Commercial/Industrial	$12,171,384	52.1%
EE—Irrigation	$2,195,594	9.4%
Total	**$23,361,078**	**100%**

[a] DR = demand response

[b] EE = energy efficiency

[c] Dollars are rounded to the nearest whole unit, which may result in minor rounding differences.

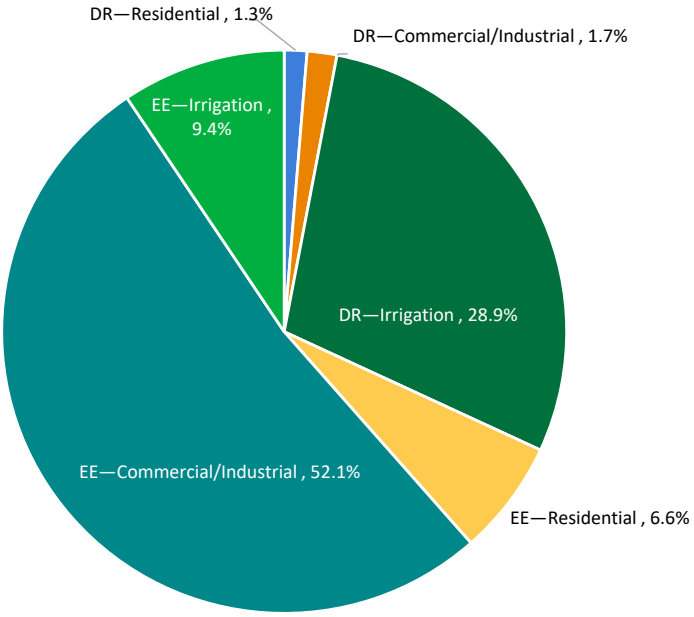

Figure 7. Percent of DSM program incentive expenses by program type and sector, 2021

Marketing

Idaho Power used multi-channel marketing and public relations (PR) strategies in 2021 to improve communication and increase energy efficiency program awareness among its customers. The company employs a wide variety of media and marketing, including owned media (social, website, and newsletters) and paid media (advertising and sponsorships), which allow Idaho Power to control the content. Earned unpaid media (news coverage, Idaho Power's *News Briefs* sent to reporters, third-party publications, and television news appearances) gives Idaho Power access to a broader audience through alternative channels that help establish credibility and brand trust. Though the company has less control with earned unpaid media, the value is established through the third-party endorsement.

Idaho Power's marketing staff networks with organizations across the region and industry to track current and future marketing trends and successes. Idaho Power continued to work with NEEA to coordinate, collaborate, and facilitate marketing for all sectors. To build marketing networks and learn what works in other regions, Idaho Power staff virtually attended a variety of conferences and webinars in 2021, such as the E Source Utility Marketing Executive Council and Forum in September.

The following describes a selection of the methods, approaches, and strategies used by Idaho Power to engage customers regarding energy efficiency, along with their results. See the respective sector overviews and programs sections later in this report for the company's marketing efforts specific to those areas.

Social Media

Approximately 24% of the company's total social media content promoted energy efficiency in 2021. Idaho Power regularly posted content encouraging energy efficiency behaviors, program enrollment, and customer engagement on Facebook, Twitter, YouTube, and LinkedIn. Social media content also showcased local businesses and organizations that have benefitted from Idaho Power energy efficiency efforts. Idaho Power engaged with customers who posted their own social media content about Idaho Power programs. Idaho Power's Facebook and Twitter pages hosted two customer sweepstakes giveaways, encouraging customers to enter by leaving a comment about how they save energy in the summer or winter.

In 2021, Idaho Power social channels focused on sharing energy efficiency tips that made sense for customers spending more time at home and working on home improvement projects. Primarily on LinkedIn, tips were provided to help businesses customers save energy while operating with fewer employees in the office or with reduced working hours.

Idaho Power's Facebook followers increased 4% in 2021, from 22,800 at the end of 2020 to 23,749 at the end of 2021. Facebook remains the company's priority channel for engaging directly with customers and was the main platform for focusing on COVID-19 safety messages, energy assistance for customers, crisis communications, energy efficiency tips and program offerings, and helping customers with account-related issues through private messages.

Idaho Power uses Twitter to communicate about media items, large outages, company news, energy efficiency, and recreation opportunities. COVID-19 messaging was also shared on the platform in 2021. Idaho Power's Twitter followers increased 6.6% in 2021, from 6,210 followers to 6,620.

Idaho Power again saw a favorable increase in followers on LinkedIn with 1,506 new followers in 2021. LinkedIn is an effective channel for engaging business and commercial customers in energy efficiency, as well as positioning the company as a good corporate citizen, clean energy leader, and employer of choice.

Website

Idaho Power tracked the number of page views to the main energy efficiency pages—also known as landing pages—from external users on the company's website. In 2021, the company's energy efficiency homepage received 5,822 page views, the residential landing page received 167,805 views, and the business and irrigation landing pages received 21,816. Idaho Power uses Google Analytics to analyze web activity. Google's definition of page views is the total number of pages viewed, with repeated views of a single page by one user counted as a new view.

Public Relations

Idaho Power's PR staff supported energy efficiency programs and activities through these channels: videos telling energy efficiency success stories; *Connections*, a customer newsletter distributed in monthly bills and available online; *News Briefs*, a weekly email of interesting news items sent to all media in the company's service area; pitching and participating in news stories; energy efficiency TV segments; and public events (such as incentive check presentations).

In 2021, the February and August issues of *Connections* were devoted to energy efficiency. The February issue included a variety of ideas for energy-saving tips, such as how to save energy in the kitchen and ideas about how to invest wisely in home energy efficiency improvements. The August edition focused on energy efficiency for businesses and schools, including a success story about Swan Falls High School, changes to incentives for business customers, and the Residential New Construction Program.

Summer 2021 presented a unique need for energy efficiency messaging. The historic heatwave that descended on the western U.S. in late June stretched energy resources enough that the company put out a voluntary call to customers to help lighten the load. Social media messaging included tips about how to save energy during the high demand hours of 4–9 p.m., with one post alone reaching 42,000 people. Another post showed what the company was doing to help and encouraged other businesses to do the same. The company also amplified messaging from customers about the energy-saving measures they were taking. Messaging was repeated on the company's website, including a new dedicated web page, and through the news media. Coverage on a local Boise TV station reached nearly 900,000 people, and total coverage for the primary week of messaging was estimated at 301 million. Paid advertising was placed on digital and radio. The company also reached out directly to customers via text message and email.

Idaho Power produced new energy efficiency success-story videos in 2021 highlighting the energy efficiency efforts of McCain Foods and Swan Falls High School. Combined, the videos received 4,991 views on YouTube and an additional 1,111 views on Facebook.

Media outreach efforts resulted in a variety of earned media coverage focused on energy efficiency. Energy efficiency topics were pitched in *News Briefs* throughout the year, and the company earned media coverage in multiple markets spanning print, TV, and radio.

2022 Marketing Activities

In 2022, the Idaho Power marketing department plans to introduce new strategies to expand the reach and visibility of the company's energy efficiency advertisements (ads).

The marketing team will update the Residential Energy Efficiency Awareness Campaign and will run energy efficiency messaging on digital podcasts. Seasonally relevant bill inserts and emails will be sent quarterly featuring energy efficiency tips. Additionally, the company will continue

to update collateral and displays as needed for irrigation programs and various sector trade shows (many of which will be virtual). See the sector overview sections for more specific future marketing plans.

Cost-Effectiveness Results

A summary of the cost-effectiveness metrics calculated for the energy efficiency programs in 2021 is provided in Table 8. Details on the cost-effectiveness assumptions and data are included in *Supplement 1: Cost-Effectiveness*.

Table 8. Cost-effectiveness summary by energy efficiency program

Program/Sector	UCT	TRC	Ratepayer Impact Measure (RIM)	PCT
Educational Distributions	2.39	3.10	0.44	N/A
Energy House Calls	0.43	0.50	0.23	N/A
Heating & Cooling Efficiency Program	1.14	0.36	0.38	0.84
Home Energy Report Program[1]	0.57	0.62	0.24	N/A
Multifamily Energy Savings Program[2]	N/A	N/A	N/A	N/A
Rebate Advantage	1.13	0.66	0.35	1.97
Residential New Construction Program	1.64	0.99	0.43	2.13
Shade Tree Project	1.07	1.21	0.48	N/A
Weatherization Assistance for Qualified Customers	0.19	0.31	0.14	N/A
Weatherization Solutions for Eligible Customers	0.15	0.28	0.12	N/A
Residential Energy Efficiency Sector[3]	**1.02**	**0.74**	**0.35**	**2.61**
Commercial and Industrial Energy Efficiency Program				
Custom Projects	2.98	1.32	0.91	1.35
New Construction	2.98	2.70	0.67	3.72
Retrofits	2.53	1.27	0.64	1.70
Commercial Energy-Saving Kits	1.64	2.00	0.55	N/A
Small Business Direct Install	0.99	1.54	0.46	N/A
Commercial/Industrial Energy Efficiency Sector[4]	**2.74**	**1.46**	**0.77**	**1.76**
Irrigation Efficiency Rewards	3.32	4.49	0.88	4.58
Irrigation Energy Efficiency Sector[5]	**3.33**	**4.49**	**0.88**	**4.58**
Energy Efficiency Portfolio[6]	**2.17**	**2.18**	**0.70**	**2.73**

[1] Cost-effectiveness based on 2021 savings and expenses. Cost-effectiveness ratios also calculated for the program life-cycle. Program life-cycle UCT and TRC 0.87 and 0.96, respectively.

[2] In-home work suspended for most of 2021 due to COVID-19. No savings reported for 2021.

[3] Residential sector cost-effectiveness excludes WAQC benefits and costs. If included, the UCT, TRC, RIM, and PCT would be 0.80, 0.63, 0.32, and 2.40, respectively.

[4] Commercial/Industrial Energy Efficiency Sector cost-effectiveness ratios include savings and participant costs from Green Motors Rewinds.

[5] Irrigation Energy Efficiency Sector cost-effectiveness ratios include savings and participant costs from Green Motors Rewinds.

[6] Portfolio cost-effectiveness excludes WAQC benefits and costs. If included, the UCT, TRC, RIM, and PCT would be 2.08, 2.13, 0.69, and 2.72, respectively.

Customer Satisfaction Surveys

Idaho Power does not separately survey most energy efficiency program participants each year, primarily due to concerns about over-surveying program participants and because the measures and specifics of most program designs do not change annually. To ensure meaningful results, Idaho Power conducts program research every two to three years unless programs have been changed significantly. Throughout 2021, Idaho Power administered several surveys regarding energy efficiency programs to measure customer satisfaction. Some surveys were administered by a third-party contractor; other surveys were administered by Idaho Power either through traditional paper or electronic surveys or through the company's online panel—Empowered Community. Results of these studies are included in *Supplement 2: Evaluation*.

The sector-level results of the annual *2021 Burke Customer Relationship Survey* are available in the Residential, Commercial and Industrial, and Irrigation sector overview sections of this report.

Evaluations

In 2021, Idaho Power contracted third-party evaluators to conduct program evaluations for the A/C Cool Credit (impact evaluation), C&I Custom Projects (impact and process evaluation), Flex Peak (impact evaluation), Heating & Cooling Efficiency (impact and process evaluation), and Irrigation Peak Rewards (impact evaluation) programs.

In 2020, Idaho Power contracted a third-party evaluator to conduct a process evaluation on the Home Energy Report Program. However, due to some late findings, additional analysis was required to complete the evaluation, which was finalized in June 2021. Idaho Power also contracted a third-party evaluator to conduct a process evaluation on the Small Business Direct Install (SBDI) program in 2020. The start of the evaluation was delayed until the second quarter of 2021 to allow time for additional installs to be completed after the program was suspended in early 2020 due to the COVID-19 pandemic. The evaluation was completed in October 2021.

External program administrators also compiled program summary reports for SEEK, Home Energy Report, and Commercial Energy-Saving Kits programs. While external impact evaluations were conducted on all three demand response programs, the company also conducted internal analyses for the Flex Peak and Irrigation Peak Rewards programs.

A summary of the results of these evaluations is available in the respective program sections. An evaluation schedule and the final reports from evaluations and research completed in 2021 are provided in *Supplement 2: Evaluation*.

Residential Sector Overview

In 2021, Idaho Power's Residential sector consisted of 499,474 customers averaged throughout the year; Idaho customers numbered 485,474 and eastern Oregon had 13,742. In 2021, the number of Residential sector customers increased by 14,783, an increase of 3.1% from 2020. The Residential sector represented 36.7% of Idaho Power's actual total electricity usage and 46.2% of overall revenue in 2021.

Table 9 shows a summary of 2021 participants, costs, and savings from the residential energy efficiency programs.

Table 9. Residential sector program summary, 2021

Program	Participants		Total Cost		Savings	
			Utility	Resource	Annual Energy (kWh)	Peak Demand (MW)
Demand Response						
A/C Cool Credit	20,846	homes	$ 751,989	$ 751,989		27
Total			**$ 751,989**	**$ 751,989**		**27**
Energy Efficiency						
Easy Savings: Low-Income Energy Efficiency Education	0	HVAC tune-ups	145,827	145,827	0	
Educational Distributions	47,027	kits/giveaways	449,790	449,790	2,931,280	
Energy Efficient Lighting*	0	lightbulbs	43,631	43,631	0	
Energy House Calls	11	homes	18,257	18,257	14,985	
Heating & Cooling Efficiency Program	1,048	projects	635,182	2,223,826	1,365,825	
Home Energy Audit	37	audits	70,448	75,461	3,768	
Home Energy Report Program	115,153	treatment size	970,197	970,197	15,929,074	
Multifamily Energy Savings Program	0	units	68,973	68,973	0	
Oregon Residential Weatherization	0	audits/projects	4,595	4,595	0	
Rebate Advantage	88	homes	173,193	327,190	235,004	
Residential New Construction Program	90	homes	247,600	524,876	389,748	
Shade Tree Project	2,970	trees	184,680	184,680	44,173	
Weatherization Assistance for Qualified Customers	162	homes/non-profits	1,186,839	1,690,152	291,105	
Weatherization Solutions for Eligible Customers	7	homes	57,656	57,656	12,591	
Total			**$ 4,256,869**	**$ 6,785,110**	**21,217,554**	

Notes:

See Appendix 3 for notes on methodology and column definitions.

Totals may not add up due to rounding.

* Expenses incurred in 2021 in preparation for the relaunch of the program in 2022.

Energy Efficiency Programs

Easy Savings: Low-Income Energy Efficiency Education. A program offering coupons to income-qualified customers for HVAC tune-ups and one-on-one energy savings education.

Educational Distributions. A multifaceted approach to educating residential customers about their energy consumption, including giving away various efficient products and engaging elementary students with in-class and at-home activities.

Energy House Calls. A program designed specifically for owners of manufactured homes to test and seal ducting and offer energy-efficient products designed to reduce energy costs.

Heating & Cooling Efficiency Program. Providing incentives to customers and builders who upgrade existing homes or build new ones using energy-efficient heating and cooling equipment and services.

Home Energy Audit. Like Energy House Calls, Idaho customers living in multifamily homes with discrete meters or in single-family homes pay a reduced price for an energy audit to identify areas of concern. Participants may also receive energy-efficient products for no additional cost.

Home Energy Report Program. A program that sends Idaho customers energy reports to help them understand their energy use.

Multifamily Energy Savings Program. A program offering renters in multifamily buildings energy-efficient products designed to reduce energy use and power costs.

Oregon Residential Weatherization. No-cost energy audits for Oregon customers who heat with electricity.

Rebate Advantage. Financial incentives for customers who buy energy-efficient manufactured homes and the people who sell them.

Residential New Construction Program. Idaho Power offers builders a cash incentive to construct energy-efficient, above code, single-family, all-electric homes that use heat pump technology for its Idaho customers.

Shade Tree Project. A tree giveaway program for Idaho customers. To maximize summer energy savings, Idaho Power provides participants with a variety of resources to encourage successful tree growth.

Weatherization Assistance for Qualified Customers and Weatherization Solutions for Eligible Customers. Energy-efficient products, services, and education for customers who meet income requirements and heat with electricity.

Demand Response Program

A/C Cool Credit. A program that gives residential customers a credit for allowing Idaho Power to cycle their A/C units during high-energy demand in the summer.

Marketing

Idaho Power ran a multi-faceted advertising campaign in the spring (May and June) and fall (October and November) to raise and maintain awareness of the company's energy efficiency programs for residential customers and to demonstrate that saving energy does not have to be challenging. The campaign used radio, television, newspaper ads, digital ads, and Facebook ads and boosted posts aimed at a variety of customer demographics across the service area. New in 2021, the company added weather-triggered billboards and two new seasonally relevant contests: Loads of Energy Savings Summer Giveaway and Touchdown to Energy Savings Fall Giveaway. Another new tactic included energy efficiency tips on the company's e-bill during the residential energy efficiency campaign.

Described below are Idaho Power's marketing efforts to promote energy-saving tips and the company's energy efficiency programs, along with resulting data. Marketing tactics related to a specific sector or program are detailed in those respective sections later in this report.

Email

Idaho Power continued its effort with email communication in 2021. The company emails only those customers who have supplied their addresses for other business purposes (signing up for paperless billing, for example). Energy efficiency promotional emails included heating and cooling tips, summer and winter contest promotion, and various program promotions (detailed information can be found in respective program sections).

Digital

During the Spring campaign, web users were exposed to 3,766,154 display ads (animated GIF image ads embedded on a website) based on their demographics, related to online articles they viewed, or their use of a particular mobile web page or app. Users clicked the ads 5,490 times, resulting in a click-through rate of 0.18%. In the fall, the display ads received 3,606,449 impressions and 3,174 clicks, resulting in a click-through rate of 0.09%.

Idaho Power began using Google search ads in 2018. When people search for terms related to energy efficiency, energy efficiency programs, and individual program measures, the company's ads appear and drive them to the appropriate energy efficiency web page. These ads received 769,230 impressions and 124,723 clicks throughout the year.

Owned-Digital

An ad promoting EE tips was featured on Idaho Power's e-bill sent to customers enrolled in the paperless billing program. A total of 178,844 e-bills featuring the ad were sent in October and

182,592 were sent in November. The October bill generated 139,792 unique opens and the November bill generated 133,087 unique opens.

Television

Idaho Power used network television and Hulu advertising for the spring and fall campaigns. The company also used over-the-top (OTT) media. OTT is a type of streaming media that delivers content to customers watching a certain online show. Most OTT providers have their own app or website and are streamed through devices like Rokus, Apple TVs, or Amazon Fire TVs. The network television campaigns focused on primetime and news programming that reaches the highest percentage of the target market: adults age 25 to 64.

During the spring campaign, an ad ran 1,448 times in the Boise, Pocatello, and Twin Falls media markets on network television. The ad reached 69% of the Boise target audience (and reached Malheur County in Oregon), 57% of the Twin Falls target audience, and 52% of the Pocatello target audience. The target audience saw the ad 6.5 times in Boise, 9 times in Twin Falls, and 5 times in Pocatello. Hulu spring ads delivered 717,324 impressions with a 98.2% completion rate. OTT ads delivered 303,553 impressions with a 97.13% video completion rate. The spring campaign also utilized Spanish network television ads. The Boise target audience saw 127 paid spots and the Pocatello market saw 51 spots. Spanish TV ads ran during the fall campaign as well; the Boise target audience saw 124 paid spots, and the Pocatello audience saw 34 spots. Ad reach and frequency information are not available for Spanish stations.

During the fall campaign, the TV spot ran 1,311 times in the Boise, Pocatello, and Twin Falls media markets. The ads reached 31.3% of the Boise target audience, 67% of the Twin Falls target audience, and 29.1% of the Pocatello target audience. The target audience saw the ad 4.5 times in Boise, 5.4 times in Twin Falls, and 5 times in Pocatello. Hulu ads received 652,831 completions. OTT ads delivered 304,898 impressions with a 98% video completion rate.

Idaho Power also sponsored commercials on Idaho Public Television in the Boise and Pocatello markets that ran a total of 72 times.

The energy efficiency television segments that aired in Boise on network news continued to receive positive feedback in 2021 but were limited due to COVID-19 restricting guests at television stations and changing programing priorities. In 2021, the television station began charging for each segment. Idaho Power paid for three segments with topics that included energy-efficient spring and fall tips and ways to beat the summer heat.

Radio

As part of its spring and fall campaigns, Idaho Power ran 30-second radio spots on major commercial radio stations in the service area. To obtain optimal reach, the spots ran on a variety of station formats, including classic rock, news/talk, country, adult alternative, rock,

sports, and classic hits. The message was targeted toward adults age 25 to 64 throughout Idaho Power's service area.

Results of the spots are provided for the three major markets: Boise, Pocatello, and Twin Falls. During the spring campaign, Idaho Power ran 2,855 English radio spots. These spots reached 84% of the target audience in Boise, 61% in Pocatello, and 70% in Twin Falls. The target audience was exposed to the ad 8.7 times in Boise, 8.8 times in Pocatello, and 12.7 times in Twin Falls. During the fall campaign, the company ran 1,770 English radio spots. These spots reached 62.2% of the target audience in Boise, 61% of the target audience in Pocatello, and 66.5% of the target audience in Twin Falls. The target audience was exposed to the message 5.9 times in Boise, 7.1 times in Pocatello, and 9 times in Twin Falls during the fall campaign.

In spring, Idaho Power also ran 393 ads on Spanish-speaking radio stations and 313 National Public Radio (NPR) ads in the service area targeting adults age 25 to 54. The fall campaign included 304 Spanish ads and 303 NPR ads.

Idaho Power ran 30-second spots with accompanying visual banner ads on Pandora internet radio, which mobile and web-based devices access. In the spring, records show 672,328 impressions and 494 clicks to the Idaho Power residential energy efficiency web page. The fall ads yielded 687,073 impressions and 338 clicks.

Print

As part of the campaign, print advertising ran in the major daily and select weekly newspapers throughout the service area. The company also ran ads in the Idaho Shakespeare Festival program, *Idaho Magazine*, *Boise and Meridian Lifestyle Magazine*, *IdaHome Magazine*, and *Mirada Magazine* (Spanish). As part of the print campaign, digital "homepage takeover" ads were featured on KTVB.com, idahopress.com, and idahostatesman.com. Homepage takeover ads fill a homepage with ads from one company for a specific timeframe. The spring ads highlighted individual energy efficiency tips, such as using the power save setting on electronics and running ceiling fans counterclockwise for summer. The fall ads featured tips on minimizing gadgets (use one at a time) and using smart power strips.

In 2021, Idaho Power updated the program information in a spiral-bound guide outlining each of the residential energy efficiency programs, tips, and resources. The updated guide will be included in the 2022 Welcome Kits. The previous edition of the guide was included in 2021 Welcome Kits, provided to Weatherization Assistance customers, and shared with customers who attended events Idaho Power participated in prior to the COVID-19 restrictions.

Social Media

Facebook ads for the 2021 spring and fall energy efficiency campaigns received an average of 24,500 impressions and 309 link clicks per ad (8 total).

Throughout the year, Idaho Power used Facebook and Twitter posts and boosted Facebook posts for various programs and easy energy efficiency tips for customers to implement at home and at work.

Out-of-Home

In 2021, Idaho Power participated in several tactics referred to as out-of-home advertising. Out-of-home advertising attempts to reach customers when they are outside of their homes. The tactics were a way to continually maintain energy efficiency program awareness throughout the year. Tactics included full-side bus wraps on three ValleyRide buses in the Treasure Valley Area that yielded 615,384 impressions. Impressions during the year most likely varied due to more customers working from home during COVID-19 restrictions but did make a comeback compared to 2020 since some restrictions were lifted. A full-side bus wrap also ran on one Pocatello Regional Transit bus in the Eastern Region.

Idaho Power sponsored the Boise Hawks (minor league baseball team) from May through September. As part of the sponsorship package, Idaho Power received a 15-second digital ad on the four screens within the stadium. The company's EE ad was shown a total of 16,416 times during the 48-game season and total audience attendance was 46,089. The Boise Hawks use a special TV system called In-Stadium Media (ISM), which can tell how often spectators are looking at screens. The average interaction/engagement rate was 38.5%, which is on par with the industry standard of 42%.

Idaho Power also used weather-triggered billboards in Boise, Pocatello, Nampa, and Caldwell. These are electronic billboards operating in January and July with variable messaging based on the outside temperatures. This tactic keeps EE top-of-mind and demonstrates simple ways customers can reduce energy use during extreme weather.

Public Relations

Many of the company's PR activities focused on the residential sector. Energy-saving tips videos, TV segments, news releases, and *Connections* newsletter articles often aim to promote incentive programs and/or educate customers about behavioral or product changes they can make to save energy in their homes. Idaho Power also promoted the Touchdown to Energy Savings contest in *News Briefs*.

See the Program Activity section and the Commercial and Industrial Sector Overview for more 2021 PR activities.

Empowered Community

In 2015, Idaho Power created the Empowered Community, an online community of residential customers, to measure customer perceptions on a variety of company-related topics, including energy efficiency. The community has over 2,000 actively engaged members from across Idaho

Power's service area. Idaho Power typically sends these members between six and 12 surveys per year. In 2021, Idaho Power included six energy efficiency messages with survey invitations resulting in nearly 13,500 touchpoints.

Recruitment for the Empowered Community is conducted on an annual basis to refresh the membership. Throughout February and March 2021, various types of recruitment were conducted with residential customers, including messages on paperless billing emails, a *News Brief* to local media outlets, pop-up ads on My Account, direct emails, and social media posts. In 2021, 838 new members were added to Empowered Community.

Seasonal Sweepstakes

In 2021, Idaho Power ran two seasonally focused energy efficiency sweepstakes—the Loads of Energy Savings Summer Giveaway in July and the Touchdown to Energy Savings Fall Giveaway in November.

Both sweepstakes aimed to maintain awareness about energy efficiency and the impact a small change can make.

The summer sweepstakes ran July 21–30 and received 5,248 entries. Customers were asked to comment—through social media or on the Idaho Power website—with a way they saved energy when doing laundry. In return, participants were entered to win an ENERGY STAR® washer and dryer set. The sweepstakes was promoted with email messaging to 222,565 customers, and social media posts reached 27,142 customers, receiving 1,545 engagements (likes, comments, shares). The sweepstakes was also promoted on idahopower.com through a pop-up ad on the My Account homepage.

The fall sweepstakes ran November 12–22 and received 2,473 entries. Customers were asked to comment—through social media or on the Idaho Power website—with a way they saved energy in the kitchen while making their favorite gameday treats. In return, participants were entered to win one of 10 air fryers. The sweepstakes was promoted with email messaging to 252,190 customers and paid social media posts reached 9,700 customers, receiving 531 post engagements. The sweepstakes was also promoted through a pop-up ad on the company's My Account homepage. It was featured in *News Briefs* to media outlets and was promoted on idahopower.com.

Customer Satisfaction

Idaho Power conducts the *Burke Customer Relationship Survey* each year. In 2021, on a scale of zero to 10, residential survey respondents rated Idaho Power 7.99 regarding offering programs to help customers save energy, and 8.21 related to providing customers with information on how to save energy and money.

Thirty percent of residential respondents indicated they have participated in at least one Idaho Power energy efficiency program. Of the residential survey respondents who have participated in at least one Idaho Power energy efficiency program, 90% were "very" or "somewhat" satisfied with the program.

Idaho Power customer awareness of energy efficiency programs is among the highest in the nation: 67% of the residential respondents in the *J.D. Power and Associates 2021 Electric Utility Residential Customer Satisfaction Study* indicated they were aware of Idaho Power's energy efficiency programs, and on an overall basis, those customers were more satisfied with Idaho Power than customers who were unaware of the programs. Idaho Power ranked third out of 17 utilities included in the west region midsize segment of this study.

See the individual program sections for program-specific customer satisfaction survey results.

Field Staff Activities

Idaho Power's residential and commercial energy advisors and EOEAs started 2021 with opportunities to conduct in-person meetings and events to promote energy efficiency programs and offerings with customers. Some areas were still cancelling due to COVID-19 restrictions, but the company and its energy advisors were able to get out and connect with customers more than the previous year. During the fall of 2021, energy advisors and other Idaho Power staff members participated in one of the company's largest legacy events, the Boise Fall Home Show. Energy advisors also were able to give in-person presentations throughout the year across southern Idaho and eastern Oregon. These presentations were for K–6, secondary school students, and adult audiences.

Energy advisors continued to use phone, email, mail, text, and virtual presentations to stay connected with customers. The energy advisors created giveaway bags for senior centers that included an LED lamp, nightlight, energy efficiency information, puzzles, and games. Energy advisors delivered these items while social distancing and wearing masks to keep everyone safe.

Though much of 2021 was spent continuing alternative methods for customer interaction, the changes are allowing the company to offer more training and development sessions for energy advisors to expand their knowledge, skills, and abilities about energy efficiency programs, measures, and technologies. Topics included lighting, building envelope, HVAC, and refrigeration.

A/C Cool Credit

	2021	2020
Participation and Savings		
Participants (homes)	20,995	22,536
Energy Savings (kWh)	n/a	n/a
Demand Reduction (MW)	27	19
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$420,376	$405,402
Oregon Energy Efficiency Rider	$25,366	$25,200
Idaho Power Funds	$306,247	$334,418
Total Program Costs—All Sources	$751,989	$765,020
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	n/a	n/a
Total Resource Levelized Cost ($/kWh)	n/a	n/a
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	n/a	n/a
Total Resource Benefit/Cost Ratio	n/a	n/a

Description

Originating in 2003, A/C Cool Credit is a voluntary, dispatchable demand response program for residential customers in Idaho and Oregon. Using communication hardware and software, Idaho Power cycles participants' central A/C units or heat pumps off and on via a direct load control device installed on the A/C unit. This program enables Idaho Power to reduce system capacity needs during times when summer peak load is high.

Customers' A/C units are controlled using switches that communicate by powerline carrier (PLC) using the same system utilized by Idaho Power's advanced metering system (AMI). The switch is installed on each participating customer's A/C unit and allows Idaho Power to control the unit during a cycling event.

The cycling rate is the percentage of an hour the A/C unit will be turned off by the switch. For instance, with a 50% cycling rate, the switch will cycle the A/C unit off for about 30 (nonconsecutive) minutes of each hour. Idaho Power tracks the communication levels to validate whether the signal reaches the switches. Switch communication may be interrupted for a variety of reasons: the switch may be disconnected, an A/C unit may not be powered on, the switch may be defective, or the participant's household wiring may prevent communication. Sometimes it is difficult for the company to detect why the switch is not communicating.

These are the program event guidelines:

- June 15 through August 15 (excluding weekends and holidays)
- Up to four hours per day
- A maximum of 60 hours per season
- At least three events per season

At the end of the season, Idaho Power or a third party evaluates the events to determine peak demand savings.

Program Activities

In 2021, about 20,850 customers participated in the program, with approximately 244 in Oregon and 20,602 in Idaho. Nine cycling events occurred, and all were successfully deployed (Table 10). The cycling rate was 55%, and the communication level exceeded 90% for each event. Idaho Power calculated the maximum potential capacity in 2021 to be 29.19 MW at the generation level. This estimate of the program capacity is based on the maximum per-unit reduction ever achieved at the generation level of 1.4 kW per participant. The incentive remained $15 per season, paid as a $5 bill credit on the July, August, and September bills.

Table 10. A/C Cool Credit demand response event details

Event Details	Monday, June 28	Monday, July 12	Monday, July 26	Tuesday, July 27	Wednesday, July 28	Thursday, July 29	Friday, July 30	Wednesday, August 4	Thursday, August 12
Event time	4–7 pm	4–7 pm	4–7 pm	5–8 pm	4–7 pm	4–7 pm	4–7 pm	4–7 pm	4–7 pm
Average temperature	102°F	101°F	96°F	99°F	96°F	98°F	98°F	102°F	99°F
Maximum load reduction (MW)	23.7	18.7	21.1	20.2	18.2	23.2	26.7	20.9	23.0

Throughout 2021, Idaho Power representatives continued site visits to check switches and equipment to improve communication levels. COVID-related safety protocols remained in place, including calling each customer before the visit to explain the process and safety measures and not visiting any site where the customer was uncomfortable with the process. While at the site, contractors wore masks, maintained a 6-foot social distance from customers, and performed enhanced disinfecting activities. Due to these protocols, not all device checks were completed. The company will continue work to ensure devices associated with the program are communicating on an ongoing basis.

During the site visits, Idaho Power representatives placed informational stickers on devices that included a safety warning and toll-free number customers could call with questions.

Marketing Activities

Per the settlement agreement reached in IPUC Case No. IPC-E-13-14 and OPUC Case UM 1653, Idaho Power did not actively market the A/C Cool Credit program in 2021.

Before the cycling season began, Idaho Power sent current participants a postcard to remind them of the program specifics. Idaho Power also attempted to recruit customers who had moved into a home that already had a load control device installed and previous participants who changed residences to a location that may or may not have a load control device installed. The company used postcards, phone calls, direct-mail letters, and home visits (leaving door hangers for those not home) to recruit these customers. Participating customers received a thank you and a credit reminder message on their summer bills. At the end of the summer, a thank-you postcard was sent to program participants.

Cost-Effectiveness

Idaho Power determines cost-effectiveness for its demand response program under the terms of IPUC Order No. 32923 and OPUC Order No. 13-482. Under the terms of the orders and the settlement, all Idaho Power's demand response programs were cost-effective for 2021.

The A/C Cool Credit program was dispatched for nine events (totaling 27 event hours) and achieved a maximum demand reduction of 26.7 MW. The total expense for 2021 was $751,989 and would have remained the same if the program was fully used for 60 hours because there is no variable incentive paid for events beyond the three required events.

A complete description of the cost-effectiveness of Idaho Power's demand response programs is included in *Supplement 1: Cost-Effectiveness*.

Evaluations

In 2021, Idaho Power contracted a third party to conduct an impact evaluation of the A/C Cool Credit Program. The evaluator was asked to review the current 3-in-10 baseline methodology and make recommendations for a demand reduction calculation methodology going forward. The evaluator recommended a mixed-method approach, in which each home would utilize non-event "proxy" days to understand which calculation method forecast the homes' usage best and produced the lowest bias. Once identified, this calculation method was used for the home.

Using the mixed-method approach, the evaluator calculated a realization rate of 82.5%, which is calculated by dividing the achieved hourly demand reduction averaged over every event hour of the season by the expected household demand reduction. The average reduction per event was 20.1 MW at the system level. The maximum hour reduction occurred on the

July 30 event with a reduction of 26.7 MW at the system level. The evaluator also found a correlation between demand reduction achieved and cooling degree days (CDD) and recommended calling events based upon forecasted high CDD.

Idaho Power will consider all recommendations made in the report and will report any changes to the program in the *Demand-Side Management 2022 Annual Report*. See the complete analysis report in *Supplement 2: Evaluation*.

In preparation for possible program changes identified in preparing the 2021 IRP, the company conducted a survey in early summer 2021. See the complete survey results in *Supplement 2: Evaluation*.

2022 Program and Marketing Strategies

For the 2022 program season, Idaho Power will implement the changes recently authorized by the IPUC and OPUC to extend the cycling season to September 15, provide one additional month of incentive to participants, and resume actively marketing the A/C Cool Credit program to solicit new participants.

Easy Savings: Low-Income Energy Efficiency Education

	2021	2020
Participation and Savings		
Participants (coupons)	0	155
Energy Savings (kWh)	0	10,628
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$0	$0
Oregon Energy Efficiency Rider	$0	$0
Idaho Power Funds	$145,827	$9,503
Total Program Costs—All Sources	$145,827	$9,503
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	n/a	$0.299
Total Resource Levelized Cost ($/kWh)	n/a	$0.299
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	n/a	n/a
Total Resource Benefit/Cost Ratio	n/a	n/a

Description

As a result of IPUC Case No. IPC-E-08-10 and Order Nos. 30722 and 30754, Idaho Power committed to fund energy efficiency education for low-income customers and provide $125,000 to Community Action Partnership (CAP) agencies in its service area annually, on a prorated basis. These orders specified that Idaho Power provide educational information to Idaho customers who heat their homes with electricity.

From 2009 to 2017, using CAP agency personnel, the program distributed Energy-Saving Kits (ESK) and corresponding educational materials to participants of the Low Income Home Energy Assistance Program (LIHEAP) who heat their homes with electricity. In 2017, with input from a planning committee consisting of representatives from CAPAI, CAP agencies, IPUC, and Idaho Power, this program discontinued kit distribution and offered a pilot incentive: a coupon for a free electric HVAC tune-up and one-on-one education with the goal of helping low-income customers learn ways to reduce their energy costs and have a maintained HVAC system.

To provide services for the program, regional HVAC company owners sign contractor guidelines and acknowledge the two-fold goal of the program—customer education and equipment tune-up. During the customer visit, HVAC contractors perform the tune-up and teach residents how to change furnace filters. They also explain how regular maintenance improves overall performance and answer questions about the specific heating equipment and ways to save energy. The contractor leaves behind information for a customer satisfaction survey that can be

completed online or mailed to CAPAI. Respondents are entered into a drawing for a gift card provided by CAPAI.

Program Activities

Due to COVID-19 restrictions, in-home program activity was suspended until year end. As a result, in 2021 there were no coupons distributed. However, CAP agencies, the planning committee, and contractors met virtually throughout the year to plan future program changes. The group agreed to noteworthy improvements, which will be implemented in 2022.

Idaho Power sent coupons for the 2022 program season to CAP agencies at the end of 2021. The company also sent helpful energy efficiency education materials that CAP agencies can give to regional HVAC contractors to share with customers.

Marketing Activities

Idaho Power sent a direct-mail postcard (Figure 8) to Idaho residential customers who received energy assistance in the previous year to encourage them to take advantage of the program as in-home activity resumed toward the end of 2021.

Figure 8. Direct-mail postcard to Idaho residential customers for Easy Savings

The Easy Savings program is included under "Savings for Your Home" on the Idaho Power website in the "Income Qualified Customers" section.

Cost-Effectiveness

Because the Easy Savings program is primarily an educational and marketing program, the company does not apply traditional cost-effectiveness tests to it.

No coupons were distributed in 2021 due to the suspension of in-home activities. When the program resumes in 2022, the program will claim 68.01 kWh for each qualifying customer, which is based on the 2020 energy efficiency potential study.

2022 Program and Marketing Strategies

In January, the Easy Savings program will execute the changes agreed on in the 2021 planning meetings:

- Eligibility: All income-qualified Idaho Power customers with electric heat are eligible to participate in the Easy Savings program regardless of whether they had participated in the LIHEAP/Energy Assistance program.
- Energy-saving services and products: In addition to conducting electric HVAC-related maintenance and repair, contractors will give customers a year's worth of furnace filters, wrap electric water heater pipes, and install "Dusk to Dawn" LEDs in porch light fixtures as needed. The program will also give participants energy-saving dryer balls, an air fryer, and/or a counter-top microwave to those who do not have these items.
- Energy education: Contractors will continue to discuss the importance of HVAC maintenance and incorporate education about saving energy with small appliances and will answer questions about other ways to save energy in their homes.

Each agency's portion of the annual $125,000 payment was made in December 2021, so agencies will begin 2022 with their portion of this payment added to any unspent portion of previous payments. In 2022, CAP agencies will again provide reporting on redemption of coupons and energy-saving items.

Educational Distributions

	2021	2020
Participation and Savings		
Participants (kits/giveaways)*	47,027	97,228
Energy Savings (kWh)**	2,930,280	19,909,741
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$433,963	3,912,564
Oregon Energy Efficiency Rider	$15,826	$91,912
Idaho Power Funds	$0	$1,547
Total Program Costs—All Sources	$449,790	$4,006,023
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	$0.019	$0.037
Total Resource Levelized Cost ($/kWh)	$0.019	$0.037
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	2.39	1.45
Total Resource Benefit/Cost Ratio	3.10	2.19

*2020 includes Home Energy Report Program savings. Program broken out in its own section for 2021.

**2020 cost-effectiveness ratios include evaluation. If evaluation expenses were removed from the program's cost-effectiveness, the UCT and TRC would be 1.48 and 2.23, respectively.

Description

Designated as a specific program in 2015, the Educational Distributions effort is administered through the REEEI and seeks to use low-cost and no-cost channels to deliver energy efficiency items with energy savings directly to customers. As with the initiative, the goal for these distributions is to drive behavioral change and create awareness of, and demand for, energy-efficiency programs in Idaho Power's service area.

Idaho Power selects items for distribution if the initial analysis indicates the measure is either currently cost-effective or expected to be cost-effective. Typically, selected items have additional benefits beyond traditional energy savings, such as educating customers about energy efficiency, expediting the opportunity for customers to experience newer technology, or allowing Idaho Power to gather data or validate potential energy savings resulting from behavior change.

Idaho Power recognizes the need to educate and guide customers to promote behavioral change and awareness and will plan program activities accordingly. Items may be distributed at events and presentations, through direct-mail, or during home visits conducted by energy advisors.

Nightlights as Giveaways

Nightlights are a popular giveaway item with Idaho Power customers and provide another opportunity to share information about energy efficient LED technology and safe, energy-efficient ways to provide nighttime lighting. Energy advisors are encouraged to use nightlights as a bridge to these discussions.

Student Energy Efficiency Kit Program

The SEEK program provides fourth- to sixth-grade students in schools in Idaho Power's service area with quality, age-appropriate instruction regarding the wise use of electricity. Each child who participates receives an energy efficiency kit. The products in the kit are selected specifically to encourage energy savings at home and engage families in activities that support and reinforce the concepts taught at school.

Once a class enrolls in the program, teachers receive curriculum and supporting materials. Students receive classroom study materials, a workbook, and a take home kit containing the following:

- Three LED lightbulbs
- A high-efficiency showerhead
- An LED nightlight
- A furnace filter alarm
- A digital thermometer for measuring water and refrigerator/freezer temperatures
- A water flow-rate test bag
- A shower timer

At the conclusion of the program, students and teachers return feedback to Idaho Power's vendor indicating how the program was received and which measures were installed. The vendor uses this feedback to provide a comprehensive program summary report showing program results and savings.

Unlike most residential programs offered by Idaho Power, SEEK results are reported on a school year basis, not by calendar year.

Welcome Kits

Idaho Power uses a vendor to mail Welcome Kits to brand new customers between 35 and 45 days after electric service begins at their residence. Each kit contains four LED lightbulbs, a nightlight, a greeting card, and a small flipbook containing energy-saving tips and information about Idaho Power's energy efficiency programs. The kits are intended to encourage first-time customers to adopt energy-efficient behaviors early in their new homes.

Program Activities

Nightlights as Giveaways

Idaho Power continued to distribute LED nightlights to engage customers in discussions around energy-efficient behavior changes and home upgrades.

In-person events continued to be curtailed due to Covid-19 concerns throughout the year; however, by year-end, Idaho Power staff and energy advisors distributed 2,378 nightlights along with an educational message. Nightlights were distributed to VIPs, sponsors, business and community leaders, veterans at over 25 American Legion and VFW organizations, rural senior centers, participants of the Pride Fest in Boise on Sept 10–12, and during presentations to civic organizations.

Student Energy Efficiency Kit Program

During the 2020 to 2021 school year, the vendor was responsible for SEEK recruiting activities. Idaho Power EOEAs continued to promote the program during their school visits and interactions with fourth to sixth grade teachers. Despite some continued school closures and online delivery, SEEK enrollments were strong. The vendor delivered 12,446 kits to 453 classrooms in 189 schools within Idaho Power's service area. This resulted in 2,167 MWh of savings.

In 2021, the company issued a request for proposals (RFP) from kit vendors for new kit options and costs for the upcoming school year. Although the 2021 vendor had been an excellent contractor to work with, the proposal team ultimately selected a new vendor.

In 2020, the SEEK Program was part of a third-party evaluation. One of the recommendations included:

- *For SEEK, if practical, consider allowing students to take pictures of the replaced/baseline equipment as a way of confirming/vetting the answers they provide on the survey.* The primary factor in selecting a new vendor was because of the ability to help transition the curriculum to a digital platform. The new curriculum will also incorporate opportunities for students to participate in a video contest and provide photo documentation of installed kit items.

Welcome Kits

Idaho Power continued to contract with a third-party vendor to distribute energy efficiency kits to the company's first-time customers. In 2021, after collaboration with EEAG, the kit contents were adjusted to improve cost-effectiveness. Rather than four 800-lumen bulbs, each recipient received two 800-lumen and two 1600-lumen LED bulbs.

The company sent nearly 32,700 Welcome Kits to customers in 2021—similar to the quantity delivered in previous years.

In 2020, the Welcome Kits were part of a third-party evaluation. One of the recommendations was:

- *Consider additional research to better estimate the number of Welcome Kit recipients who take kit measures with them when they move.* Although the company considered this recommendation, it did not move forward with additional research in 2021. Welcome Kit LED bulb savings rely on the RTF deemed savings which factor in storage and removal rates. Additionally, LEDs delivered through other channels, such as retail or direct install use the RTF deemed savings values, and the RTF has not factored in a discount due to participant subsequently relocating or transporting measures outside a utility's service area. While Idaho Power may potentially include this research in a future evaluation, it is likely that the risk is relatively small and may be offset by new customers to Idaho Power's service area who may be transporting energy efficient items into the area.

Idaho Power continues to receive positive customer feedback indicating these kits are well-received.

Marketing Activities

Nightlights as Giveaways

Nightlights are not marketed as a separate measure, but energy advisors used them to facilitate energy efficiency conversations during customer visits.

Student Energy Efficiency Kit Program

During the 2020–2021 school year, the vendor staff handled most of the marketing and recruitment of teachers via email and phone calls to the eligible schools. Idaho Power EOEAs continued to promote the program through the *Community Education Guide* and in conversations with teachers throughout the year.

Welcome Kits

The Welcome Kits are not requested by customers; therefore, they are not marketed. Instead, each week Idaho Power sends a list of new customers to the vendor to fulfill the order. The kits are, however, used to cross-market other programs through the inclusion of a small flipbook containing energy-saving tips and information about Idaho Power's energy efficiency programs.

Cost-Effectiveness

In situations where Idaho Power managed energy efficiency education and distribution through existing channels, the cost-effectiveness calculations were based on the actual cost of the items. In 2021, the Welcome Kits were not fully cost-effective due to additional erosion of lighting savings. After consulting the EEAG, the decision was made to keep this educational program, but to only include the cost-effective portion associated with those energy savings in

the Educational Distribution program and the remainder of the kit costs are included in the Residential Energy Efficiency Education Initiative budget.

The UCT and TRC for the program is 2.39 and 3.10 respectively.

Nightlights as Giveaways

Idaho Power used the third-party evaluator's calculated savings of 12 kWh per nightlight as explained in the Welcome Kit cost-effectiveness section.

Student Energy Efficiency Kit Program

In 2020, the SEEK Program was part of a third-party evaluation. Three of the recommendations were:

- *Continue to not claim savings from the shower timers.*
- *Assume 13 watts (W) for baseline wattage for "Other" bulbs for SEEK lighting saving calculations.*
- *Ask the SEEK vendor to provide a spreadsheet or code used to calculate savings.*

The cost-effectiveness analysis for the SEEK offering was based on the savings reported by the kit provider during the 2020 to 2021 school year. The kit provider calculated the annual savings based on information collected from the participants' home surveys and the installation rate of the kit items. Questions on the survey included the number of individuals in each home, water-heater fuel type, flow rate of old showerheads, and the wattage of any replaced lightbulbs. The response rate for the survey was approximately 32%. The survey gathers information on the efficiency level of the existing measure within the home and which measure was installed. The energy savings will vary for each household based on the measures offered within the kit, the number of items installed, and the existing measure that was replaced. Idaho Power adopted the recommendations from the evaluation. The company continued not to claim savings for the shower times, received the spreadsheet the vendor used to calculate savings, and confirmed the baseline wattage of 13W for the "other" bulb types. Based on the feedback received from the 2020 to 2021 school year, the savings for each kit was approximately 174 kWh annually per household on average, and the program saved 2,166,583 kWh annually. A copy of the report is included in *Supplement 2: Evaluation*.

Welcome Kits

For the two 800-lumen LED lightbulbs included in the kit, Idaho Power used the RTF's giveaway deemed savings value of 0.71 kWh per bulb. For the two 1600-lumen LED bulbs, Idaho Power used the RTF's giveaway deemed savings value of 4.72 kWh per bulb. For the nightlight, Idaho Power used the third-party evaluator's calculated savings of 12 kWh per nightlight, which were identified using survey data as part of a 2020 evaluation. The annual savings for each kit is 22.86 kWh.

Evaluations

In 2021, Idaho Power considered the recommendations from the 2020 process and impact evaluations conducted by a third party. See the recommendations and Idaho Power's responses above.

2022 Program and Marketing Strategies

Nightlights as Giveaways

Nightlights will continue to be the primary opportunity to garner savings in conjunction with educational discussions and customer conversations. Field staff will look for opportunities to discuss LED technology and savings, encourage in-home adoption of LED lighting, and promote the use of LED nightlights as an energy efficient, safe nighttime lighting option.

Student Energy Efficiency Kit Program

Idaho Power will continue to offer the SEEK program. The company will work with the new vendor to transition the curriculum and teacher/student interface to a more digital-friendly delivery system with additional opportunities for student engagement.

The company will continue to leverage the positive relationships Idaho Power's EOEAs have within the schools to maintain program participation levels. Idaho Power will continue to work with the new SEEK program vendor, responding to feedback and input from teachers and parents regarding the new online delivery format.

Welcome Kits

Idaho Power will continue to offer Welcome Kits to first-time customers. In 2022, the kit contents will be adjusted to take advantage of the RTF savings associated with 1100-lumen bulbs. The Welcome Kit will cross-promote other energy efficiency programs and educate and encourage new customers to adopt energy-efficient behaviors upon moving into their new homes. The Educational Distributions program will continue to count the savings and pay for the cost-effective energy saving portion of each kit, while the remaining costs associated with the kits will be included in Idaho Power's REEEI efforts.

Other Educational Distributions

Idaho Power will continue to look for opportunities to engage customers with new technologies that stress the importance of energy-efficient behaviors at home. The online marketplace Idaho Power is considering for 2022 may serve as an avenue to engage and educate customers while promoting efficient technologies that may not fold neatly into other program offerings.

Energy House Calls

	2021	2020
Participation and Savings		
Participants (homes)	11	51
Energy Savings (kWh)	14,985	56,944
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$17,375	$40,492
Oregon Energy Efficiency Rider	$882	$5,422
Idaho Power Funds	$0	$438
Total Program Costs—All Sources	$18,257	$46,352
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	$0.105	$0.075
Total Resource Levelized Cost ($/kWh)	$0.105	$0.075
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	0.43	0.63
Total Resource Benefit/Cost Ratio	0.50	0.77

Description

Initiated in 2002, the Energy House Calls program gives homeowners of electrically heated manufactured homes an opportunity to reduce electricity use by improving the home's efficiency. Specifically, this program provides free duct sealing and additional efficiency measures to Idaho Power customers living in Idaho or Oregon who use an electric furnace or heat pump. Participation is limited to one service call per residence for the lifetime of the program.

Services and products offered through the Energy House Calls program include duct testing and sealing according to Performance Tested Comfort System (PTCS), standards set and maintained by BPA; installing LED lightbulbs; testing the temperature set on the water heater; installing water heater pipe covers when applicable; installing one bathroom faucet aerator, one kitchen faucet aerator; and leaving two replacement furnace filters with installation instructions, as well as energy efficiency educational materials appropriate for manufactured home occupants.

Idaho Power provides contractor contact information on its website and marketing materials. The customer schedules an appointment directly with one of the certified contractors in their region. The contractor verifies the customer's initial eligibility by testing the home to determine if it qualifies for duct sealing. Additionally, contractors have been instructed to install LED lightbulbs only in exterior, moderate and high-use areas of the home; to replace only

incandescent and halogen lightbulbs; and to install bathroom aerators and showerheads only if the upgrade can be performed without causing damage to a customer's existing fixtures.

The actual energy savings and benefits realized by each customer depend on the measures installed and the repairs and/or adjustments made. Although participation in the program is free, a typical cost for a similar service call would be $400 to $600, depending on the complexity of the repair and the specific measures installed.

Program Activities

In response to COVID-19 restrictions and to ensure the safety of customers and contractors, visits to customer homes for the Energy House Calls program were suspended much of the year. In 2021, 11 homes received products and/or services through this program (Figure 9), resulting in 14,985 kWh savings. Of the total participating homes, 100% were in Idaho Power's South–East Region.

Once in-home visits resumed in late November, approximately 125 homes were on waitlists to participate in the program. Due to supply chain issues, the contractors had difficulty finding crossovers to repair damaged crossovers on double-wide and triple-wide homes. This delay extended times to complete the orders that were already on hold due to COVID-19. According to contractors, all requests for an Energy House Calls visit should be completed by March 1, 2022, if the necessary materials to complete the jobs can be obtained.

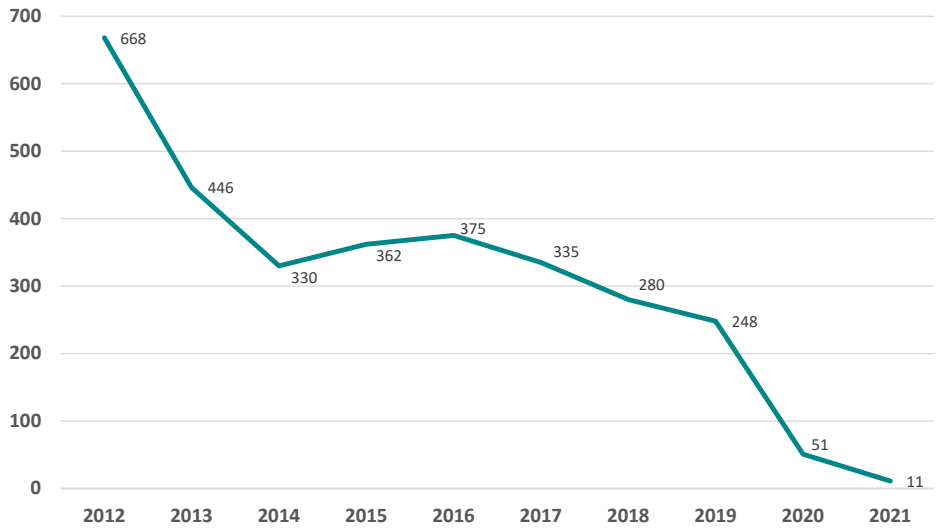

Figure 9. Participation in the Energy House Calls program, 2012–2021

Duct-Sealing

Each year, several customers who apply for the Energy House Calls program cannot be served because their ducts do not require duct-sealing or cannot be sealed, for various reasons. These jobs are billed as a test-only job. On some homes, it is too difficult to seal the ducts, or

the initial duct blaster test identifies the depressurization to be less than 150 cubic feet per minute (cfm), and duct-sealing is not needed. Additionally, if after sealing the duct work the contractor is unable to reduce leakage by 50%, the contractor will bill the job as a test-only job. Prior to 2015, these test-only jobs were not reported in the overall number of jobs completed for that year because they included no kWh savings. Because Idaho Power now offers direct-install measures in addition to the duct-sealing component, all homes are reported. While some homes may not have been duct-sealed, all would have had some of the direct-install measures included, which would allow Idaho Power to report kWh savings for those homes. Of the 11 homes that participated in 2021, none were serviced as test only.

If a home had a blower door and duct blaster test completed, and the contractor determined that only duct-sealing is necessary, it was billed as a test and seal. For a multi-section home with an x-over duct system (one that transfers heated or cooled air from one side to the other) that needs replaced in addition to the duct-sealing, it is charged as an x-over. When a home requires the existing belly-return system to be decommissioned and have a new return installed along with the duct sealing, it is billed as a complex system. A complex system that also requires the installation of a new x-over and duct sealing is billed as a complex system and x-over job. Figure 10 shows the job type percentages (Test and Seal versus x-over) for the 2021 Energy House Calls program.

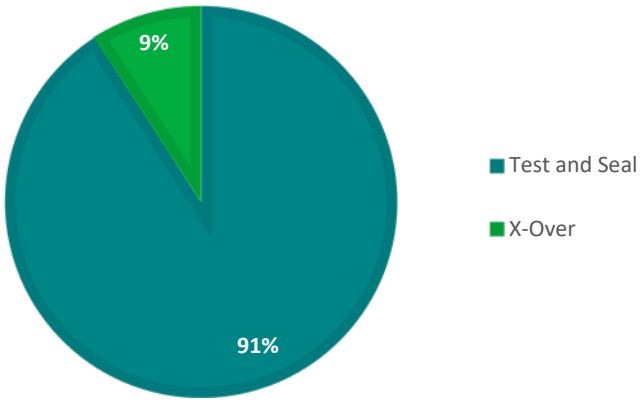

Figure 10. Energy House Calls participation by job type

Direct-Install Measures

In 2021, contractors installed 63 LED lightbulbs, no showerheads, no bathroom aerators, and two kitchen aerators.

Marketing Activities

Due to program inactivity for most of the year, all marketing efforts were suspended, except for a shared bill insert with Rebate Advantage sent to all residential customers in May and November 2021 (Figure 11). The May insert was sent to 302,353 customers, and the November

insert was sent to 296,992 customers. Customers who requested an energy house call while in-home work was on hold were added to a waitlist and were contacted in November to schedule a visit once in-home work resumed.

Figure 11. Energy House Calls bill insert

While in-home work was on hold, Idaho Power added an alert to the Energy House Calls web page to let customers know of the delay for scheduling home visits.

Cost-Effectiveness

The UCT and TRC ratios for the program are 0.43 and 0.50, respectively. The program's cost-effectiveness was impacted by the updated savings assumptions coupled with the suspension of in-home visits due to COVID-19 from March 2020 through November 2021.

In 2021, Idaho Power used the same RTF savings for duct-sealing in manufactured homes as were used in 2020. In December 2021, the RTF reviewed and updated the savings associated with manufactured home duct sealing based on program evaluations around the region. For 2022, Idaho Power plans to use the updated savings of 888 kWh per home.

Savings for the LED lightbulbs decreased from 30.63 kWh to 5.65 kWh based on updated lighting assumptions for the RTF. In 2020, the RTF reviewed the savings associated with low-flow showerheads. Because of the uncertainty around the relationship between the hot

water savings and the low-flow showerhead and the increasing efficiency for showerheads in the region due to codes and standards, the RTF deactivated the low-flow showerhead measure. Therefore, there are no savings associated with low-flow showerheads. Additionally, the RTF reviewed aerator savings in 2021. Like the showerheads, there was uncertainty with the savings associated with aerators and the RTF deactivated the measure. While the savings for low-flow faucet aerators remain the same between 2020 and 2021, there will be no savings associated with the aerators in 2022.

Because the program would have likely remained cost-effective in 2021 had in-home work not been suspended, Idaho Power will continue to work through the homes that remain on the waitlist. Due to the lower savings associated with duct sealing and LED lightbulbs and the removal of the showerhead and faucet aerator savings, cost-effectiveness will continue to be a challenge for the current program model in 2022.

For more detailed information about the cost-effectiveness savings and assumptions, see *Supplement 1: Cost-Effectiveness*.

2022 Program and Marketing Strategies

Idaho Power will continue to provide free duct sealing and selected direct-install efficiency measures for all-electric manufactured/mobile homes in its service area as long as the program is operational. Due to cost-effectiveness constraints, the Energy House Calls program as a stand-alone program is no longer cost-effective. Idaho Power will continue to work with stakeholders, including EEAG, to determine the best course of action for Energy House Calls in 2022.

Heating & Cooling Efficiency Program

		2021	2020
Participation and Savings			
	Participants (projects)	1,048	1,019
	Energy Savings (kWh)	1,365,825	1,839,068
	Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source			
	Idaho Energy Efficiency Rider	$600,636	$578,893
	Oregon Energy Efficiency Rider	$34,522	$23,978
	Idaho Power Funds	$25	$3,689
	Total Program Costs—All Sources	$635,182	$606,559
Program Levelized Costs			
	Utility Levelized Cost ($/kWh)	$0.044	$0.033
	Total Resource Levelized Cost ($/kWh)	$0.155	$0.103
Benefit/Cost Ratios*			
	Utility Benefit/Cost Ratio	1.14	1.66
	Total Resource Benefit/Cost Ratio	0.36	0.81

*2021 cost-effectiveness ratios include evaluation. If evaluation expenses were removed from the program's cost-effectiveness, the UCT and TRC would be 1.19 and 0.36, respectively.

Description

Initiated in 2007, the objective of the Heating & Cooling Efficiency (H&CE) Program is to provide customers with energy-efficient options for space heating and cooling and water heating. The program provides incentives to residential customers, builders, and installation contractors in Idaho Power's service area for the purchase and proper installation of qualified heating and cooling equipment and services.

Measures, Conditions, and Incentives/Stipends for Existing Homes

- Ducted air-source heat pump:
  - The customer incentive for replacing an existing ducted air-source heat pump with a new ducted air-source heat pump is $250 for a minimum efficiency 8.5 heating seasonal performance factor (HSPF). A $50 stipend is paid to the participating contractor.
  - The customer incentive for replacing an existing oil or propane heating system with a new ducted air-source heat pump is $400 for a minimum efficiency 8.5 HSPF. A $50 stipend is paid to the participating contractor. Participating homes be where natural gas is unavailable.
  - The customer incentive for replacing an existing electric forced-air or zonal electric heating system with a new ducted air-source heat pump is $800 for a minimum efficiency 8.5 HSPF. A $50 stipend is paid to the participating contractor.

- Ducted open-loop water-source heat pump:
  - The customer incentive for replacing an existing ducted air-source heat pump with a new ducted open-loop water-source heat pump is $500 for a minimum efficiency 3.5 coefficient of performance (COP). A $50 stipend is paid to the participating contractor.
  - The customer incentive for replacing an existing electric forced-air or zonal electric, oil, or propane heating system with a new ducted open-loop water-source heat pump is $1,000 for a minimum efficiency 3.5 COP. Participating homes with oil or propane heating systems must be where natural gas is unavailable. A $50 stipend is paid to the participating contractor.
- Ductless air-source heat pump: The customer incentive for replacing a zonal electric heating system with a new ductless air-source heat pump is $750.
- Duct sealing: The customer incentive for duct-sealing services performed in an existing home with an electric forced-air heating system or a heat pump is $350.
- Electronically commutated motor (ECM): The customer incentive for replacing a permanent split capacitor (PSC) air handler motor with an ECM in an existing home with oil or propane or natural gas forced-air heat, electric forced-air heat, or a heat pump is $50. A $150 incentive is paid to the licensed contractor.
- Evaporative cooler: The customer incentive for installing an evaporative cooler is $150.
- Heat pump water heater (HPWH): The customer incentive for installing an HPWH is $300.
- Smart thermostat: The customer incentive for a smart thermostat installed in an existing home with an electric forced-air furnace or a heat pump is $75.
- Whole-house fan (WHF): The customer incentive for a WHF installed in an existing home with central A/C, zonal cooling, or a heat pump is $200.

Measures, Conditions, and Incentives/Stipends for New Homes

- Ducted air-source heat pump: The incentive for homeowners, property owners, or builders of new construction installing a ducted air-source heat pump in a new home is $400 for a minimum efficiency 8.5 HSPF. A $50 stipend is paid to the participating contractor. Participating homes must be where natural gas is unavailable.
- Ducted open-loop water-source heat pump: The incentive for homeowners, property owners, or builders of new construction installing a ducted open-loop water-source heat pump in a new home is $1,000 for a minimum efficiency 3.5 COP. A $50 stipend is paid to the participating contractor. Participating homes must be where natural gas is unavailable.

Idaho Power requires licensed contractors to perform the installation services related to these measures, except evaporative coolers, HPWH, and smart thermostats. To qualify for the heat pump and duct-sealing incentive, an authorized participating contractor must perform the work. To be considered a participating contracting company, an employee from the contracting company must first complete Idaho Power's required training regarding program guidelines and technical information on HVAC equipment.

A third-party contractor reviews and submits incentive applications for payment using a program database portal developed by Idaho Power. The contractor also provides technical and program support to customers and contractors and performs on-site and off-site verifications.

Program Activities

The 2021 H&CE Program paid incentives are listed in Table 11. The third-party contractor performed random off-site verifications on 5% of the completed installations. The verifications were performed via phone and email due to COVID-19 restrictions. These verifications confirmed the information submitted on the paperwork matched what was installed at customers' sites. Overall, the verification results were favorable.

Supporting, developing, and expanding Idaho Power's authorized participating contractor network remained a key growth strategy for the program. In 2021, company representatives met with several prospective contractors to support this approach. As a result, Idaho Power added seven new contractors to the program in 2021.

Table 11. Quantity of H&CE Program incentives in 2021

Incentive Measure	Project Quantity
Ducted Air-Source Heat Pump	184
Open Loop Water-Source Heat Pump	5
Ductless Heat Pump	226
Evaporative Cooler	16
Whole-House Fan	105
Electronically Commutated Motor	40
Duct Sealing	7
Smart Thermostat	433
Heat Pump Water Heater	32

In 2020, Idaho Power conducted an exercise, described as journey mapping, with a team of fellow employees who met periodically for three months to identify difficulties customers might experience when participating in the program. Recommendations included new layouts for the program's 10 application forms. Idaho Power updated one of the 10 forms in 2021 with the balance to be completed in 2022 using an improved editing process.

In 2019, Idaho Power and other stakeholders began a regional Smart Thermostat Research Study to collect and provide regional smart thermostat performance data to the RTF. The final report was published in November 2021. The data in the report will assist the RTF in determining energy savings for smart thermostats.

Marketing Activities

Idaho Power used multiple marketing methods for its H&CE Program in 2021, focusing efforts toward the hottest and coldest times of the year.

Idaho Power sent two program-related postcards to a targeted customer group that uses electric heat: 8,087 customers received postcards in February and September. The company mailed a bill insert to 304,389 residential customers in April and 298,024 residential customers in September.

In February, the company emailed information about the H&CE Program to approximately 217,000 residential customers. The promotion was opened by over 85,000 customers and received approximately 5,200 click throughs to the H&CE Program web page. Idaho Power also sent an email promotion in September to 232,211 residential customers; the email was opened by over 79,000 customers and received 4,812 click throughs to the web page.

In February and September, Idaho Power used an ad agency to send digital display ads to customers based on their internet browsing preferences. Using Google Analytics, the ad agency determined the ads resulted in 2,450,361 impressions and 10,072 clicks to the H&CE Program web page in February and 3,124,373 impressions and 12,311 web clicks in September.

The company held a smart thermostat giveaway at the September Women and Leadership Conference. Program information was also included in energy efficiency collateral mailed in the new customer Welcome Kits.

Smart thermostats were also promoted in a *News Briefs* in December. The summer edition of the *Energy Efficiency Guide* distributed through local newspapers featured a call-out on smart thermostats. A pop-up graphic ran in the company's online My Account platform in February directing customers to the H&CE Program landing page. There were 3,675 click throughs on the promotion.

Additionally, the program specialist continued to distribute flyers, called tech sheets, to interested customers and contractors. The eight different flyers are especially beneficial as sales tools for contractors, for use at trade shows, and as mailers to customers without internet access who seek program and individual cash incentive information.

Cost-Effectiveness

In 2021, the H&CE Program had a UCT of 1.14 and TRC of 0.36. While participation slightly increased in 2021 relative to 2020, much of the decrease in cost-effectiveness can be attributed to a decrease in the RTF measure savings. In 2021, savings were decreased for DHPs, and heat pump conversions and upgrades, which made up ~61% of the 2021 program savings. In 2021, Idaho Power added tier 4 efficiency HPWH to the program.

Some measures within the program do not pass the UCT; however, these measures, with the exception of DHPs, would pass the UCT if administration costs were not included in the measure's cost-effectiveness. Most measures are not cost-effective from a TRC perspective. The program itself has a cost-effectiveness exception with the OPUC under UM 1710. The program will be modified in 2022 to incorporate the updated savings assumptions, new measures, and recommendations from the 2021 evaluation.

For detailed information about the cost-effectiveness savings, sources, calculations, and assumptions, see *Supplement 1: Cost-Effectiveness.*

Evaluations

In 2021, Idaho Power contracted a third party to conduct an impact and process evaluation of the H&CE Program. Idaho Power also asked the evaluator to conduct additional detailed research on many of the measures within the program.

The evaluation found a smooth-running program with high levels of customer satisfaction that delivers sufficient energy efficiency options to customers. The evaluators calculated a realization rate of 96.4%. The evaluators provided recommendations to improve the data collection strategies and the savings calculation process. They also provided recommendations to reduce barriers for contractor participation and improve the reach of the program to customers.

Idaho Power will consider all recommendations made in the report, and any changes to the program will be reported in the *Demand-Side Management 2022 Annual Report.* See the complete analysis report in *Supplement 2: Evaluation*.

2022 Program and Marketing Strategies

Idaho Power will continue to provide program training to existing and prospective contractors to assist them in meeting program requirements and further their product knowledge. Training remains an important part of the program because it creates the opportunity to invite additional contractors into the program, is a refresher for contractors already participating in the program, and helps them increase their customers' participation while improving the contractors' work quality and program compliance.

Idaho Power's primary goals in 2022 are to develop contractors currently in the program while adding new contractors, as program performance is substantially dependent on the contractors' abilities to promote and leverage the measures offered. To meet these goals, the program specialist will frequently interact with contractors in 2022 to discuss the program.

Ground-source heat pumps and central A/C will be reviewed by Idaho Power for inclusion into the program. Factors including market readiness, supply chain availability, customer demand, installer availability, and cost-effectiveness will be assessed. The measures have been

considered in past years but were not added to the program due to less than favorable TRC results. If Idaho Power determines these two measures have satisfactory UCT results, the measures will be added to the program during 2022.

The 2022 marketing strategy will include bill inserts, direct-mail, social media, digital and search advertising, and email marketing to promote individual measures as well as the overall program.

Home Energy Audit

	2021	2020
Participation and Savings		
Participants (homes)	37	97
Energy Savings (kWh)	3,768	31,938
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$70,448	$128,547
Oregon Energy Efficiency Rider	$0	$0
Idaho Power Funds	$0	$1,999
Total Program Costs—All Sources	$70,448	$130,546
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	$2.173	$0.448
Total Resource Levelized Cost ($/kWh)	$2.328	$0.449
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	n/a	n/a
Total Resource Benefit/Cost Ratio	n/a	n/a

Description

Under the Home Energy Audit program, a certified, third-party home performance specialist conducts an in-home energy audit to identify areas of concern and provide specific recommendations to improve the efficiency, comfort, and health of the home. The audit includes a visual inspection of the crawlspace and attic, a health and safety inspection, and a blower door test to identify and locate air leaks. The home performance specialist collects information on types and quantities of appliances and lighting in each home, then determines which available energy efficiency measures are appropriate. Homeowners and/or landlords approve all direct-install measures prior to installation, which could include the following:

- Up to 20 LED lightbulbs
- One high-efficiency showerhead
- Pipe insulation from the water heater to the home wall (approximately 3 feet)
- Tier 2 Advanced Power Strip

The home performance specialist collects energy-use data and records the quantity of measures installed during the audit using specialized software. After the audit, the auditor writes up the findings and recommendations, and the software creates a report for the customer.

To qualify for the Home Energy Audit program, a participant must live in Idaho and be the Idaho Power customer of record for the home. Renters must have prior written permission from the landlord. Single family site-built homes, duplexes, triplexes, and fourplexes qualify, though multifamily homes must have discrete heating units and meters for each unit. Manufactured homes, new construction, or buildings with more than four units do not qualify.

Interested customers fill out an application online. If they do not have access to a computer, or prefer talking directly to a person, Idaho Power accepts applications over the phone. Participants are assigned a home performance specialist based on geographical location to save travel time and expense.

Participating customers pay $99 (all-electric homes) or $149 (other homes: gas, propane, or other fuel sources) for the audit and installation of measures, with the remaining cost covered by the Home Energy Audit program. The difference in cost covers the additional testing necessary for homes that are not all-electric. These types of energy audits normally cost $300 or more, not including the select energy-saving measures, materials, and labor. The retail cost of the materials available to install in each home is approximately $145.

Each year, the quality assurance (QA) goal for the program is to inspect 5% of all audits.

Program Activities

Due to COVID-19 restrictions, Idaho Power suspended in-home audits in mid-March 2020 and was able to resume work in late October 2021. This greatly impacted the number of audits completed and associated savings. During the in-home work suspension, the program remained operational, and the company continued to accept enrollments and contacted customers to explain the delay.

Two home performance specialist companies served the program in 2021 and completed 37 energy audits. House size ranged from 1,000 square feet (ft^2) to 4,864 ft^2, with the average size of 2,341 ft^2. Houses were built from 1910 to 2020, with an average age of 38 years.

Figure 12 depicts the program's reach across Idaho Power's service area, and Figure 13 depicts the space and water heating fuel types. Figure 14 indicates the total quantity of direct-install measures.

Because in-home activity was suspended most of the year, QAs were not performed.

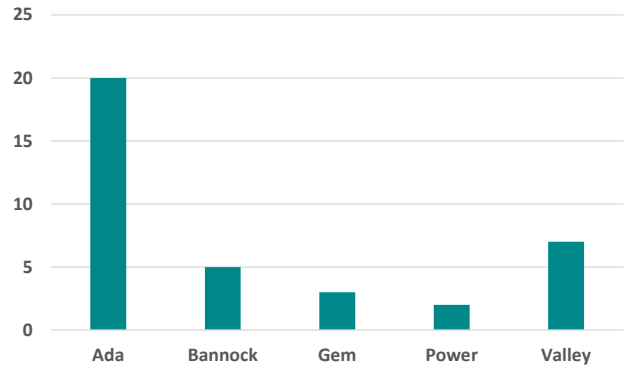

Figure 12. Home Energy Audit summary of participating homes, by county

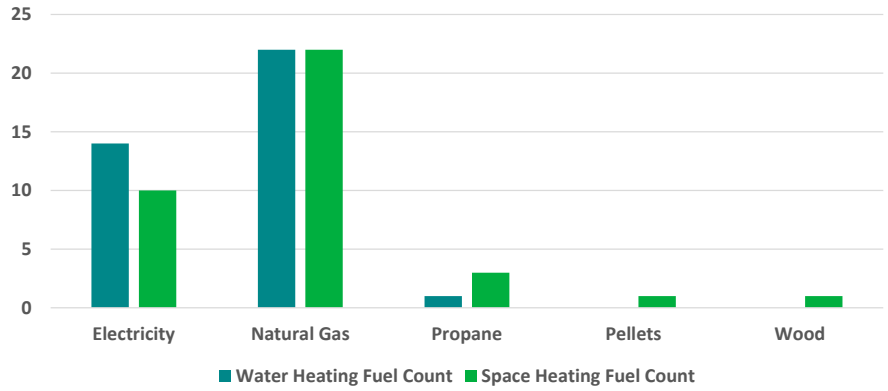

Figure 13. Home Energy Audit summary of space and water heating fuel types

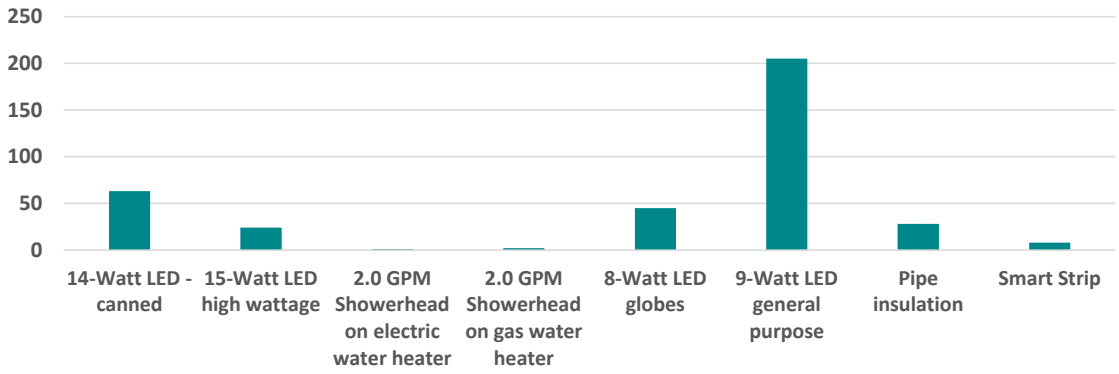

Figure 14. Number of Home Energy Audit measures installed in participating homes

Marketing Activities

Due to COVID-19 restrictions, Idaho Power suspended marketing efforts as of mid-March 2020. Enrollments continued to come in during the suspension of in-home work and were tracked on a waitlist. There were approximately 450 customers on the waitlist when the in-home work resumed.

In March 2021, a bill insert was sent to 24,514 residential customers to help maintain program visibility. A disclaimer was included to let customers know they'd be signing up for the waitlist and contacted when in-home visits resumed.

In November, Idaho Power again collaborated with the University of Idaho's (U of I) Valley County Extension Office to host a virtual energy efficiency workshop for customers in Valley county. The company sent letters and emails and used a Facebook post to invite residents to attend the workshop, which was scheduled in the evening and was well received. Fifteen residents registered for the workshop, and eight attended. The U of I saved the recording so it can be viewed by interested parties in the future and allow the educational program to live on.

Attendees learned how to check their homes for efficiency, how to make some improvements, incentives available through Idaho Power, and how a professional energy assessment could lead to improved energy efficiency. Customers expressed appreciation during the event for being able to have the workshop despite COVID-19 restrictions.

Customers who enrolled in the Home Energy Audit program throughout the year were asked where they heard about the program. Responses included the following: information in the mail, 24.43%; family member or friend, 10.42%; Idaho Power employee, 11.40%; social media, 1.63%; other, 52.12%.

Cost-Effectiveness

One of the goals of the Home Energy Audit program is to increase participants' understanding of how their home uses energy and to encourage their participation in Idaho Power's energy efficiency programs. Because the Home Energy Audit program is primarily an educational and marketing program, the company does not utilize the traditional cost-effectiveness tests.

For the items installed directly in the homes, Idaho Power used the RTF savings for direct-install lightbulbs, which range from 4.68 to 17.59 kWh per year. This was a decrease over the 2020 lightbulb savings, which ranged from 16 to 46 kWh per year depending on lightbulb type and installation location.

In Idaho Power's *Energy Efficiency Potential Study*, it is estimated that pipe wraps save 76 kWh per year. Savings for pipe wrap are counted for homes with electric water heaters.

In 2020, the RTF reviewed the savings associated with low-flow showerheads. Because of the uncertainty around the relationship between the hot water savings and the low-flow showerhead and the increasing efficiency for showerheads in the region due to codes and standards, the RTF deactivated the low-flow showerhead measure. Therefore, there are no savings associated with low-flow showerheads.

While Idaho Power does not calculate a cost-effectiveness ratio for the Home Energy Audit program, the savings benefits and costs associated with direct-install measures have been

included in the sector and portfolio cost-effectiveness. Idaho Power also converted the 76 kWh of pipe wrap savings to 2.59 therms and those gas savings are included in the sector and portfolio cost-effectiveness.

2022 Program and Marketing Strategies

Due to the large number of applicants on the waitlist, the program won't be marketed while contractors work through the list. The waitlist will be worked through as quickly as possible, in the order applications were received. Once most customers have been served, Idaho Power will resume recruiting participants through small batches of targeted direct-mailings, social media posts, advertising, and bill inserts. Additional digital advertising may be considered if the program needs to be strategically promoted in specific regions.

Home Energy Report Program

		2021	2020*
Participation and Savings			
	Participants (homes)	115,153	n/a
	Energy Savings (kWh)**	15,929,074	n/a
	Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source			
	Idaho Energy Efficiency Rider	$970,197	n/a
	Oregon Energy Efficiency Rider	$0	n/a
	Idaho Power Funds	$0	n/a
	Total Program Costs—All Sources	$970,197	n/a
Program Levelized Costs			
	Utility Levelized Cost ($/kWh)	$0.057	n/a
	Total Resource Levelized Cost ($/kWh)	$0.057	n/a
Benefit/Cost Ratios* **			
	Utility Benefit/Cost Ratio	0.57	n/a
	Total Resource Benefit/Cost Ratio	0.62	n/a

* 2020 program savings and costs were part of the Educational Distributions Program. The offering had a UCT and TRC of 0.64 and 0.71, respectively. Broken out separately in 2021.

** 2021 reported savings of 16,767,446 kWh discounted by 5% to account for potential double-counting of savings from other programs.

*** Home Energy Report Program cost-effectiveness also calculated on a program life-cycle basis to account for savings persistence once treatment ends. Program has a life cycle UCT and TRC of 0.87 and 0.96, respectively.

Description

The objective of the HER Program is to encourage customers to engage with their home's electricity use in attempt to produce average annual behavioral savings of 1 to 3%. The program also promotes customer use of online tools and participation in other energy efficiency programs. Prior to 2021, Idaho Power worked with a third-party contractor and operated the HER Program under the Educational Distributions program umbrella. In 2021, the HER Program became a stand-alone energy efficiency program.

Participants receive periodic reports with information about how their homes' energy use compares with similar homes. The *Home Energy Reports* also give a breakdown of household energy use and offer suggestions to help customers change their energy-related behaviors. The program contractor estimates energy savings by completing a statistical comparison of the energy used by customers who receive the reports against the energy used by a control group. Since the savings estimates rely on the integrity of the experimental design, participants in both the treatment (those receiving reports) and the control group are selected through a process of randomization.

Program Activities

In 2021, the HER pilot participants and the expansion participants were integrated into one report delivery schedule—with each participant receiving quarterly reports in the months of February, May, August, and November.

In addition to showing participants how their energy compared relative to similar homes, the February reports delivered energy-saving ideas focused on appliances and lighting. August reports offered either laundry tips or additional cooling tips. The May and November reports were segmented between participants with weather-related usage and those whose energy use was less affected by weather. In May, customers with significant A/C use during the previous summer received tips to reduce upcoming cooling bills. In November, customers with electric space heating received information regarding their previous winter's use along with heating tips.

In August, Idaho Power and the program vendor made a concerted effort to improve *Home Energy Reports* by obtaining and incorporating missing home size information for 14,838 participants. Idaho Power and the program vendor were able to fill some of the gap with information available from public sources. Those participants still missing data received an insert (Figure 15) and a follow-up email requesting this information. The effort resulted in getting accurate home size information to improve the reports and home comparisons for an additional 10,075 participants.

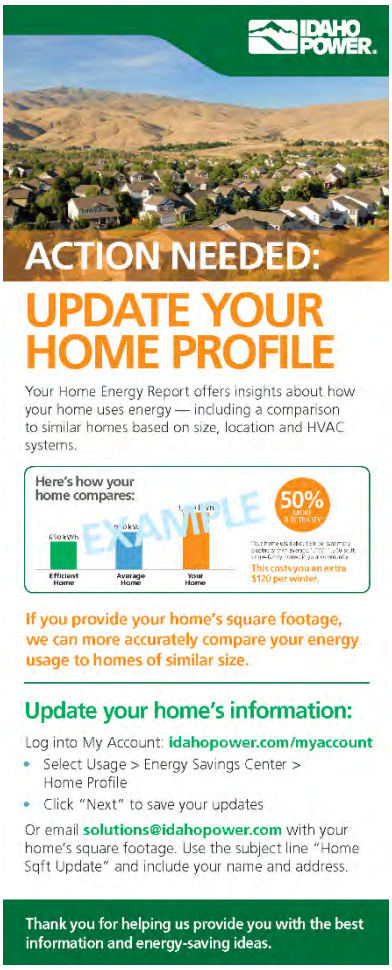

Figure 15. *Home Energy Report* insert requesting more home size information

The HER Program was part of an Educational Distributions program process evaluation in 2020. Now a stand-alone program, Idaho Power responded to these HER-specific recommendations in 2021:

- *DNV recommends that the vendor update its data tracking to reflect additional treatments and conduct tests that include the original and additional treatments.*
- *Before an impact evaluation, the vendor should append dates that households went inactive and/or moved out.*

In response to these recommendations, Idaho Power asked the program vendor to review its data tracking and prepare documentation showing sequential HER activity, including dates households went inactive and/or moved out, from the date a customer was initially assigned as either a treatment or control participant through the present day. Idaho Power contracted with a third-party consultant to review this documentation and confirm it was complete. Additionally, Idaho Power facilitated meetings between the consultant and the program vendor

to confirm the methodology and data sets used to estimate 2021 savings aligned with industry best practice.

- *Ask the vendor to remove old data from its FTP folders and implement a process to remove data from such locations as soon as possible after the data transfer is complete. Then confirm the deletion.* Idaho Power established parameters for retention of data on the vendor's FTP site and worked with the vendor to establish a process to remove the data based on the retention schedule.

In 2021, the savings results for the pilot participants identified as electric heating customers were not statistically significant as stand-alone cohorts; however, these participants did contribute to the overall program savings. The new participants joining the program in 2020 saw increases in both their savings percentage and kWh savings per customer, increasing from 0.56% to 0.98% and from 39.67 kWh to 144.28 kWh, respectively. On average, the combined group of participants used an average of 151.5 fewer kWh per home than their control group counterparts. When viewed in aggregate, the estimated savings for all program participants was about 1% below their respective control groups, for a total of 16,667 MWh. To target customers with higher savings potential, a small group of customers received their last report in February of 2020; however, this group continued to demonstrate persistent savings. With their results included, total 2021 program savings totaled 16,767 MWh. On average, program participants are providing savings at between 36 to 303 kWh annually per home.

Idaho Power's customer solutions advisors responded to 660 HER Program-related phone calls during the year. Given that 445,841 reports were delivered, this represents a call rate of just under 0.15%. The participant-driven opt-out rate in 2021 was 0.17%—significantly lower than the industry average of 1%. Overall attrition in 2021 was 7.82%--down slightly from 9.4% in 2020 (includes opt-outs, move-outs, etc.).

Marketing Activities

Because the HER Program is based on a randomized control trial (RCT) methodology, the reports cannot be requested by customers, therefore the program is not marketed. The periodic reports were, however, used to cross-market Idaho Power's other energy efficiency programs. Care was taken to promote programs and offerings currently available to customers given ongoing safety concerns due to COVID-19. Customers continued to be encouraged to sign up for My Account alerts in 2021.

Cost-Effectiveness

HER savings are calculated each year using measured usage of the customers receiving the reports relative to a statistically similar control group that does not receive the reports. Due to the potential of double-counting savings from other programs, Idaho Power discounts the Home Energy Report Program savings of 16,767,446 kWh by 5% to report savings of

15,929,074 kWh. This percentage will be reviewed as part of the planned 2022 impact evaluation. Based on the reported savings of 15,929 MWh, the UCT and TRC for the program are 0.57 and 0.62, respectively, for 2021.

Due to the continuous nature of the HER program with costs and savings extending over numerous years for the same participants, a program life look at cost-effectiveness is utilized to understand the cost-effectiveness of the program as a whole. The analysis uses 2020 as the start year and assumes the program continues to send reports until the current contract ends in 2023. From this point savings per participant decrease at 20% per year for another three years, where it is assumed the treatment no longer impacts the participants. Total participation also declines at 10% per year, which is the approximate observed annual attrition for the program. The RTF recently proposed guidelines for reviewing cost-effectiveness for behavioral programs. The company has done an initial review of these guidelines and incorporated concepts into the lifetime cost-effectiveness analysis. This lifetime analysis calculates UCT and TRC ratios of 0.87 and 0.96, respectively.

For more detailed information about the cost-effectiveness savings and assumptions, see Supplement 1: *Cost-Effectiveness.*

Customer Satisfaction

In September, Idaho Power invited customers in the treatment group and the control group to participate in a customer satisfaction survey. The purpose of the survey was to evaluate the customer's overall satisfaction with Idaho Power and the efforts taken to reduce electricity use in their home. Customers that were part of the treatment group were asked additional questions regarding the *Home Energy Report* they received.

Idaho Power received 1,069 responses from the treatment group and 505 responses from the control group. Some highlights include the following:

- Nearly 86% of treatment group respondents and over 84% of control group respondents are satisfied with Idaho Power.
- Nearly 85% of treatment group respondents and nearly 86% of control group respondents are motivated to reduce electricity in their home.
- Over 91% of treatment group respondents and nearly 90% of control group respondents have made efforts to reduce electricity use in their home.
- Approximately 66% of treatment group respondents and almost 63% of control group respondents agreed that Idaho Power provides helpful tools to help them save energy.

- Approximately 70% of treatment and control group respondents agreed that Idaho Power helps them save energy by providing useful energy-saving recommendations and programs.
- Approximately 82% of treatment group respondents recalled receiving a *Home Energy Report* from Idaho Power.
- Nearly 76% of treatment group respondents that recalled receiving a *Home Energy Report* read all or most of them with 21% reading some of them.
- Over 92% of respondents that read their *Home Energy Report* agreed that the information presented in their report was easy to understand.
- Nearly 71% of respondents that read their *Home Energy Report* agreed that the recommendations and tips on how to conserve were helpful.

A copy of the survey results is included in *Supplement 2: Evaluation.*

Evaluations

In 2020, Idaho Power contracted a third-party evaluator to conduct a process evaluation for the HER Program alongside the Educational Distributions program evaluation. However, due to some late findings, additional analysis was required to complete the evaluation. The evaluation report for the HER Program was completed in April 2021 and each of the recommendations are addressed in the section above. See the Program Activity section above for specific recommendations and company responses. See *Supplement 2: Evaluation* for the complete report. The company plans to conduct an impact evaluation in 2022, and this evaluation may help inform the company about any needed changes to the program.

2022 Program and Marketing Strategies

Idaho Power plans to continue to deliver *Home Energy Reports* to active program participants on a quarterly schedule with reports arriving in February, May, August, and November. Participants with high A/C use or winter heating will also receive seasonal reports in either May or November, as appropriate. Idaho Power will also evaluate the possibility of segmenting HER participants to provide energy-saving tips related specifically to those with electric water heaters.

Idaho Power is currently upgrading the HER Program software platform which should provide opportunities to enhance the *Home Energy Report* template and/or messaging. As new options become available, the company will actively assess them with an effort toward improving savings and enhancing the customer experience.

Multifamily Energy Savings Program

	2021	2020
Participation and Savings		
Participants (projects [buildings])	0	33 [4]
Energy Savings (kWh)	0	28,041
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$65,525	$83,951
Oregon Energy Efficiency Rider	$3,449	$4,350
Idaho Power Funds	$0	$1,528
Total Program Costs—All Sources	$68,973	$89,829
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	n/a	$0.372
Total Resource Levelized Cost ($/kWh)	n/a	$0.372
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	n/a	0.14
Total Resource Benefit/Cost Ratio	n/a	0.28

Description

The Multifamily Energy Savings Program provides for the direct installation of energy-saving products in multifamily dwellings with electrically heated water in Idaho and Oregon. These energy-saving products are installed by an insured contractor hired by Idaho Power at no cost to the property owner, manager, or tenant. Idaho Power defines a multifamily dwelling as a building consisting of five or more rental units. The products installed are: ENERGY STAR® LED lightbulbs, high-efficiency thermostatic shower valve (TSV) showerheads, kitchen and bathroom faucet aerators, and water heater pipe insulation.

To ensure energy savings and eligibility, Idaho Power pre-approves each building and the contractor who will install the energy efficiency measures. Upon approval, the no-cost, direct installation is scheduled, and a tailored door hanger is placed on tenants' apartments to explain the schedule and process of the installation.

Program Activities

Due to COVID-19 contractor restrictions, and for customer and contractor safety, in-home work remained suspended through November 2021. This resulted in no units being completed and no energy savings claimed in 2021.

In 2021, the company identified a small number of apartment complex owners/managers interested in participating in the program. These customers were placed on a waitlist and

notified they would be contacted once in-home work resumed. Program contractors began contacting those on the waitlist in December 2021 and will continue to do so into 2022.

Marketing Activities

Idaho Power continued to run three alternating, clickable ads on its Landlord/Property Manager Requests web page that linked users to the Multifamily Energy Savings Program web page.

A marketing video placed at the top of the Multifamily Energy Savings Program web page also continued to run in 2021. The video explains the eligibility requirements, the no-cost direct-install measures available to landlords/tenants, the installation process, and the potential for residents to save on their monthly bills and to be more comfortable in their homes. At the end of the video, company contact information is provided.

In January, Idaho Power placed a print ad promoting the program in the *Idaho Business Review's* special *Multifamily Residential* section. The ad featured updated imagery to match the refreshed look of the company's energy efficiency marketing collateral.

Cost-Effectiveness

The program's cost-effectiveness was impacted by the suspension of in-home visits due to COVID-19.

Due to the reduction of savings for the deemed measure options, cost-effectiveness for the program in its current format will be a challenge on an ongoing basis. Previously, the RTF was the source of savings for many of the measures in the program. In 2020, the LED lightbulbs had a deemed savings value of 16.17 to 83.87 kWh per year depending on the type and lumens of the lightbulbs and the location of the lightbulb installation. Based on the RTF version 9.4 lighting workbook, these savings now range between 4.73 to 13.81 kWh. To improve the accuracy of the data being collected, Idaho Power modified the installation worksheets, which will help Idaho Power calculate the lighting savings for each install based on information around the existing lamp and the location of the installation rather than using a deemed savings value from the RTF. However, there are still challenges related to the other direct-install items.

In 2020, the RTF reviewed the savings associated with low-flow showerheads. Because of the uncertainty around the relationship between the hot water savings and the low-flow showerhead and the increasing efficiency for showerheads in the region due to codes and standards, the RTF deactivated the low-flow showerhead measure. Although Idaho Power installs a different showerhead (the integrated 1.75 gallons per minute [gpm] showerhead with the TSV), the RTF workbook was updated to remove the savings associated with the showerhead. The savings for the integrated showerhead with TSV is now solely based on the TSV itself, resulting in a reduction in annual savings from 198 kWh to 50 kWh. Additionally, the RTF reviewed aerator savings in 2021. Like the showerheads, there was uncertainty with the

savings associated with aerators and the RTF deactivated the measure. There will be no savings associated with the aerators in 2022.

Idaho Power has shared these challenges with EEAG and plans to convene a subcommittee in 2022 to discuss the savings assumptions around the program and alternatives to the current direct-install retrofit model. The company will continue to work with EEAG to determine the program's future and ways the company can still serve this population of customers.

2022 Program and Marketing Strategies

Because COVID-19 restrictions were lifted as of December 2021, interested owners/managers will be contacted by both the program manager and installation contractors to revisit the program in those buildings. Residential energy advisors will also be looking for potential projects in their areas.

Idaho Power will resume pursuing energy-efficient direct-installation projects in multifamily dwellings throughout its service area. The company will continue to use informative notifications, pre-installation door hangers, and post-installation informational marketing pieces, as well as survey cards for scheduled projects. The company will also advertise in industry publications to encourage property owner/manager engagement and to increase program visibility.

Oregon Residential Weatherization

	2021	2020
Participation and Savings		
Participants (audits/projects)	0	0
Energy Savings (kWh)	0	0
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$0	$0
Oregon Energy Efficiency Rider	$4,595	$5,313
Idaho Power Funds	$0	$0
Total Program Costs—All Sources	$4,595	$5,313
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	n/a	n/a
Total Resource Levelized Cost ($/kWh)	n/a	n/a
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	n/a	n/a
Total Resource Benefit/Cost Ratio	n/a	n/a

Description

Idaho Power offers free energy audits for electrically heated customer homes within the Oregon service area. This is a program required by Oregon Revised Statute (ORS) 469.633 and has been offered under Oregon Tariff Schedule 78 since 1980. Upon request, an energy audit contractor hired by Idaho Power visits the customer's home to perform a basic energy audit and to analyze it for energy efficiency opportunities. An estimate of costs and savings for recommended energy-efficient measures is given to the customer. Customers may choose either a cash incentive or a 6.5%-interest loan for a portion of the costs for weatherization measures.

Program Activities

Due to COVID-19 restrictions, and for customer and contractor safety, in-home activity remained suspended through late December 2021, which resulted in no program participation.

The nine customers who expressed program interest, seven in 2020 and two in 2021, were contacted by an energy advisor to notify them of in-home activity suspension and to confirm program eligibility. The energy advisor informed qualified customers they would be contacted by the contracted energy auditor when the program was reinstated.

Marketing Activities

In October, Idaho Power sent 10,361 Oregon residential customers an informational brochure about energy audits and home weatherization financing.

Cost-Effectiveness

The Oregon Residential Weatherization program is a statutory program described in Oregon Schedule 78, which includes a cost-effectiveness definition of this program. Pages three and four of Schedule 78 identify the measures determined to be cost-effective and the specified measure life cycles for each. This schedule also includes the cost-effective limit (CEL) for measure lives of seven, 15, 25, and 30 years.

2022 Program and Marketing Strategies

In-home work resumed as of late 2021, and eligible customers on the waiting list will be contacted. Due to staffing shortages in late 2021, the contractor will begin contacting interested customers to schedule in-home audits in January of 2022. Idaho Power will continue to market the program to customers with a bill insert/brochure.

Rebate Advantage

	2021	2020
Participation and Savings		
Participants (participants)	88	116
Energy Savings (kWh)	235,004	366,678
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$164,243	$174,670
Oregon Energy Efficiency Rider	$8,950	$4,897
Idaho Power Funds	$0	$855
Total Program Costs—All Sources	$173,193	$180,422
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	$0.046	$0.031
Total Resource Levelized Cost ($/kWh)	$0.088	$0.075
Benefit/Cost Ratios*		
Utility Benefit/Cost Ratio	1.13	1.69
Total Resource Benefit/Cost Ratio	0.66	0.98

*2020 cost-effectiveness ratios include evaluation expenses. If evaluation expenses were removed from the program's cost-effectiveness, the UCT and TRC would be 1.73 and 0.99, respectively.

Description

Initiated in 2003, the Rebate Advantage program helps Idaho Power customers in Idaho and Oregon with the initial costs associated with purchasing new, energy-efficient, ENERGY STAR® qualified manufactured homes. This enables the homebuyer to enjoy the long-term benefit of lower electric bills and greater comfort. The program also provides an incentive to the sales consultants to encourage more sales of ENERGY STAR® qualified homes and more discussion of energy efficiency with their customers during the sales process.

In addition to offering financial incentives, the Rebate Advantage program educates manufactured home buyers and retailers about the benefits of owning energy-efficient models. The Northwest Energy-Efficient Manufactured Home Program™ (NEEM), a consortium of manufacturers and state energy offices in the Northwest, establishes quality control (QC) and energy efficiency specifications for qualified manufactured homes and tracks their production and on-site performance. NEEM adds the classification Eco-Rated™ for homes produced by factories that have demonstrated a strong commitment to minimizing environmental impacts from the construction process.

In 2019, NEEM created the most stringent manufactured home energy standard in the country, the ENERGY STAR® with NEEM 2.0 specification, which was later renamed the ENERGY STAR®

with NEEM+ certification. NEEM+ standards are engineered to save approximately 30% more energy than ENERGY STAR® standards. As a result, NEEM+ delivers the highest possible energy savings and the highest level of overall comfort. These homes are built to specifications tailored to the Northwest climate.

Program Activities

In 2021, for each home sold under this program, the residential customer incentive was $1,000 and the sales staff incentive was $200. Idaho Power paid 88 incentives on new manufactured homes, which accounted for 235,004 annual kWh savings. This included 84 homes sited in Idaho and four sited in Oregon. Of the 88 homes in the program, 13 were NEEM+, 72 were ENERGY STAR, and three were Eco-Rated.

Marketing Activities

Idaho Power continued to support manufactured home dealerships by providing them with updated program marketing collateral.

In May and November, Idaho Power promoted the Rebate Advantage program with a bill insert sent to 302,353 and 296,992 customers, respectively. The insert had information about the potential energy and cost savings and referred customers to the program website.

In July, the company ran programmatic display ads that garnered 727,595 impressions and 903 clicks through to the website.

Cost-Effectiveness

In May 2020, the RTF updated savings for new construction manufactured homes. First, the RTF removed the savings designation for Eco-Rated™ certified homes. The energy savings associated with these homes are the same as those built to ENERGY STAR standards; therefore, the RTF voted to combine the savings for Eco-Rated and ENERGY STAR manufactured homes. Second, the RTF removed the assumptions related to non-energy benefits (NEB). The previous assumptions were based on the reduction of supplemental fuel use, which they found no evidence of occurring. Finally, when other assumptions around heating system type, lighting, and other appliances were updated, the average annual savings per home declined by 10%. Idaho Power used RTF workbook version 4.2 in 2021.

The UCT and TRC for the program are 1.13 and 0.66, respectively.

For detailed information for all measures within the Rebate Advantage program, see *Supplement 1: Cost-Effectiveness*.

2022 Program and Marketing Strategies

Idaho Power plans to address the cost-effectiveness of adding an incentive tier for the ENERGY STAR with NEEM+ certification homes and review the idea with EEAG. If cost effective, Idaho Power believes this could help promote the sales of these higher efficiency homes.

Idaho Power will continue to support manufactured home dealers by providing them with program materials. The company will also distribute a bill insert to Idaho and Oregon customers and explore digital advertising to promote the program to potential manufactured home buyers.

Residential New Construction Program

	2021	2020
Participation and Savings		
Participants (participants)	90	248
Energy Savings (kWh)	389,748	649,522
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$246,245	$471,542
Oregon Energy Efficiency Rider*	$1,356	$0
Idaho Power Funds	$0	$1,962
Total Program Costs—All Sources	$247,600	$473,504
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	$0.039	$0.044
Total Resource Levelized Cost ($/kWh)	$0.082	$0.081
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	1.64	1.54
Total Resource Benefit/Cost Ratio	0.99	1.20

* Oregon activity of $1,356 was reversed and charged to the Idaho rider in the first quarter of 2022.

Description

The Residential New Construction Program launched in March 2018 as a pilot, replacing the ENERGY STAR® Homes Northwest Program, and transitioned to a regular program in 2021. The Residential New Construction Program offers builders a cash incentive to build energy-efficient, single-family, all-electric homes that use heat pump technology in Idaho Power's Idaho service area. These homes must meet strict requirements that make them 10%, 15%, or 20% more energy efficient than homes built to standard state energy code.

The RTF and NEEA have created specific modeling requirements and program guidelines to ensure the program provides reliable energy savings for utilities across the northwest. These homes feature high performance HVAC systems, high-efficiency windows, increased insulation values, and tighter building shells to improve comfort and save energy. Idaho Power claims energy savings based on each home's individual modeled savings.

Builders must contract with a Residential Energy Services Network (RESNET)-certified rater to ensure the home design will meet program qualifications. The rater will work with the builder from the design stages through project completion; perform the required energy modeling (REM) using REM/Rate modeling software; perform site inspections and tests; and enter, maintain, and submit all required technical documentation in the REM/Rate modeling software and the NEEA-maintained AXIS database. This data is used to determine the energy savings and the percent above code information needed to certify the home.

Program Activities

Participating residential builders who built homes at least 10% above the standard state energy code, as determined by the REM/Rate energy modeling software and AXIS database output, were incentivized as follows:

- 10 to 14.99% above code: $1,200 incentive
- 15 to 19.99% above code: $1,500 incentive
- 20% or more above code: $2,000 incentive

In 2021, the company paid incentives for 90 newly constructed energy-efficient homes in Idaho, and the homes accounted for 389,748 kWh of energy savings.

On January 1, 2021, the Idaho energy code increased from the 2012 IECC up to the 2018 IECC (with state-specific amendments). This increase makes it more difficult for builders to achieve the program's incentive tier levels.

To align with the new Idaho state energy code and updates to the regional Performance Path programs prescribed by the RTF, Idaho Power's Residential New Construction Program implemented the following updates:

- August 8, 2021 was the last day for raters to submit homes in AXIS to be certified under alignment with the previous state energy code and the Idaho Power Utility Incentive, V2 program.
- August 9, 2021 was the first day for raters to submit homes in AXIS to be certified in alignment with the new/current energy code and the updated Idaho Power Utility Incentive, V3 Program.

Early in 2021, NEEA removed their support on the region's residential new construction programs due to some markets in the Northwest being determined to be transformed. NEEA program support included both file and field QA as well as new rater training/on-boarding and current rater technical problems. On May 24, 2021, Idaho Power signed a contract with Washington State University Energy Program to perform both file and field QA services on home energy ratings performed by the program raters. The university's contract also includes new rater training/on-boarding as well as working with current rater technical problems/issues.

Marketing Activities

Due to COVID-19 restrictions, the company was unable to participate in in-person Building Contractors Association (BCA) events, including the Idaho (IBCA) Winter Board Meeting, the IBCA Fall Board Meeting, and regional BCA Builders' Expos as has been done consistently in past years.

Idaho Power supported 2021 Parade of Homes events with full-page ads in the *Parade of Homes* magazines of the following BCAs: The Magic Valley Builders Association (MVBA), the Building Contractors Association of Southwestern Idaho (BCASWI), the Snake River Valley Building Contractors Association (SRVBCA), and the Building Contractors Association of Southeast Idaho (BCASEI). A print ad appeared in the March issue of *Boise Lifestyle* and *Meridian Lifestyle* magazines that highlighted top home builders and residential real estate. A digital app ad and company listing was also included as part of the advertising package with the MVBA.

The program brochure was included as part of a direct-mail package sent to 524 contractors in July and November touting the benefits of all-electric construction. The brochure was also left at the City of Boise permitting office as a hard copy handout.

The company sent a bill insert to 302,353 Idaho customers in May to promote the program.

The program was featured in the August edition of *Connections,* Idaho Power's monthly newsletter for customers; the article highlighted NeighborWorks Boise® and their successful participation in the program.

A Certificate of Completion that brands homes certified within the program as, "Certified Idaho Power Efficient Homes" was created in 2021 and is being sent to builders with their incentive checks. The brand gives builders a name for the energy efficient product they are building, and the certificate is a piece they can leave with the homeowner to show they have purchased a well-built, efficient home.

A sticker using the same "Certified Idaho Power Efficient Home" branding was also developed to use as a leave-behind at homes that participated in the program. The sticker is an easily removable decal and allows the rater to easily write in the home percentage above state code and the kWh savings. It's meant to be left on the HVAC system—similar to stickers HVAC companies leave behind.

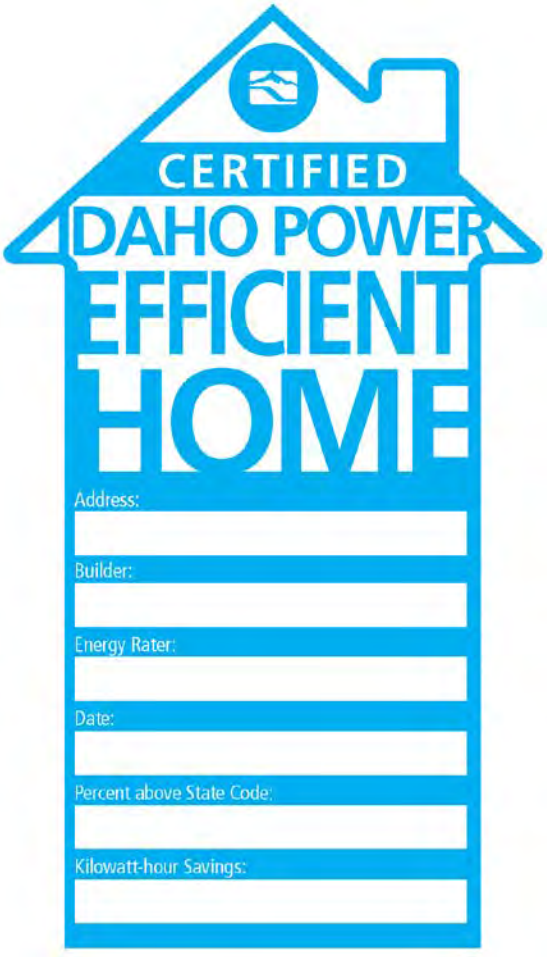

Figure 16. Certified Idaho Power Efficient Home sticker

Cost-Effectiveness

The savings for the 90 energy-modeled homes average approximately 4,331 kWh per home depending on which efficiency upgrades were included, an increase over the average energy-modeled savings of 2,619 kWh per home in 2020. This increase is largely due to two factors. First, a larger percentage of the homes built in 2021 (~63%) were built 20% or more above code, relative to homes built in 2020 (~25%). Second, a larger percentage of the homes built in 2021 (~33%) were detached single-family homes, relative to homes built in 2020 (~13%). Single-family homes tend to have larger savings when compared to attached townhomes and condos. Additionally, several large projects with over 10,000 kWh of savings were completed in 2021. If those large homes are excluded, the average energy-modeled savings is approximately 3,674 kWh.

While savings are custom calculated for each of the 90 modeled homes, the incremental costs over a code-built home are difficult to determine. The RTF's single-family new construction workbook was used as a proxy for the incremental costs and NEBs.

The UCT and TRC ratios for the program are 1.64 and 0.99, respectively.

For more detailed information about the cost-effectiveness savings and assumptions, see *Supplement 1: Cost-Effectiveness*.

2022 Program and Marketing Strategies

Idaho Power plans to continue to promote this program to Idaho builders and new home buyers. These marketing efforts include ads in *Parade of Homes* magazines for the BCASWI, SRVBCA, MVBA, and the BCASEI. A bill insert is planned for spring 2022. The company also plans to continue supporting the general events and activities of the IBCA and its local affiliates. Social media and other advertising will be considered based on past effectiveness.

Shade Tree Project

	2021	2020
Participation and Savings		
Participants (trees)	2,970	0
Energy Savings (kWh)*	44,173	52,662
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$184,680	$27,652
Oregon Energy Efficiency Rider	$0	$0
Idaho Power Funds	$0	$838
Total Program Costs—All Sources	$184,680	$28,490
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	$0.269	n/a
Total Resource Levelized Cost ($/kWh)	$0.269	n/a
Benefit/Cost Ratios**		
Utility Benefit/Cost Ratio	1.07	n/a
Total Resource Benefit/Cost Ratio	1.21	n/a

* Incremental savings for trees planted between 2013–2017 not claimed in previous years.

** No trees distributed in 2020 due to COVID-19 restrictions. Cost-effectiveness ratios were not calculated.

Description

Idaho Power's Shade Tree Project operates in a small geographic area each spring and fall, offering no-cost shade trees to Idaho residential customers. Participants enroll using the online Energy-Saving Trees tool and pick up their tree at specific events. Unclaimed trees are donated to cities, schools, and other non-profit organizations.

Using the online enrollment tool, participants locate their home on a map, select from a list of available trees, and evaluate the potential energy savings associated with planting in different locations. During enrollment, participants learn how trees planted to the west and east save more energy over time than trees planted to the south and north.

Ensuring the tree is planted properly helps it grow to provide maximum energy savings. At the tree pick-up events, participants receive additional education on where to plant trees for maximum energy savings and other tree care guidance from local experts. These local specialists include city arborists from participating municipalities, Idaho Power utility arborists, county master gardeners, and College of Southern Idaho (CSI) horticulture students.

Each fall, Idaho Power sends participants from the previous two offerings a newsletter filled with reminders on proper tree care and links to resources, such as tree care classes and educational opportunities in the region. This newsletter was developed after the 2015 field audits identified common customer tree care questions and concerns.

According to the DOE, a well-placed shade tree can reduce energy used for summer cooling by 15% or more. Utility programs throughout the country report high customer satisfaction with shade tree programs and an enhanced public image for the utility related to sustainability and environmental stewardship. Other utilities report energy savings between 40 kWh per year (coastal climate, San Diego) and over 200 kWh per year (Phoenix) per tree planted.

To be successful, trees should be planted to maximize energy savings and ensure survivability. Two technological developments in urban forestry—the state sponsored Treasure Valley Urban Tree Canopy Assessment and the Arbor Day Foundation's Energy-Saving Trees tool—provide Idaho Power with the information to facilitate a shade tree project.

Program Activities

Due to COVID-19 restrictions and to ensure the safety of customers, employees, and volunteers, the decision was made to partner with the Arbor Day Foundation for the 2021 events and have the trees shipped directly to customer homes rather than holding in-person pick-up events. Shipped delivery was used for both the spring and fall events. The spring event was made available to residential customers that reside in the Treasure Valley while the fall event was offered to customers who live in the Magic Valley, and later opened to customers in the Wood River Valley. The trees came from a grower selected by the Arbor Day Foundation.

Both events had 1,500 trees available. Due to the mail delivery method and added shipping fees, the trees available in 2021 were one-gallon trees, as opposed to the three- to five-gallon trees that were distributed through the traditional in-person events. The smaller trees resulted in some decreased customer satisfaction. In 2019, 93% of respondents strongly agreed they were satisfied with their overall experience with the program, while only 66% of respondents who participated in the 2021 offering strongly agreed they were satisfied with their overall experience in the program.

Figure 17. Customer tweet about the Shade Tree Project

Idaho Power continues to track the program data in the DSM database. The database is also used to screen applicants during enrollment to determine whether participants meet the eligibility requirements for the project, such as residential status within the eligible counties. Participation in the program remains two trees per address for the life of the program.

Marketing Activities

Due to the cancellation of the 2020 Shade Tree events, Idaho Power had compiled a large list of customers who had submitted their information to be notified of the next Shade Tree offering in their area. Customers on this list were notified for both the spring and fall events (Figure 18).

Wood River and Magic Valley Residents Can Enroll Now for Fall 2021 Shade Tree Project

Idaho Power's Shade Tree Project encourages homeowners to plant shade trees to help shade their home, reduce energy use by up to 15% and improve local air and water quality.

For a limited time, Idaho Power residential customers in Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka and Twin Falls counties are eligible to receive up to two free shade trees.

Figure 18. Shade Tree Project email to Wood River Valley and Magic Valley residents

Due to slow enrollments during the fall campaign, two additional emails were sent to Magic Valley and Wood River Valley customers who had homes 20 years old or newer. In addition to a boosted Facebook post informing Wood River and Magic Valley customers of the open program enrollment (Figure 19), a *News Briefs* was also sent to regional news outlets to spread the word about the available trees.

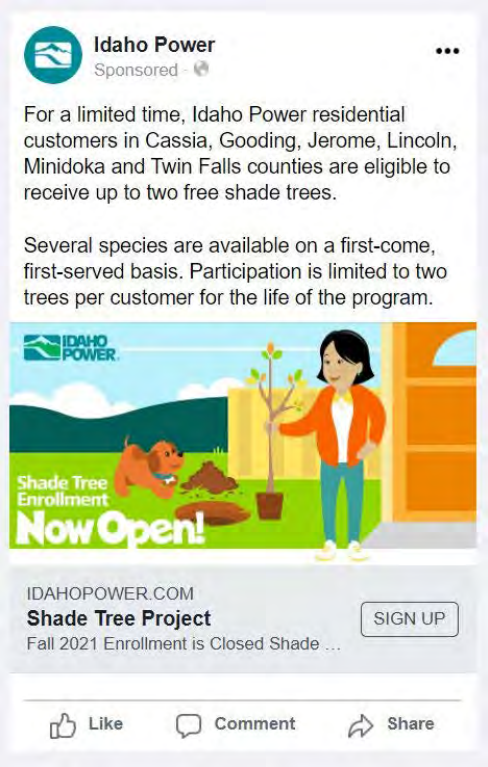

Figure 19. Boosted Facebook post about Shade Tree Project's fall enrollment

Since in-person events were cancelled and participants could not speak with a tree expert to learn how to properly plant and maintain their trees, emails were sent to customers with tree maintenance tips and a copy of a *Tree Planting Guide*. For the spring event, an email was sent once the trees were shipped with planting instructions as well as a follow-up email that was sent a few weeks letter with tips on how to maintain their new trees. For the fall event, the Arbor Day Foundation sent out the initial "how to plant your tree" email and Idaho Power sent a follow-up email on how to take care of the trees.

Cost-Effectiveness

For the Shade Tree Project, Idaho Power utilizes the Arbor Day Foundation's software, which calculates energy savings and other non-energy impacts based on tree species and orientation/distance from the home. This software tool, i-Tree, estimates these benefits for years 5, 10, 15, and 20 after the tree planting year. However, the savings estimates assume each tree is planted as planned and does not consider survivorship. Idaho Power contracted with a third party to develop a model to calculate average values per tree using the tool data and calculated a realization rate based on the survival rate. Unlike traditional energy savings measures in which the annual savings remain flat throughout the measure life and only first-year savings are reported, the savings for trees grow as the tree grows when using the

realization rate based on survival. The calculator was used to estimate the 44,173 kWh of incremental claimable savings in 2021 for the trees planted between 2013 and 2017.

The cost-effectiveness for the program is based on the modeled savings for the trees distributed in 2021 and costs incurred during 2021. Because the trees were delivered through the mail, it is estimated the trees are approximately one year younger than the trees distributed at the in-person events, which the calculator was based on. To adjust for this, the year the company could begin claiming savings was pushed out a year, thus trees distributed in 2021 will begin saving 43,086 kWh in 2026. The cost-effectiveness calculations also include a net-to-gross (NTG) factor of 124%, which accounts for the spillover associated with the trees shading a neighboring home as well as various non-energy impacts related to the improved air quality, avoided stormwater runoff, and winter heating detriment. Finally, the cost-effectiveness calculations were updated to extend the program life from 30 to 40 years. While the i-Tree software only estimates savings out to 20 years, the contractor worked closely with the creators of the software to produce saving estimates out to 99 years. The contractor recommended that Idaho Power use a 40-year measure life. It is estimated that these trees will save 126,684 kWh in 2061. Based on the model, the project has a UCT of 1.07 and a TRC ratio of 1.21.

For more detailed information about the cost-effectiveness savings and assumptions, see *Supplement 1: Cost-Effectiveness.*

Customer Satisfaction

After each offering, a survey was emailed to participants. The survey asked questions related to the program marketing, tree-planting education, and participation experience with the enrollment and tree delivery processes. Results are compared, offering to offering, to look for trends to ensure the program processes are still working to identify opportunities for improvement. Because this was Idaho Power's first year shipping the trees directly to customers, Idaho Power is also comparing customer satisfaction results from participants who picked up trees at in-person events in the past. Data is also collected about where and when the participant planted the tree. This data will be used by Idaho Power to refine energy-saving estimates.

In total, the survey was sent to 1,568 Shade Tree Project participants and received 570 responses for a response rate of 36%. Participants were asked how much they would agree or disagree that they would recommend the project to a friend. Nearly 76% of respondents said they "strongly agree," and nearly 13% said they "somewhat agree." Participants were asked how much they would agree or disagree that they were satisfied with the overall experience with the Shade Tree Project. Nearly 66% of respondents indicated they "strongly agree," and

over 21% "somewhat agree" they were satisfied. View the complete survey results in *Supplement 2: Evaluation*.

2022 Program and Marketing Strategies

Idaho Power plans to continue the Shade Tree Project in 2022, with the spring offering to customers in the Treasure Valley and the fall event to customers in the Magic Valley. The enrollment process will remain the same, using the Arbor Day Foundation enrollment tool. For customers who don't feel comfortable or able to attend an in-person pick-up event, the company will partner with the Arbor Day Foundation to deliver one-gallon trees to their homes. Additionally, in-person events will resume where three- to five-gallon trees will be available for customer pick up. Safety protocols will be in place to ensure these events do not contribute to the spread of COVID-19.

Idaho Power will continue to market the program through direct-mail, focusing on customers identified as living in newly constructed homes and those identified using the Urban Tree Canopy Assessment tool in the Treasure Valley. The program will be promoted in the April 2022 *Home Energy Report*. In addition, Idaho Power maintains a wait list of customers who were unable to enroll because previous offerings were full. Idaho Power will reach out to these customers through email for the 2022 offerings. Idaho Power will continue to leverage allied interest groups and use social media and boosted Facebook posts if enrollment response rates decline.

Weatherization Assistance for Qualified Customers

		2021*	2020*
Participation and Savings			
	Participants (homes/non-profits)	162	115
	Energy Savings (kWh)	291,105	218,611
	Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source			
	Idaho Energy Efficiency Rider	$0	$0
	Oregon Energy Efficiency Rider	$0	$0
	Idaho Power Funds	$1,186,839	$1,385,577
	Total Program Costs—All Sources	$1,186,839	$1,385,577
Program Levelized Costs			
	Utility Levelized Cost ($/kWh)	$0.254	$0.244
	Total Resource Levelized Cost ($/kWh)	$0.374	$0.353
Benefit/Cost Ratios			
	Utility Benefit/Cost Ratio	0.19	0.20
	Total Resource Benefit/Cost Ratio	0.31	0.33

* 2020 and 2021 Total Program Costs include accounting accruals and reversals associated with unspent dollars carried over into the next year. These accruals and reversals have been removed from the cost-effectiveness and levelized cost calculations.

Description

The WAQC program provides financial assistance to regional CAP agencies in Idaho Power's service area. This assistance helps fund weatherization costs of electrically heated homes occupied by qualified customers who have limited incomes. Weatherization improvements enable residents to maintain a more comfortable, safe, and energy-efficient home while reducing their monthly electricity consumption and are available at no cost to qualified customers who own or rent their homes. These customers also receive educational materials and ideas on using energy wisely in their homes. Local CAP agencies determine participant eligibility according to federal and state guidelines. The WAQC program also provides limited funds to weatherize buildings occupied by non-profit organizations that serve primarily special-needs populations, regardless of heating source, with priority given to electrically heated buildings.

In 1989, Idaho Power began offering weatherization assistance in conjunction with the State of Idaho Weatherization Assistance Program (WAP). In Oregon, Idaho Power offers weatherization assistance in conjunction with the State of Oregon WAP. This allows CAP agencies to combine Idaho Power funds with federal weatherization funds to serve more customers with special needs in electrically heated homes.

Idaho Power has an agreement with each CAP agency in its service area for the WAQC program that specifies the funding allotment, billing requirements, and program guidelines. Currently,

Idaho Power oversees the program in Idaho through five regional CAP agencies: Eastern Idaho Community Action Partnership (EICAP), El Ada Community Action Partnership (EL ADA), Metro Community Services (Metro Community), South Central Community Action Partnership (SCCAP), and Southeastern Idaho Community Action Agency (SEICAA). In Oregon, Community Connection of Northeast Oregon, Inc. (CCNO), and Community in Action (CINA) provide weatherization services for qualified customers.

The Idaho Department of Health and Welfare (IDHW) uses the DOE-approved energy audit program (EA5) for the Idaho WAP and, therefore, the Idaho CAP agencies use the EA5.

Annually, Idaho Power verifies a portion of the homes weatherized under the WAQC program. This is done through two methods. The first method uses Idaho's and Oregon's state monitoring processes for weatherized homes. The state hires the quality-control inspector, who ensures measures were installed to DOE and state WAP specifications. Utility representatives, weatherization personnel from the CAP agencies, CAPAI, and a Building Performance Institute (BPI)-certified QC inspector review homes weatherized by each of the CAP agencies.

For the second method, Idaho Power contracts with two companies that employ building performance specialists to verify the installed measures. After verification, any required follow-up is done by CAP agency personnel.

Idaho Power reports the activities related to the WAQC program as set forth below in compliance with IPUC Order No. 29505, as updated in Case No. IPC-E-16-30, Order No. 33702 and consolidates the WAQC Annual Report with Idaho Power's *Demand-Side Management Annual Report* each year.

Program Activities

Weatherized Homes and Non-Profit Buildings by County

In 2021, Idaho Power made $1,861,402 available to Idaho CAP agencies. Of the funds provided, $990,416 were paid to Idaho CAP agencies, while $870,985 were accrued for future funding. This relatively large carryover was caused by COVID-19 in-home activity restrictions, supply chain limitations, and labor shortages limiting the number of homes CAP agencies weatherized. Of the funds paid in 2021, $900,379 directly funded audits, energy efficiency measures, and health and safety measures for qualified customers' homes (production costs) in Idaho, and $90,038 funded administration costs to Idaho CAP agencies for those homes weatherized.

In 2021, Idaho Power funds provided for the weatherization of 161 homes in Idaho, one in Oregon, and no non-profit buildings in Idaho. Table 12 shows each CAP agency, the number of homes weatherized, production costs, the average cost per home, administration payments, and total payments per county made by Idaho Power.

Table 12. WAQC activities and Idaho Power expenditures by agency and county in 2021

Agency/County	Number of Homes	Production Cost	Average Cost	Administration Payment to Agency	Total Payment
Idaho Homes					
EICAP					
Lemhi	0	$ 0	$ 0	$ 0	$ 0
Agency Total	**0**	**$ 0**	**$ 0**	**$ 0**	**$ 0**
EL ADA					
Ada	64	399,820	6,247	39,982	439,802
Elmore	13	89,251	6,865	8,925	98,176
Owyhee	15	76,415	5,094	7,641	84,056
Agency Total	**92**	**$ 565,485**	**$**	**$ 56,549**	**$ 622,034**
Metro Community Services					
Ada	1	9,723	9,723	972	10,695
Boise	1	11,421	11,421	1,142	12,563
Canyon	20	125,075	6,254	12,507	137,582
Gem	6	39,697	6,616	3,970	43,667
Payette	1	8,659	8,659	866	9,525
Valley	2	10,650	5,325	1,065	11,715
Agency Total	**31**	**$ 205,225**	**$**	**$ 20,522**	**$ 225,747**
SCCAP					
Blaine	3	15,107	5,036	1,511	16,617
Camas	1	5,216	5,216	522	5,737
Gooding	2	3,096	1,548	310	3,405
Jerome	2	14,905	7,452	1,490	16,395
Twin Falls	8	29,150	3,644	2,915	32,065
Agency Total	**16**	**$ 67,473**	**$**	**$ 6,747**	**$ 74,221**
SEICAA					
Bannock	9	24,721	2,747	2,472	27,193
Bingham	10	28,660	2,866	2,866	31,526
Power	3	8,814	2,938	881	9,696
Agency Total	**22**	**$ 62,195**	**$**	**$ 6,220**	**$ 68,415**
Total Idaho Homes	**161**	**$ 900,379**	**$**	**$ 90,038**	**$ 990,416**
Non-Profit Buildings					
Total Non-Profit Buildings	**0**	**$ 0**	**$ 0**	**$ 0**	**$ 0**
Oregon Homes					
CCNO—Baker	0	0	0	0	0
Agency Total	**0**	**0**	**0**	**$ 0**	**$ 0**
CINA—Malheur	1	4,923	4,923	492	5,415
Agency Total	**1**	**$ 4,923**	**$**	**$ 492**	**$ 5,415**
Total Oregon Homes	**1**	**$ 4,923**	**$**	**$ 492**	**$ 5,415**
Total Program	**162**	**$ 905,302**	**$**	**$ 90,530**	**$ 995,831**

Note: Dollars are rounded.

The base funding for Idaho CAP agencies is $1,212,534 annually, which does not include carryover from the previous year. Idaho Power's agreements with CAP agencies include a provision that identifies a maximum annual average cost per home up to a dollar amount specified in the agreement between each CAP agency and Idaho Power. The intent of the maximum annual average cost allows the CAP agency flexibility to service some homes with greater or fewer weatherization needs. It also provides a monitoring tool for Idaho Power to forecast year-end outcomes. The average cost per home weatherized is calculated by dividing the total annual Idaho Power production cost of homes weatherized by the total number of homes weatherized that the CAP agencies billed to Idaho Power during the year. The maximum annual average cost per home in the 2021 agreement was $6,000. In 2021, Idaho CAP agencies had a combined average cost per home weatherized of $5,592.

CAP agency administration fees are equal to 10% of Idaho Power's per-job production costs. The average administration cost paid to agencies per Idaho home weatherized in 2021 was $559. Not included in this report's tables are additional Idaho Power staff labor, marketing, and support costs for the WAQC program totaling just over $69,400 for 2021. These expenses were in addition to the WAQC program funding requirements in Idaho specified in IPUC Order No. 29505.

In compliance with IPUC Order No. 29505, WAQC program funds are tracked separately, with unspent funds carried over and made available to Idaho CAP agencies in the following year. In 2021, $648,868 in unspent funds from 2020 were made available for expenditures in Idaho. Table 13 details the funding base and available funds from 2020, and the total amount of 2021 spending.

Table 13. WAQC base funding and funds made available in 2021

Agency	2021 Base	Available Funds from 2020	Total 2021 Allotment	2021 Spending
Idaho				
EICAP	$ 12,788	$ 12,788	$ 25,576	$ 0
EL ADA	568,479	141,524	710,003	622,034
Metro Community Services	302,259	141,029	443,288	225,747
SCCAP	167,405	124,150	291,555	74,221
SEICAA	111,603	149,986	261,589	68,415
Non-profit buildings	50,000	79,391	129,391	0
Idaho Total	**$ 1,212,534**	**$ 648,868**	**$ 1,861,402**	**$ 990,416**
Oregon				
CCNO	$ 6,750	$ 6,750	$ 13,500	$ 0
CINA	38,250	19,125	57,375	5,415
Oregon Total	**$ 45,000**	**$ 25,875**	**$ 70,875**	**$ 5,415**

Note: Dollars are rounded.

To help keep weatherization crews and customers safe from exposure to COVID-19, CAP agencies suspended weatherization activities for Idaho Power's WAQC program in March 2020, and most resumed work starting in May 2020. In 2021, Idaho Power allowed CAP agencies to leverage funding of their state WAP jobs with Idaho Power funds. However, home verification contractors continued the temporary suspension from 2020 and no verifications were made to customer homes through Idaho Power's two home verifiers in 2021.

The DOE also had CAP agency Weatherization follow Centers for Disease Control and Prevention (CDC) and DOE COVID-19 guidelines. Various CAP agencies performed certain weatherization activities under CDC and DOE guidelines throughout 2021. Because weatherization personnel provided services for the state WAPs between March and December, Idaho Power allowed CAP agencies within its service area to leverage state and federal funding along with its funding.

Because of COVID-19 restrictions, supply chain issues, and labor shortages, various weatherization department's production schedules were lower than normal, and less Idaho Power funding was spent in 2021. Unspent funding will be carried over to 2022.

Weatherization Measures Installed

Table 14 details home counts for which Idaho Power paid all or a portion of each measure's cost during 2021. The home counts column shows the number of times any percentage of that measure was billed to Idaho Power during the year. If totaled, measure counts would be higher than total homes weatherized because the number of measures installed in each home varies.

WAQC and other state WAPs nationwide are whole-house programs that offer several measures that have costs but do not necessarily save energy, or for which the savings cannot be measured. Included in this category are health and safety measures and home energy audits. Health and safety measures are necessary to ensure weatherization activities do not cause unsafe situations in a customer's home or compromise a home's existing indoor air quality (IAQ). Idaho Power contributes funding for the installation of items that do not save energy, such as smoke and carbon monoxide detectors, vapor barriers, electric panel upgrades, floor registers and boots, kitchen range fans, and venting of bath and laundry areas. While these items increase health, safety, and comfort and are required for certain energy-saving measures to work properly, they increase costs of the job.

Table 14. WAQC summary of measures installed in 2021

	Counts		Production Costs
Idaho Homes			
Audit	120	$	13,087
Ceiling Insulation	45		41,643
CFLs/LED Bulbs	28		1,325
Doors	90		74,602
Ducts	21		11,091
Floor Insulation	28		32,646
Furnace Repair	4		1,495
Furnace Replacement	106		468,008
Health and Safety	25		23,993
Infiltration	105		17,279
Other	1		51
Pipes	4		347
Vents	1		49
Wall Insulation	5		251
Water Heater	1		1,514
Windows	100		212,997
Total Idaho Homes		**$**	**900,379**
Oregon Homes			4,117
Floor Insulation	1		779
Health and Safety	1		27
Pipes	1		4,923
Total Oregon Homes			4,117
Idaho Non-Profits	0		0
Total Idaho Non-Profit Measures	**0**	**$**	**0**

Note: Dollars are rounded.

Marketing Activities

Information about WAQC is available in a brochure (English and Spanish) and on the Income Qualified Customers page of Idaho Power's website. The CAP agencies promote the program and maintain a continual waiting list for interested customers.

Cost-Effectiveness

In 2021, WAQC program cost-effectiveness was 0.19 from the UCT perspective and 0.31 from the TRC perspective.

While final cost-effectiveness is calculated based on measured consumption data, cost-effectiveness screening begins during the initial contacts between CAP agency weatherization staff and the customer. In customer homes, the agency weatherization auditor uses the EA5 to conduct the initial audit of the home. The EA5 compares the efficiency of the

home prior to weatherization to the efficiency after the proposed improvements and calculates the value of the efficiency change into a savings-to-investment ratio (SIR). The output of the SIR is similar to the PCT ratio. If the EA5 computes an SIR of 1.0 or higher, the CAP agency is authorized to complete the proposed measures. The weatherization manager can split individual measure costs between Idaho Power and other funding sources with a maximum charge of 85% of total production costs to Idaho Power. Using the audit tool to pre-screen projects ensures each weatherization project will result in energy savings.

The 2021 cost-effectiveness analysis continues to incorporate the following directives from IPUC Order No. 32788:

- Applying a 100% NTG value to reflect the likelihood that WAQC weatherization projects would not be initiated without the presence of a program
- Claiming 100% of project savings
- Including an allocated portion of the indirect overhead costs
- Applying the 10% conservation preference adder
- Claiming $1 of benefits for each dollar invested in health, safety, and repair measures
- Amortizing evaluation expenses over a three-year period

Finally, the cost-effectiveness calculations were updated in 2021 to remove the impacts of any accruals and reversals associated with unspent dollars carried over into the following year. Generally, the carryover dollars are reversed the following year when the CAP agencies spend the previous year's unused funds. A new accrual is made at the end of the year for the new carryover dollars. By leaving the carryover accounting entry in the cost-effectiveness calculation, it would overstate expenses in 2021 while the subsequent reversal would understate expenses in 2022.

Idaho Power will continue to work with EEAG, as well as the weatherization managers who oversee the weatherization work, to discuss ways to improve the program. For further details on the overall program cost-effectiveness assumptions, see Supplement 1: *Cost-Effectiveness*.

Customer Education and Satisfaction

The CAP agency weatherization auditor explains to the customer which measures are analyzed and why. Further education is done as the crew demonstrates the upgrades and how they will help save energy and provide an increase in comfort. Idaho Power provides each CAP agency with energy efficiency educational materials for distribution to customers during home visits. Any customers whose homes are selected for the company's post-weatherization home verification receive additional information from home verifiers and have an opportunity to ask follow-up questions.

Idaho Power uses independent, third-party verification companies to ensure the stated measures were installed in the homes and to discuss the program with these customers. In 2021, home verifiers did not visit customer homes for feedback about the program due to COVID-19 concerns and the temporary suspension of in-home visits.

A customer survey was used to assess major indicators of customer satisfaction throughout the service area. All program participants in all regions were asked to complete a survey after their homes were weatherized. Survey questions gathered information about how customers learned of the program, reasons for participating, how much customers learned about saving energy in their homes, and the likelihood of household members changing behaviors to use energy wisely.

Idaho Power received survey results from 124 of 162 households weatherized by the program in 2021. Some highlights include the following:

- Just over 37% of respondents learned of the program from a friend or relative, and over 18% learned of the program from an agency flyer.
- Over 46% of the respondents reported their primary reason for participating in the weatherization program was to reduce utility bills, just over 20% had concerns about their existing furnace, and over 21% wanted to improve the comfort of their home.
- Nearly 22% reported they learned how air leaks affect energy usage, and just over 18% indicated they learned how insulation affects energy usage during the weatherization process.
- Over 21% of respondents said they learned how to use energy wisely. Most respondents (90%) reported they were very likely to change habits to save energy, and almost 85% reported they have shared all the information about energy use with members of their household.
- Nearly 94% of the respondents reported they think the weatherization they received will significantly affect the comfort of their home, and almost all (98%) said they were very satisfied with the program.
- Over 17% of the respondents reported the habit they were most likely to change was washing full loads of clothes, and more than 20% said that turning off all the lights when not in use was a habit they were likely to adopt to save energy. Turning the thermostat up in the summer was reported by over 17% of the respondents and turning the thermostat down in the winter was reported by more than 18% as a habit they and members of the household were most likely to adopt to save energy.

A summary of the survey is included in *Supplement 2: Evaluation*.

2022 Program and Marketing Strategies

In 2022, Idaho Power will continue to provide financial assistance to CAP agencies while exploring changes to improve program delivery. The company will also continue to provide the most benefit possible to special-needs customers while working with Idaho and Oregon WAP personnel. Since the retirement of the Idaho state WAP energy audit tool (EA5) is planned for 2022, CAP agency personnel will invoice Idaho Power with a new job cost calculator.

Idaho Power plans to verify approximately 5% of the homes weatherized under the WAQC program via home-verification companies and the Idaho and Oregon state monitoring process.

In 2022, Idaho Power will support the whole-house philosophy of the WAQC program and Idaho and Oregon WAP by continuing to allow a $6,000 annual maximum average per-home cost. The company will continue to work with CAPAI, CAP agencies, and IDHW to develop recommendations and ideas to help improve the program for customers with special needs.

In Idaho during 2022, Idaho Power expects to contribute the base amount plus available funds from 2021 to total just over $2,083,500 in weatherization measures and agency administration fees. Of this amount, approximately $179,400 will be provided to the non-profit pooled fund to weatherize buildings housing non-profit agencies that primarily serve qualified customers in Idaho, with an allowance for annual unused non-profit funds to be used toward additional residential weatherization projects.

Idaho Power will continue to maintain the program content on its website and other marketing collateral.

Weatherization Solutions for Eligible Customers

	2021	2020
Participation and Savings		
Participants (homes)	7	27
Energy Savings (kWh)	12,591	47,360
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$54,793	$198,226
Oregon Energy Efficiency Rider	$0	$0
Idaho Power Funds	$2,863	$10,489
Total Program Costs—All Sources	$57,656	$208,715
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	$0.317	$0.338
Total Resource Levelized Cost ($/kWh)	$0.317	$0.338
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	0.15	0.13
Total Resource Benefit/Cost Ratio	0.28	0.23

Description

Weatherization Solutions for Eligible Customers is an energy efficiency program designed to serve Idaho Power residential customers in Idaho whose income falls between 175% and 250% of the current federal poverty level. Initiated in 2008, the program is designed to mirror the WAQC program. These customers often do not have disposable income to invest in energy efficiency upgrades, and they typically live in housing similar to WAQC customers.

The Weatherization Solutions program also benefits certain customers on the WAQC waiting list. When customer income overlaps both programs, this program may offer an earlier weatherization date than WAQC, resulting in less wait time for the customer and quicker energy savings.

Potential participants are interviewed by a participating contractor to determine household occupant income eligibility, as well as to confirm the home is electrically heated. If the home is a rental, the landlord must agree to maintain the unit's current rent for a minimum of one year, and to help fund a portion of the cost of weatherization. If the customer is eligible, an auditor inspects the home to determine which upgrades will save energy, improve IAQ, and/or provide health and safety measures for the residents. To be approved, energy efficiency measures and repairs must have an SIR of 1.0 or higher, interact with an energy-saving measure, or be necessary for the health and safety of the occupants.

The Weatherization Solutions for Eligible Customers program uses a home audit tool called the HAT14.1, which is like the EA5 audit tool used in WAQC. The home is audited for energy efficiency measures, and the auditor proposes upgrades based on the SIR ratio calculated by HAT14.1. As in WAQC, if the SIR is 1.0 or greater, the contractor is authorized to upgrade that measure. Measures considered for improvement are window and door replacement; ceiling, floor, and wall insulation; HVAC repair and replacement; water heater repair and replacement; and pipe wrap. Also included is the potential to replace lightbulbs and refrigerators. Contractors invoice Idaho Power for the project costs, and if the home is a rental, a minimum landlord payment of 10% of the cost is required.

Idaho Power's agreement with contractors includes a provision that identifies a maximum annual average cost per home. The intent of the maximum annual average cost is to allow contractors the flexibility to service homes with greater or fewer weatherization needs. It also provides a monitoring tool for Idaho Power to forecast year-end outcomes.

Program Activities

Due to COVID-19 restrictions, in-home work was suspended from early 2020 thru mid-October of 2021. At the time of the 2020 in-home work suspension, seven homes had been audited and/or weatherization activities had begun. Weatherization activities for those seven homes were completed once in-home work resumed in late 2021—four in south-central Idaho and three in the company's Capital Region (Figure 2). Of those seven homes weatherized, four were single-family and three were manufactured homes.

Marketing Activities

Due to in-home work being suspended since March 2020, no program marketing was done in 2021.

In the absence of Weatherization Solutions program offerings, Idaho Power promoted do-it-yourself winter weatherization techniques with a December bill insert and email to 243,833 residential customers. The insert was sent to 312,161 Idaho and Oregon residential customers and included tips like checking for air leaks, installing a smart thermostat, and behavior changes to increase comfort and lower energy bills.

Taking a few easy steps to stay warm and cozy as winter weather rolls in can make a big difference for energy-savings. Here are our best DIY tips and tricks for getting the most out of your winter heating.

One and done:

- **Weatherstrip and caulk around doors and windows to reduce drafts.** Fixing air leaks is one of the cheapest and easiest ways to improve comfort and reduce energy use.
- **Replace or clean your heating and cooling system filter(s)** to improve efficiency and help your system last longer.
- **Set the temperature on your water heater** so water at the tap is 120° F.
- **Seal ductwork using mastic or approved, foil-faced tape** to keep heated air from leaking into your attic or crawlspace.
- **Ensure you have adequate attic insulation.** We recommend a ceiling R-value of 38 or more.
- **Install a smart or programmable thermostat** to easily adjust your home's temperature based on your schedule. Visit idahopower.com/save to see if you qualify for a $75 smart thermostat incentive!

Figure 20. Weatherization tips emailed to residential customers

Cost-Effectiveness

In 2021, the Weatherization Solutions for Eligible Customers program cost-effectiveness was 0.15 from the UCT perspective and 0.28 from the TRC perspective.

Weatherization Solutions for Eligible Customers projects, similar to WAQC program guidelines, benefit from a pre-screening of measures through a home audit process. The home audit process ensures an adequate number of kWh savings to justify the project and provides more consistent savings for billing analysis. See WAQC cost-effectiveness for a discussion of the audit and prescreening process, which is similar for both programs.

For further details on the overall program cost-effectiveness assumptions, see *Supplement 1: Cost-Effectiveness*.

Customer Satisfaction

Due to the limited number of projects resulting from COVID-19 restrictions, customer surveys were not distributed in 2021. Though two independent companies normally perform random verifications of weatherized homes and visit with customers about the program, no homes were verified because of COVID-19 restrictions.

2022 Program and Marketing Strategies

On October 25, 2021, once COVID-19 safety protocols allowed for in-home work to resume, Idaho Power notified contractors to resume weatherization projects. It is anticipated that program activity may be lower than normal in 2022 due to worker shortages, supply chain restrictions, and the high volume of WAQC applicants on regional CAP Agency waiting lists.

Idaho Power will update brochures as necessary to help spread the word about the program in all communities in 2022. If needed, additional marketing for the program may include bill inserts, emails, *News Briefs*, website updates, and ads in various regional publications, particularly those with a senior and/or low-income focus. Social media posts and boosts, coordinated partner content, and employee education may be used to increase awareness. Regional marketing and targeted digital ads will be considered based on need as evidenced by any regional contractor's waiting list for Weatherization Solutions services.

Commercial & Industrial Sector Overview

In 2021, Idaho Power's commercial and industrial (C&I) sector consisted of 76,022 commercial, governmental, school, and small business customers. The number of customers increased by 1,613 or 2.2% from 2020. Energy use per month for customers in this sector is not as homogenous as other customer sectors and can vary by several hundred thousand kWh each month depending on customer type. In 2021, the commercial sector represented 27% of Idaho Power's total retail annual electricity sales.

Industrial and special contract customers are Idaho Power's largest individual energy consumers. In 2021, there were 125 customers in this category, representing approximately 22.5% of Idaho Power's total retail annual electricity sales.

Idaho Power's C&I sector has many energy-efficiency programs available to commercial, industrial, governmental, schools, and small business customers. The suite of options can help businesses of all sizes implement energy efficiency measures.

Table 15. Commercial/Industrial sector program summary, 2021

Program	Participants	Total Cost		Savings	
		Utility	Resource	Annual Energy (kWh)	Peak Demand (MW)
Demand Response					
Flex Peak Program	139 sites	$ 501,973	$ 501,973		31
Total		**$ 501,973**	**$ 501,973**		**31**
Energy Efficiency					
C&IEE					
Custom Projects	135 projects	8,608,903	22,550,062	53,728,267	
Green Motors Initiative—Industrial	4 motor rewinds	0	12,172	20,430	
New Construction	95 projects	2,691,171	4,160,999	17,536,004	
Retrofits	787 projects	3,826,750	11,534,413	21,181,022	
Commercial Energy-Saving Kits	906 kits	74,617	74,617	296,751	
Small Business Direct Install	452 projects	1,032,056	1,032,056	2,421,842	
Total		**$ 16,233,498**	**$ 39,364,320**	**95,184,315**	

Notes:
See Appendix 3 for notes on methodology and column definitions.
Totals may not add up due to rounding.

Energy Efficiency Programs

C&I Energy Efficiency—Custom Projects. For projects not covered by the New Construction or Retrofits options, Custom Projects offers incentives for qualifying large, custom energy efficiency projects and energy management measures, such as strategic energy management (SEM), tune-ups, system optimization, and recommissioning. Additionally, Idaho business

customers who wish to find ways to save energy and to quantify their savings can obtain a scoping assessment and detailed assessment through this option.

C&I Energy Efficiency—New Construction. This option offers specific incentives for designing and building better-than-code energy-efficient features into a new construction, major renovation, addition, expansion, or change-of-space project.

C&I Energy Efficiency—Retrofits. This option offers specific incentives for simple energy-saving retrofits to existing equipment or facilities.

Green Motors Initiative (GMI). Under the GMI, service center personnel are trained and certified to repair and rewind motors to improve reliability and efficiency. If a rewind returns a motor to its original efficiency, the process is called a "Green Rewind." By rewinding a motor under this initiative, customers may save up to 40% of the cost of a new motor.

Commercial Energy-Saving Kits. This program offers free ESKs filled with products and tips to help small businesses save energy. Three industry-specific versions of the kit are delivered directly to Idaho Power's small business customers: office, restaurant, and retail.

Small Business Direct Install (SBDI). Idaho Power launched an SBDI program in November 2019 targeting typically hard-to-reach small business customers. SBDI is implemented by a third-party contractor that provides turn-key services. Idaho Power pays 100% of the cost to install eligible measures for customers who use 25,000 kWh annually or less. SBDI is offered to eligible customers in a strategic geo-targeted approach.

Oregon Commercial Audits. This statutory-required program offers free energy audits, evaluations, and educational products to Oregon customers to help them achieve energy savings.

Demand Response Programs

Flex Peak Program. Idaho Power pays an incentive to commercial and industrial customers who voluntarily help the company reduce summer demand on specific summer weekdays or for other system needs.

Marketing

In 2021, Idaho Power continued to market the programs listed above, targeting the following customers: commercial, industrial, governmental, schools, small businesses, architects, engineers, and other design professionals.

Bill Inserts

A bill insert highlighting how Idaho Power's incentives can save customers money was included in 40,048 business customer bills in March and a redesigned version of the bill insert was included in 39,594 bills in July.

Print and Digital Advertising

In 2021, the company redesigned its print ad to a single version that focused on promoting offered incentives and their availability to businesses of all sizes. The company also continued to promote messages around reliable, clean energy and low prices in select publications.

Print ads ran in the *Idaho Business Review* in April, May, August, September, October, and November, and in the *BOC Bulletin* in February and August. Ads also ran in the Building Owners and Managers Association (BOMA) membership directory and symposium program, *Idaho Business Review Top Projects Awards* publication, and the Idaho Association of General Contractors membership directory. Additionally, Idaho Power sponsored the Construction section in the *Idaho Business Review's Book of Lists*, which included an ad, company logo in the table of contents, and an article highlighting Idaho Power and the company's energy efficiency programs.

Idaho Power continued using search engine marketing to display Idaho Power's C&I Energy Efficiency Program near the top of the search results with the paid search terms when customers search for energy efficiency business terms. These ads received 257,579 impressions and 20,350 clicks.

Newsletters

Idaho Power produces a monthly newsletter called *Connections* that is distributed to all customers and covers a variety of topics. The August issue was dedicated to business energy efficiency topics, including the Swan Falls High School success story, changes to business incentives, and residential new construction incentives.

Idaho Power produces and distributes *Energy@Work*, a quarterly newsletter about Idaho Power company information and energy efficiency topics for business customers. In 2021, newsletters were delivered electronically.

- The spring issue was sent to 13,522 customers in March. The issue focused on lighting incentive increases and included articles on refrigerating COVID-19 vaccines with ultra-low temperature freezers and 2021 training opportunities.
- The summer issue, sent to 13,971 customers in June, focused on incentive changes for Retrofits and New Construction. It also included a Simplot success story and promotion of the GMI.
- The fall issue was sent to 14,343 customers in October. The issue included articles about operating during a drought, Idaho Power's Electric Vehicle Network, and new technology at the IDL ERL.
- The winter issue was sent to 15,551 customers in December. The issue included articles about supply chain issues impacting the ability to install energy-saving equipment in a

timely manner, Snake River restoration work, and new electric buses in Idaho Power's service area.

Airport Advertising

To reach business customers, Idaho Power continued to display two backlit ads throughout the airport in 2021. The company redesigned its ad promoting how Idaho Power helps power businesses and moved it from a baggage claim location to the main concourse walkway for increased visibility. Additionally, an ad on alternating airport display boards highlighted the company's clean energy goal—Clean Today. Cleaner Tomorrow.®—and the role energy efficiency plays in achieving that goal.

Radio

Idaho Power sponsored messages on public radio stations in Boise, Twin Falls, and Pocatello from July through September. The company ran a total of 402 messages in Boise and Twin Falls, and 750 messages in Pocatello.

Social Media

Idaho Power continued using regular LinkedIn posts focused on energy-saving tips, program details, incentives, and training opportunities. When appropriate, these messages were also shared on Idaho Power's Facebook and Twitter pages.

Public Relations

Idaho Power provides PR support to customers who want to publicize the work they have done to become more energy efficient. Upon request, Idaho Power creates large-format checks used for media events and/or board meetings. Idaho Power will continue to assist customers with PR opportunities by creating certificates for display within their buildings and speaking at press events, if requested.

While these opportunities were limited in 2021 due to the pandemic, Idaho Power did produce checks and support PR efforts for several companies, including Simplot, Twin Falls County, CLIF Bar, ON Semiconductor, Idaho Milk Products, the city of Council, Idaho State University, and the Wendell School District.

The company also released success-story videos on YouTube highlighting how McCain Foods and Swan Falls High School benefitted from Idaho Power's energy efficiency programs. The videos were shared on Idaho Power's social media channels and highlighted on the Idaho Power homepage.

Association and Event Sponsorships

Idaho Power's C&I Energy Efficiency Program typically sponsors a number of associations and events. In 2021, many of these events were cancelled or held virtually.

The company sponsored the BOMA Commercial Real Estate Symposium held virtually February 18. During the event, the company shared a video from the new construction senior engineer that included the Idaho Humane Society success-story video. The company also developed slides with key company facts that rotated on the screen before the event, placed LEDs and a brochure in the event giveaway box that was available for pickup, and placed an ad and article in the event program. The company also participated in BOMA's virtual Thursday Conversations video blog in March.

Idaho Power remained a sponsor of the Idaho Business Review's Top Projects Awards held in October in Meridian. The company logo was used throughout the event, and company materials were placed at the tables.

Customer Satisfaction

Idaho Power conducts the *Burke Customer Relationship Survey* each year. In 2021, on a scale of zero to 10, small business survey respondents rated Idaho Power 8.18 regarding offering programs to help customers save energy, and 8.13 related to providing customers with information on how to save energy and money. Twenty percent of small business respondents indicated they have participated in at least one Idaho Power energy efficiency program. Of the small business survey respondents who have participated in at least one Idaho Power energy efficiency program, 92% are "very" or "somewhat" satisfied with the program.

In 2021, on a scale of zero to ten, large commercial and industrial survey respondents rated Idaho Power 9.16 regarding offering programs to help customers save energy, and 8.99 related to providing customers with information on how to save energy and money. Seventy-six percent of large commercial and industrial respondents indicated they have participated in at least one Idaho Power energy efficiency program. Of the large commercial and industrial survey respondents who have participated in at least one Idaho Power energy efficiency program, 99% are "very" or "somewhat" satisfied with the program.

Training and Education

In 2021, Idaho Power engineers, program staff, field representatives, and hired consultants continued to provide technical training and education to help customers learn how to identify opportunities to improve energy efficiency in their facilities. The company has found that these activities increase awareness and participation in its energy efficiency and demand-response programs and enhance customer program satisfaction. To market this service and distribute the training schedule and resources, Idaho Power used its website, email, and *Energy@Work* newsletter.

During each training session, the large commercial and industrial technical consultant, key account energy advisors, or a program engineer gave an overview of the commercial and industrial programs available to customers.

As part of this outreach activity, Idaho Power collaborated with and supported stakeholders and organizations, such as IDL, BOMA, and the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE). Using Idaho Power funding, the IDL performed several tasks aimed at increasing the energy efficiency knowledge of architects, engineers, trade allies, and customers. Specific activities included sponsoring a BSUG, conducting Lunch & Learn sessions at various design and engineering firms, and offering the ERL.

Idaho Power delivered six equivalent full-time days of technical live, online training sessions in 2021 at no cost to the customers over the course of 12 days. Topics included the following:

- Industrial Refrigeration
- Motors
- Variable Frequency Drives (VFD)
- Introduction to Unitary Air Conditioning
- Advanced Unitary Air Conditioning
- Harmonics
- Pumping Systems

The level of participation in 2021 remained high, with 221 individuals signing up and 208 unique logins to the technical sessions. Due to the virtual nature of the course delivery, in some cases there were multiple attendees at a single login location. Customer feedback indicated the average satisfaction level was 91%. Idaho Power's average cost to deliver the technical trainings in 2021 was approximately $4,720 per class.

Also, Idaho Power offered eight technical, live, online training sessions to municipal water and wastewater customers. Topics included the following:

- Water Energy Basics
- Activated Sludge Basics
- Primary Clarifier Optimization
- Pumping Energy Efficiency
- Controlling Activated Sludge
- Denitrification and Bio-P
- Low Cost/No Cost Opportunities

Water and wastewater trainings were attended by 262 participants. Cohort members and other operators were invited and offered continuing education units for drinking water and

wastewater professionals. Each course is designed to study improved operation, quality, and energy performance for different systems.

Aside from the classes listed above, Idaho Power also partnered with the NEEC to administer a Building Operator Certification Level I Course that began in November 2021 and will continue through May 2022. Idaho Power sponsored 17 customers who signed up for the training and will pay $900 of the $1,895 tuition cost upon completion.

Field Staff Activities

Energy efficiency opportunities continue to be an important factor for most businesses. Not only has there been ongoing interest in upgrading old, less efficient equipment, but there is also a heightened interest to improve behaviors to meet new sustainability initiatives. Idaho Power's energy efficiency programs are designed to accommodate all possible efficiency opportunities, ranging from equipment improvements to a variety of business cohorts that offer support and ongoing training for a long-term, more sustainable approach to energy efficiency.

Idaho Power has trained friendly and engaged energy advisors in each region to proactively share these opportunities to influence change. While COVID-19 has presented challenges in some areas with on-site visits in 2021, it has also opened doors to be creative in maintaining close working relationships with customers. Online meetings and more frequent check-ins have proven to be productive and effective with the company's largest commercial customers. Energy advisors have specific goals to maintain close working relationships and COVID-19 did not negatively affect those goals. The company continued to offer commercial building engineers, trade allies, and other stakeholders online technical training to help them be successful with the ongoing promotion of energy efficiency opportunities.

Commercial and Industrial Energy Efficiency Program

	2021	2020
Participation and Savings*		
Participants (projects/kits)	1,021	928
Energy Savings (kWh)**	92,465,723	129,593,880
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source***		
Idaho Energy Efficiency Rider	$14,375,182	$23,293,492
Oregon Energy Efficiency Rider	$742,013	$661,370
Idaho Power Funds	$9,630	$75,793
Total Program Costs—All Sources	$15,126,824	$24,030,655
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	$0.017	$0.018
Total Resource Levelized Cost ($/kWh)	$0.043	$0.044
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	2.86	3.27
Total Resource Benefit/Cost Ratio	1.46	1.63

*Metrics for each option (New Construction, Custom Projects, and Retrofits) are reported separately in the appendices and in *Supplement 1: Cost-Effectiveness*.

**2020 total includes 56,012 kWh of energy savings from 10 GMI projects. 2021 total includes 20,430 kWh of energy savings from four GMI projects.

***2020 and 2021 dollars include totals for New Construction, Custom Projects, and Retrofits.

Description

Three major program options targeting different energy efficiency projects are available to commercial, industrial, governmental, schools, and small business customers in the company's Idaho and Oregon service areas: Custom Projects, New Construction, and Retrofits.

Custom Projects

The Custom Projects option provides incentives for non-lighting energy efficiency modifications to new and existing facilities. The goal is to encourage energy savings in Idaho and Oregon service areas by helping customers implement energy efficiency upgrades. Incentives reduce customers' payback periods for custom modifications and promote energy-saving operations that might not otherwise be completed. The Custom Projects option also offers energy assessment services to help identify and evaluate potential energy-saving modifications or projects.

Interested customers submit a pre-approval application to Idaho Power for potential modifications identified by the customer, Idaho Power, or a third-party consultant. Idaho Power reviews each application and works with the customer and vendors to provide or gather sufficient information to support the estimated energy savings calculations, then pre-approves

the project. Then the customer moves forward with the project. In some cases, large, complex projects may take as long as two or more years to complete.

Once the project is completed, customers submit a payment application, and each project is reviewed to ensure energy savings are achieved. Idaho Power engineering staff or a third-party consultant verifies the energy-savings methods and calculations. Through this verification process, the final energy savings and the project costs are estimated.

On the larger and more complex projects, Idaho Power or a third-party consultant conducts on-site power monitoring and data collection before and after project implementation. The M&V process helps ensure projected energy savings are achieved. Verifying applicants' information confirms energy savings are obtained and are within program guidelines. If changes in project scope take place, Idaho Power will recalculate energy savings and incentive amounts based on the actual installed equipment and performance.

New Construction

The New Construction option enables customers in Idaho Power's Idaho and Oregon service areas to incorporate energy-efficient design features and technologies into new construction, expansion, or major remodeling projects. Initiated in 2004, the New Construction option currently offers incentives for 33 energy-saving building and design features related to efficient lighting, lighting controls, building shell, HVAC equipment, HVAC controls, variable speed drives, refrigeration, compressed air equipment, appliances, and other equipment. The customer may otherwise lose savings opportunities for these types of projects. The new construction and major renovation project design and construction process is much longer than small retrofits and often encompasses multiple calendar years.

Retrofits

The Retrofits option is Idaho Power's prescriptive measure option for existing facilities. This part of the program encourages customers in Idaho and Oregon to implement energy efficiency upgrades by offering incentives on a defined list of measures. Eligible measures cover a variety of energy-saving opportunities in lighting, HVAC, building shell, food service equipment, and other commercial measures. Customers can also apply for non-standard lighting incentives. A complete list of the measures offered through Retrofits is included in *Supplement 1: Cost-Effectiveness*.

Program Activities

Idaho Power has found that providing facility energy assessments, customer technical training, and education services are key to encouraging customers to consider energy efficiency modifications. The 2021 activities not already described in the Commercial/Industrial Sector Overview are described below.

Custom Projects

Incentive levels for the non-lighting projects remained the same in 2021, at $0.18/kWh of first-year savings, up to 70% of the project cost. The energy management incentive of $0.025/kWh of first-year savings, up to 100% of the eligible costs (added in 2020), also remained the same in 2021. Energy management projects have the following benefits:

- Tend to have a shorter measure life and a much lower cost.
- Involve O&M changes that save energy without interrupting the customer's service or product.
- Generate cost-effective energy savings from measures rooted in low-cost or no-cost O&M improvements.

Idaho Power provides incentives for conducting leak assessments and fixing underground water leaks. The program reimburses $1,000 per five miles of pipe for a third-party leak assessment and offers a custom incentive of $0.18/kWh saved up to 70% of the eligible cost to repair the leaks for eligible underground pipes.

Compressed air system leak repairs are also eligible under the energy management incentive at $0.025 per kWh saved up to 100% of project cost. Customers can use their own instrumentation to identify compressed air leaks or work with one of Idaho Power's third-party consultants to identify leaks. Once leaks are identified, energy savings achieved from fixing leaks can be quantified. Project costs are calculated by factoring in the material cost to fix the leaks as well as any labor requirements. One of the third-party engineering consultants is developing a tool that will help streamline the incentive process for this type of project.

Idaho Power funds the cost of engineering services, up to $4,500, for conducting energy scoping assessments to encourage its larger customers to adopt energy efficiency improvements. Idaho Power contracted with five firms to provide scoping assessments and general energy efficiency engineering support services in 2021. A new RFP was issued in the fall of 2021, and six successful bidders were selected to provide general energy efficiency engineering services through 2025. Two of the firms that were selected are focused on energy modeling to support cohorts and other SEM offerings. The other four firms provide a wide array of engineering services, including scoping assessments, detailed assessments, energy modeling, and various SEM programs.

The Custom Projects option had a successful year with a total of 135 completed projects, 20 of which were in Oregon. Custom Projects achieved energy savings of 53,728 MWh (Table 16), which is a 43% decrease compared to 2020. The year 2020 was an exceptional growth year in terms of energy savings under the Custom Projects option (greater than 30% versus 2019), and COVID had not yet impacted many of the projects. In 2021, almost all projects were slowed down by materials and labor issues.

Idaho Power also received 114 new applications in 2021 representing a potential of 40,577 MWh of savings on future projects.

Table 16. Custom Projects annual energy savings by primary option measure, 2021

Option Summary by Measure	Number of Projects	kWh Saved
Compressed Air	19	6,101,839
Controls	1	119,378
Energy Management	33	11,300,724
Fans	3	1,294,181
HVAC	8	2,613,396
Lighting	21	5,564,430
Motors	0	0
Other	6	4,313,845
Pump	6	458,478
Refrigeration	23	11,700,832
VFD	15	10,261,164
Total*	**135**	**53,728,267**

*Does not include GMI project counts and savings.

Custom Projects engineers and the key account energy advisors visited large-commercial and industrial customers to conduct initial facility walk-throughs, commercial/industrial efficiency program informational sessions, and training on specific technical energy-saving opportunities as pandemic and other conditions allowed. Virtual/remote capabilities were developed and implemented when health or safety restrictions were necessary. Idaho Power also provided sponsorship for the 2021 ASHRAE Technical Conference (virtual). Custom Projects engineers gave presentations on Idaho Power programs and offerings at the Cohort for Schools Mid-term and Final Workshops (virtual) and eight presentations at Water and Wastewater Cohort Workshops (virtual).

In 2021, Idaho Power contractors completed 26 scoping assessments on behalf of Idaho Power customers. These assessments identified over 28,984 MWh of savings potential and will be used to promote future projects.

In 2013, a Streamlined Custom Efficiency (SCE) offering was started that works to keep vendor engagement high, targeting projects that may have typically been too small to participate under the Custom Projects option. Currently, the SCE offering provides custom incentives for refrigeration controllers for walk-in coolers, process-related VFDs, and other small, vendor-based projects that do not qualify for prescriptive incentives.

Idaho Power contracted with a third party to manage SCE data collection and analysis for each project. In 2021, the SCE offering processed 24 projects totaling 4,096,687 kWh of savings and $571,999 in incentives.

Cohorts

Idaho Power also has cohorts to engage with customers in group settings to allow customer interaction and economies of scale in working with multiple customers on SEM.

The Municipal Water Supply Optimization Cohort (MWSOC), Eastern Idaho Water Cohort (EIWC), Wastewater Energy Efficiency Cohort (WWEEC), and the Continuous Energy Improvement (CEI) Cohort for Schools program offerings are also driving a significant number of new projects in addition to increasing vendor engagement from the SCE offering. Capital projects promoted or identified in SEM are reported and incentivized through other Idaho Power C&I programs, not as a cohort savings number.

Cohorts are structured to offer three phases of support.

1. The *active* phase, which is typically the first two years of engagement with strong consultant support, includes energy team development, energy policy development, energy model creation, training and report-out workshops, energy champion and team calls, and general energy awareness.
2. The *maintaining* phase includes medium consultant support and is typically years three through five or six. This phase includes consultant maintenance of facility energy models, monthly energy champion calls, report-out workshops, and ongoing general development.
3. The *sustaining* phase is typically beyond year five or six where the participants manage activities on their own including maintenance of energy models and ongoing focus on energy-saving activities with little consultant support. Participants in this phase will have the option to participate in report-out workshops but cohort-related energy savings will no longer be claimed, and consultant support will be minimal.

Each cohort offering is described below.

Municipal Water Supply Optimization Cohort

The MWSOC began in January 2016. The goal of the cohort was to equip water professionals with the skills necessary to independently identify and implement energy efficiency opportunities that produce long-term energy and cost savings.

Fourth-year incentives and savings totaled $11,275 and 559,254 kWh per year with all incentives paid at 70% of the eligible cost. Fourth-year incentives were processed, and savings were reported in 2021.

Fifth-year incentives and savings totaled $7,173 and 403,826 kWh per year with all incentives paid at 70% of the eligible cost except one facility. Fifth-year incentives were processed, and savings were reported in 2021.

Idaho Power continued the cohort for 11 of the original 15 participants and offered two webinar trainings in late 2021. One participant will remain in the active phase and 10 participants will be transitioning to the sustaining phase. Idaho Power's contractor minimally contacted participants to check on project progress and opportunities and to address energy model data updates.

Eastern Idaho Water Cohort

The EIWC began in January 2018 with the goal to offer the MWSOC to the eastern part of Idaho Power's service area. This was accomplished in collaboration with Rocky Mountain Power and BPA to deliver joint workshops for customers located in eastern Idaho. Two Idaho Power customers started at the beginning of this program and are in the active phase and will soon transition to the sustaining phase. Third-year incentives were processed, and savings were reported in 2021 totaling $2,392 and 674,892 kWh per year. In the third year of the offering, Idaho Power's contractor contacted participants to check on project progress and opportunities and to address energy model data updates. A draft of the fourth-year energy-savings report is expected in 2022.

Wastewater Energy Efficiency Cohort

In January 2014, Custom Projects launched WWEEC, a two-year cohort training approach and incentives for low-cost or no-cost energy improvements for 11 municipal wastewater facilities in Idaho Power's service area. In 2016, Idaho Power decided to increase the duration of WWEEC to further engage customers. Five of the 11 original participants are engaged in the WWEEC Continuation with many of the original participants starting major construction projects in years two and three of WWEEC.

Year six includes one facility that re-engaged with the cohort after major renovations. The facility was re-baselined, and the sixth-year energy savings before adjusting for capital projects were 591,226 kWh per year. After capital project adjustments, incentives and savings were processed and reported in 2021, totaling $174 and 965 kWh per year. In the sixth year, the consultant contacted the participant to check on progress, discuss opportunities, and to address energy model data updates. Six participants are in the maintaining phase of the program.

Continuous Energy Improvement Cohort for Schools

The goal of this cohort is to equip school district personnel with hands on training and guidance to help them get the most out of their systems while reducing energy consumption. The fourth program year of the Cohort for Schools ran from June 2020 through May 2021. Over this

program year, the structure of the offering was refined to include three phases of support: active, maintaining, and sustaining.

Five school districts, of the original nine from 2017, continued to implement CEI concepts and planned activities for the cohort. In October 2019, two new school districts began participating. These districts developed their energy teams, built initial facility energy models, and went through training on various aspects of CEI and energy efficiency through 2021.

Energy savings for the participants were evaluated from June 2020 through May 2021. Activities were conducted through May 2021 to complete a full 12-month cycle and to work around the standard school calendar for the participants. The cohort is implemented by a third-party consultant that provided final savings reports for each school district, which totaled 4,556,394 kWh for 2021. In addition, one district saved 2,848,708 kWh through program year four but was still providing backup documentation at the end of 2021, so these savings will be claimed in 2022.

Fourth-year activities commenced over the summer of 2020, concluding at the end of May 2021. All seven participants entering this program year continued through 2021. Of those seven, five districts are now modeling all schools in their district. One district added three new facilities to the cohort, one added two new facilities, and another added one new facility in this program year for a total of 41 facilities that are currently engaged with the offering.

Activities in 2021 included managing a register of energy efficiency opportunities for each facility detailing low-cost and no-cost opportunities to reduce energy consumption. The consultant worked with each participant to complete as many identified opportunities as possible. Afterward, the consultant checked in monthly by phone to review opportunity register items and to discuss current activities. Idaho Power provided program and incentive information, both in hard copy and electronically, along with many other energy-saving resources pertinent to school facilities.

A virtual mid-term workshop was held January 14, 2021, where school districts reported their results through the end of 2020, and a final virtual workshop was held on June 29, 2021, where final results were reported for the program year. Districts shared successes, lessons learned, and other details pertinent to their energy-saving journeys.

The 2021 to 2022 program year activities will continue until May 31, 2022. Idaho Power will then review final M&V reports to establish energy savings and eligible costs for the program year activities and will distribute the corresponding incentives to participating school districts.

Green Motors Initiative

Idaho Power participates in the Green Motors Practices Group's (GMPG) GMI. Under the GMI, service center personnel are trained and certified to repair and rewind motors to improve

reliability and efficiency. If a rewind returns a motor to its original efficiency, the process is called a "Green Rewind." By rewinding a motor under this initiative, customers may save up to 40% of the cost of a new motor. The GMI is available to Idaho Power's agricultural, commercial, and industrial customers.

Currently, nine motor service centers have signed on as GMPG members in Idaho Power's service area. Under the initiative, Idaho Power pays service centers $2 per horsepower (hp) for each National Electrical Manufacturers Association (NEMA)-rated motor up to 5,000 hp that receives a verified Green Rewind. Half of that incentive is passed on to the customer as a credit on their rewind invoice. The GMPG requires all member service centers to sign and adhere to the GMPG Annual Member Commitment Quality Assurance agreement. The GMPG is responsible for verifying QA.

In 2021, a total of four commercial and industrial customers' motors were rewound, and the savings for the GMI was 20,430 kWh.

New Construction

In 2021, 95 projects were completed, resulting in 17,536,004 kWh of energy savings in Idaho and Oregon. New Construction had a 20% reduction in total projects and a 20% increase in total savings compared to 2020. The commercial and industrial construction industry has been extremely active in Idaho Power's service area throughout 2021, although the industry is experiencing labor shortages and supply chain issues that have delayed, slowed, and complicated some projects.

Maintaining a consistent offering is important for large projects with long construction periods; however, changes are made to enhance customers' choices or to meet new code changes. Idaho Power tries to keep the New Construction option consistent by making changes approximately every other year. The TRM has been updated to include 2018 IECC information and was finalized in 2021. The program offerings were updated June 15, 2021, to reflect those changes; along with the update, program offerings were reviewed to include new measures, adjust existing measures, and review the cost-effectiveness of all measures. Overall, seven program offerings were removed, and seven program offerings were added to align with the updated TRM. The 2021 program offering includes 33 measures in Idaho and 25 measures in Oregon.

In addition to the customer incentive, a Professional Assistance Incentive (PAI) is available to architects and/or engineers for supporting technical aspects and documentation of a project. The PAI is equal to 20% of the participant's total incentive with a maximum allowed of $5,000 per application.

The PAI increases the engagement with architects and engineers and is most beneficial to small and medium businesses as they prepare project documentation. These customers typically do

not have staff with a technical background in construction, which makes completing applications and submitting documentation a challenge.

On September 23, 2020, Idaho Power increased the eligible PAI incentive from 10% to 20% of the participant's total incentive with a correspondingly increased maximum allowed from $2,500 to $5,000 per application. In 2021, 40 projects, or 42% of the projects paid, received the PAI compared to 40 projects, or 34% of the total projects paid, in 2020. The company decided to continue the increased PAI after positive feedback from architects and engineers.

Idaho Power representatives did not make in-person visits to architectural and engineering firms in Boise in 2021 due to COVID-19 restrictions, but they did continue discussions via phone and email. These conversations are intended to build relationships with the local design community and to discuss Idaho Power's C&I Energy Efficiency Program.

The New Construction option continued random post-project verifications on 10% of projects completed in 2021. The University of Idaho's IDL did not complete on-site post-project verifications in 2020, but rather completed desk reviews of all documentation. In 2021, the IDL returned to on-site post-project verification on 12 of the 95 projects—over 10% of the total completed. The purpose of the verifications is to confirm program guidelines and requirements are adequate to ensure the supporting final project documentation provided aligns with field installation. More discrepancies were identified in verified projects in 2021 than in previous years. Idaho Power and the IDL will evaluate the process in 2022 and create a project verification standard to include verification prior to payment for 10% of projects completed. See *Supplement 2: Evaluation* for the complete IDL report.

The impact evaluation from 2019 had a recommendation to:

- *Utilize [Hours of Use] HOUs from the TRM for lighting and HVAC projects started after the TRM was implemented*
- *Also, the sources for the TRMs data are clearly cited and can be traced back to original research*. The TRM was updated in 2021 adding additional transparency and clarification.

Retrofits

The Retrofits option achieved 21,181 MWh of energy savings in 2021, representing 787 projects. Lighting retrofits comprised most of the energy savings and project count.

In March 2021, Idaho Power rolled out an updated lighting tool for Retrofits lighting applications. Enhancements were made to this version, such as consolidating two tabs into one, and making the temporary incentive increases from 2020 permanent. In addition, fluorescent fixture incentives were removed from the standard incentive menu to a non-standard

incentive. Other lighting incentive menu changes were made in response to measure cost-effectiveness review.

Retrofits staff conducted four virtual program workshops for trade allies and large customers to inform them of the adjustments to the lighting measures and the upgrades to the lighting tool.

The Retrofits non-lighting measure savings and costs are determined by Idaho Power's TRM. In 2020, the company contracted with a third party to update its TRM. The work was completed in 2021, and the TRM updates were incorporated into the Retrofits non-lighting option menu, which resulted in incentive changes for several measures, the addition of new measures, and the removal of others. The changes became effective in Idaho in June and in Oregon in September 2021. Retrofits staff conducted three non-lighting webinars to review the changes with trade allies and large customers.

Due to the continued COVID-19 pandemic, no in-person workshops occurred in 2021. In September 2021, Idaho Power gave a virtual presentation as part of an International Brotherhood of Electrical Workers (IBEW) Local 291 class in Boise on the available lighting incentives and how electrical contractors could engage in the Retrofits option. In December 2021, Idaho Power hosted the *Making Controls Simple: LLLC Myths & Installation Advantages* webinar for electrical contractors and suppliers, and large commercial customers. Continuing education credits were given for electricians attending the webinar.

Idaho Power continued its contracts with various consultants to provide ongoing program support for lighting and non-lighting reviews and inspections, as well as trade ally outreach.

Marketing Activities

Idaho Power continued to primarily market the C&I Energy Efficiency Program as a single offering to businesses. See the Sector Overview for the company's efforts to market the C&I Energy Efficiency Program. Below are the option-specific marketing efforts for 2021.

Custom Projects

In addition to program-level marketing activities, Idaho Power continued to present large-format checks to interested Custom Projects participants and publicized these events to local media, when applicable. However, there were far fewer checks presented in-person in 2020 and 2021 than in previous years due to COVID-19 restrictions.

New Construction

Idaho Power updated its brochure in mid-2021 to reflect the new incentive information. The company also sent a letter to 310 architects and engineers in August informing them of the new incentives and providing them with a copy of the updated program overview brochure and harmonics brochure.

The company continued to place banners on select construction sites highlighting that the facility is being built or enhanced with energy efficiency in mind. A banner remained at St. Luke's McCall Medical Center throughout 2021.

Last, Idaho Power sponsored the American Institute of Architects (AIA) Idaho Chapter awards event in Ketchum in September. The company's logo appeared on all marketing materials, a table tent promoting the New Construction option was placed on the tables, and print ads and articles appeared in the event programs.

Retrofits

In 2021, Idaho Power updated its Retrofits brochure and split the information into two brochures: one specific to Idaho customers and the other for Oregon customers. The company also redesigned the Retrofits website so customers first choose which state the project will be completed in, so they are directed to the incentives specific to that state.

The company placed a pop-up ad on My Account in September that resulted in 2,859 views and 160 click-throughs from business customers.

To promote the lighting incentives, Idaho Power developed a point-of-purchase display to place at the checkout counter at 60 lighting suppliers. The displays received very positive comments from suppliers. The company also sent out a lighting postcard to 1,400 businesses in October. Throughout a portion of the year, the company also sent out emails promoting the lighting incentives. The company's customer solutions advisors then followed up by making personal phone calls to customers who received the email.

Green Motors Initiative

In 2021, Idaho Power continued to promote GMI as part of the C&I Energy Efficiency Program marketing efforts. The company posted about the program on social media in March and December. Additionally, the program was featured in the summer Energy@Work electronic newsletter.

Cost-Effectiveness

Custom Projects

Historically, all projects submitted through the Custom Projects option must meet cost-effectiveness requirements, which include TRC, UCT, and PCT tests from a project perspective. The program requires that all costs related to the energy efficiency implementation and energy-savings calculations are gathered and submitted with the program application. Payback is calculated with and without incentives, along with the estimated dollar savings for installing energy efficiency measures. As a project progresses, any changes to the project are used to recalculate energy savings and incentives before the incentives are paid to the participant. To aid in gathering or verifying the data required to conduct cost-effectiveness

and energy-savings calculations, third-party engineering firms are sometimes used to provide an assessment, or engineering M&V services available under the Custom Projects option.

The UCT and TRC ratios for the program are 2.98 and 1.32, respectively. Non-energy impacts were applied in 2021 based on an estimated per-kWh value by commercial and industrial end-uses. These values were provided by a third-party as part of the 2019 impact evaluation of the New Construction and Retrofits options. Details for the program cost-effectiveness are in *Supplement 1: Cost-Effectiveness*.

New Construction

To calculate energy savings for the New Construction option, Idaho Power verifies the incremental efficiency of each measure over a code or standard practice installation baseline. Savings are calculated through two main methods. When available, savings are calculated using actual measurement parameters, including the efficiency of the installed measure compared to code-related efficiency. When precise measurements are unavailable, savings are calculated based on industry standard assumptions. Because the New Construction option is prescriptive and the measures are installed in new buildings, there are no baselines of previous measurable kWh usage in the building. Therefore, Idaho Power uses industry standard assumptions from the IECC to calculate the savings based on an assumed baseline, i.e., how the building would have used energy absent of efficiency measures.

New Construction incentives are based on a variety of methods depending on the measure type. Incentives are calculated mainly through a dollar-per-unit equation using square footage, tonnage, operating hours, or kW reduction.

To prepare for the 2021 program changes, Idaho Power contracted with a third party to update the TRM for the New Construction option. The TRM, which provides savings and costs related to existing and new measures for the New Construction option, was updated to include the IECC 2018 baseline. The new savings will be reflected on applications initiated after the June 2021 program update.

The UCT and TRC ratios for the program are 2.98 and 2.70, respectively. Non-energy impacts were applied in 2021 based on an estimated per-kWh value by commercial and industrial end-uses. These values were provided by a third party as part of the 2019 impact evaluation of the New Construction and Retrofits options.

Complete, updated measure-level details for cost-effectiveness can be found in *Supplement 1: Cost-Effectiveness*. Assumptions for measures prior to the mid-year update can be found in the *Demand-Side Management 2020 Annual Report, Supplement 1: Cost-Effectiveness.*

Retrofits

For the first half of 2021, Idaho Power used most of the same savings and assumptions as were used after the program changes in 2020 for the Retrofits option. For all lighting measures,

Idaho Power uses a Lighting Tool developed by a third party. An initial analysis was conducted to see if the lighting measures shown in the tool were cost-effective based on the average input of watts and hours of operation, while the actual savings for each project are calculated based on specific information regarding the existing and replacement fixture. For most non-lighting measures, deemed savings from the TRM or the RTF are used to calculate the cost-effectiveness. To prepare for the 2021 program changes, Idaho Power contracted with a third party to update the TRM for the Retrofits options. The TRM provides savings and costs related to existing and new measures for the Retrofits option. The new savings will be reflected on all applications submitted after the June 2021 program update.

The UCT and TRC ratios for the program are 2.53 and 1.27, respectively. Non-energy impacts were applied in 2021 based on an estimated per-kWh value by commercial and industrial end-uses. These values were provided by a third-party as part of the 2019 impact evaluation of the New Construction and Retrofits options.

Complete updated measure-level details for cost-effectiveness can be found in *Supplement 1: Cost-Effectiveness*. Assumptions for measures prior to the mid-year update can be found in the *Demand-Side Management 2020 Annual Report, Supplement 1: Cost-Effectiveness.*

Customer Satisfaction

Retrofits

In 2021, a survey was sent to customers who had a lighting project installed by a contractor to evaluate the customers' satisfaction level for the contractors listed on the Retrofits website. Survey questions gathered information about how customers learned of the program and their satisfaction with the program, contractor, and equipment.

A survey invitation was sent to 497 program participants in 2021. Idaho Power received survey results from 125 respondents. Some highlights include the following:

- Over 53% of respondents learned of the program from a contractor, and over 14% learned of the program from an equipment supplier.
- 88% of respondents said they were "very satisfied" with the program, and over 11% of respondents indicated they were "somewhat satisfied."
- 92% of respondents said they were "very satisfied" with the contractor they hired to install their equipment, and over 6% of respondents indicated they were "somewhat satisfied."
- Nearly 93% of respondents said they were "very satisfied" with the equipment installed, and nearly 6% of respondents said they were "somewhat satisfied."

A copy of the survey results is included in *Supplement 2: Evaluation*.

Evaluations

In 2021, Idaho Power contracted with a third party to conduct impact and process evaluations of the C&I Custom Projects program. The evaluation found a successfully run program that has mitigated many of the risks associated with custom energy efficiency programs. The evaluation team identified only minor adjustments to claimed savings and calculated a realization rate of 99.8%.

The impact evaluation recommends maintaining the long-term focus of the cohorts' projects, continuing to build relationships in the market, and considering the use of a consumption analysis approach for determining energy savings, where necessary. The process evaluation recommends updating the commercial and industrial program logic model to include recent program updates, adding a new construction or equipment replacement check box for the program application, and continuing to focus on efficient and effective communication between all parties.

Idaho Power will consider all recommendations made in the report, and any changes to the program will be reported in the *Demand-Side Management 2022 Annual Report.* See the complete analysis report in *Supplement 2: Evaluation*.

2022 Program and Marketing Strategies

In 2022, the three options will continue to be marketed as part of Idaho Power's C&I Energy Efficiency Program. Below are specific program strategies that apply to the individual options of the program.

Custom Projects

In 2022, the company plans to expand deployment of the newly developed energy management commercial energy-savings tool, Find n' Fix, which, in conjunction with engineering services, will help identify and quantify energy savings opportunities for commercial customers. Also, the compressed air leak detection and repair offering that is available to larger customers, like the water leak measure launched in 2020, will be marketed and expanded in 2022.

Activities and coaching will continue for the water and wastewater cohort participants and the EIWC. Preliminary planning to implement a new cohort based on industrial wastewater is being conducted. This cohort will focus on a more technical approach to energy savings than the other water and wastewater cohorts. The estimated implementation of this cohort will be early 2022.

Idaho Power will continue to provide the following:

- In-person or virtual site visits and energy scoping assessments by Custom Projects engineers to identify projects and energy savings opportunities as conditions allow.

- Funding for detailed energy assessments for larger, complex projects. Virtual assessments can also be offered in many cases.
- M&V of larger, complex projects. Virtual M&V can also be used as conditions allow.
- Technical training for customers, presented virtually or in person as conditions allow.

New Construction

In 2021, more discrepancies were identified in verified projects than in previous years. Idaho Power and the IDL will evaluate the project verification process in 2022 and create a standard that includes verification prior to payment on a minimum of 10% of completed projects. The 2022 evaluation and process update will improve the verification process and reduce discrepancies.

As in past years, Idaho Power will continue to build relationships in 2022 by sponsoring technical training through the IDL to address the energy efficiency education needs of design professionals throughout Idaho Power's service area.

Retrofits

Idaho Power will offer two lighting-related technical trainings to trade allies and large commercial customers in 2022.

Commercial Energy-Saving Kits

	2021	2020
Participation and Savings		
Participants (sites)	906	1,379
Energy Savings (kWh)	296,751	258,368
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$71,501	$97,645
Oregon Energy Efficiency Rider	$3,117	$5,678
Idaho Power Funds	$0	$355
Total Program Costs—All Sources	$74,617	$103,678
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	$0.029	$0.047
Total Resource Levelized Cost ($/kWh)	$0.029	$0.047
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	1.64	1.24
Total Resource Benefit/Cost Ratio	2.00	2.38

Description

The Commercial Energy-Saving Kit (Commercial ESK) program is offered to commercial business customers in Idaho and Oregon. Three industry-specific types are available for restaurants, retailers, and offices (Table 17)—and each contains installation instructions and a variety of items intended to help save energy related to lighting, hot-water use, and intermittently used electrical devices. Idaho Power uses a third-party vendor for kit assembly and mailing. The vendor sends the kit through the mail directly to the customer on the company's behalf.

Table 17. Industry-specific Commercial ESK contents

Restaurant	Retail	Office
(3) 9-watt LED Lightbulbs	(2) 9-watt LED Lightbulbs	(2) 9-Watt LED Lightbulbs
(2) Bathroom Aerator 1.0 gpm	(2) 8-watt LED BR30	(2) Bathroom Aerator 1.0 gpm
(2) Kitchen Aerator 1.5 gpm	(1) Bathroom Aerator 1.0 gpm	(1) Kitchen Aerator 1.5 gpm
(2) Exit Sign Retrofit	(2) Exit Sign Retrofit	(2) Exit Sign Retrofit
(1) Pre-Rinse Spray Valve		(1) Advanced Power Strip

The vendor also batch-ships kits to Idaho Power area offices for distribution by its energy advisors. An energy advisor may then deliver a Commercial ESK while visiting a small business customer and use it as an introduction to the benefits of the other commercial energy efficiency programs offered by the company.

Program Activities

The vendor made no batch shipments in 2021 due to in-person customer visits being drastically reduced because of COVID-19 restrictions. However, Idaho Power continued to offer Commercial ESKs, with a primary focus on small business customers. Nearly all the kits were distributed by mail in 2021.

Idaho Power distributed 906 kits (Table 18), most of which were distributed after a customer made a request through the website or spoke with a company representative on the phone.

A modified RFP was sent to three third-party kit vendors who are currently contracted with Idaho Power or who have been in the recent past. The RFP asked only for pricing on a shortened list of kit items. Due to cost-effectiveness or the RTF deactivating a few of the kit items, they were omitted. The vendor with the lowest kit cost was selected.

Table 18. Energy savings by type and number of Commercial ESKs distributed

State	Kit Type	Total Distributed	kWh Savings
Idaho	Restaurant	206	163,381
	Retail	51	10,940
	Office	611	108,233
Oregon	Restaurant	12	9,517
	Retail	2	429
	Office	24	4,251

Marketing Activities

Idaho Power promoted the Commercial ESKs using LinkedIn posts in February and July. Additionally, the kits were promoted on Facebook, Twitter, and LinkedIn in November in support of Small Business Saturday.

The company displayed a pop-up ad to small business customers who logged into My Account in March, resulting in 417 kit orders. Customers signing into My Account clicked on the pop-up ad and requested a kit through the online order form. The form generated an email that was sent directly to the program specialist, who fulfilled the order.

In May, the company tried a new tactic by sending a targeted email to 478 restaurants. This tactic resulted in 158 kit orders, many of them restaurant kits, but the other two kit types were distributed as well. The company sent a targeted email to 485 retail customers in November that resulted in 49 kits ordered of all kit types.

Cost-Effectiveness

Because no deemed savings values exist for the Commercial ESK program, Idaho Power made several assumptions for each kit. When the offering launched in mid-2018, the installation rates

of the items in the kit were unknown. Idaho Power estimated the installation rates based on professional judgement. A follow-up survey was sent to active participants in November 2020 with an added question regarding fuel type to determine the percentage of electric water heaters. When the kits are distributed, the water heating fuel source is often unknown. Idaho Power updated this assumption in 2021 based on the follow-up survey sent to customers in 2020.

For the LEDs and aerators, savings vary by kit type based on the average annual HOU and annual gallons of water used by business type. Savings for the pre-rinse spray valve in the restaurant kit, and advance power strips for the office kits, were directly from the RTF. Based on the updated savings assumptions, restaurant, retail, and office kits provide approximately 793, 215, and 177 kWh of savings respectively.

In 2021, the RTF reviewed the savings associated with the pre-rinse spray valve and the advanced power strips. For pre-rinse spray valves, the federal standards changed in 2019, and the current standards already met or exceeded the WaterSense specifications. WaterSense has not released a new, more efficient specification. As a result, the RTF deactivated the workbook, and there are no savings associated with the pre-rinse spray valves; the restaurant kit savings declined to 665 kWh.

In regard to the advanced power strips, the RTF found there was large uncertainty around the savings estimates, and more research is needed. Because the measure is shown to be not cost-effective for the region and many office computers already have energy-saving features, a decision was made to deactivate the workbook. Therefore, there are no savings associated with the advanced power strips going forward, and the savings for the office kits decline to approximately 117 kWh. Because of this, the office kits would not be cost-effective as a standalone kit.

At the November EEAG meeting, Idaho Power shared the cost-effectiveness challenges for the kit program and proposed four possible options. With direction from EEAG, it was decided to simplify the offering to one kit, continue sending the kit per customer request, and track the business type ordering the kit.

The Commercial ESK contract with the existing third-party vendor ended as of December 31, 2021, and a new contract featuring the condensed version of the kit with a plain box and minimal marketing to reduce kit costs will be effective in early 2022. The kit distribution will remain dependent on a customer request or through an Idaho Power employee.

For more information about the cost-effectiveness savings and assumptions, see *Supplement 1: Cost-Effectiveness*.

Customer Satisfaction

With customer survey numbers remaining small, it is difficult to quantify the program satisfaction based on the small percentage of surveys returned. Anecdotally, the program specialist received multiple emails with a "thank you" included after the kit was ordered. With the new third-party kit vendor, an emphasis will be placed on survey returns and asking for the fuel source and business type within the survey. The third-party vendor has offered to include survey follow-up and rewards in their contract.

2022 Program and Marketing Strategies

In 2022, Idaho Power anticipates working with the new third-party vendor for Commercial ESK distribution to small business customers. Once the contract is finalized, the marketing activities scheduled include a LinkedIn post and an online pop-up during quarter three or four during the My Account login. Additionally, a kit may be included as one of the welcome offerings when Idaho Power calls new business customers. The online order form will remain available through the company's website, and Idaho Power employees will have the option to distribute the kit while visiting eligible small business customers.

Flex Peak Program

	2021	2020
Participation and Savings		
Participants (sites)	139	141
Energy Savings (kWh)	n/a	n/a
Demand Reduction (MW)	31	24
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$101,236	$84,716
Oregon Energy Efficiency Rider	$175,121	$207,707
Idaho Power Funds	$225,617	$250,056
Total Program Costs—All Sources	$501,973	$542,480
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	n/a	n/a
Total Resource Levelized Cost ($/kWh)	n/a	n/a
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	n/a	n/a
Total Resource Benefit/Cost Ratio	n/a	n/a

Description

The Flex Peak Program is a voluntary program where participants are eligible to earn a financial incentive for reducing load. The program is available to Idaho and Oregon commercial and industrial customers with the objective to reduce the demand on Idaho Power's system during periods of extreme peak electricity use.

Program event guidelines include the following:

- June 15 to August 15 (excluding weekends and holidays)
- Up to four hours per day between 2 and 8 p.m.
- Up to 15 hours per week
- No more than 60 hours per season
- At least three events per season

Customers with the ability to offer load reduction of at least 20 kW are eligible to enroll in the program. The 20-kW threshold allows a broad range of customers to participate in the program. Participants receive notification of a load reduction event two hours before the start of the event.

The program originated in 2009 as the FlexPeak Management program managed by a third-party contractor. In 2015, Idaho Power took over full administration and changed the name to Flex Peak Program. The IPUC issued Order No. 33292 on May 7, 2015, while the OPUC approved Advice No. 15 03 on May 1, 2015, authorizing Idaho Power to implement an internally managed Flex Peak Program (Schedule No. 82 in Idaho and Schedule No. 76 in Oregon) and to continue recovering its demand response program costs in the previous manner.

Program Activities

In 2021, 61 participants enrolled 139 sites in the program. Existing customers were automatically re-enrolled. Participants had a committed load reduction of 36 MW in the first week of the program and ended the season with a committed load reduction of 29.7 MW. The estimated maximum capacity of the program came from the nominated amount in the first week of the season at 36 MW.

This weekly commitment, or nomination, was comprised of all 139 sites. The maximum realization rate during the season was 106%, and the average for the five events was 78%. The realization rate is the percentage of load reduction achieved versus the amount of load reduction committed for an event. The highest hourly load reduction achieved was 30.6 MW (at generation level) during the June 28 event (Table 19).

Table 19. Flex Peak Program demand response event details

Event Details	Monday, June 28	Friday, July 16	Monday, July 26	Thursday, July 29	Thursday, August 12
Event time	4–8 p.m.	4–8 p.m.	4–8 p.m.	4–8 p.m.	4–8 p.m.
Average temperature	101.2° F	95.0° F	96.0° F	98.1° F	98.8° F
Maximum load reduction (MW)	30.6	22.6	20.3	23.1	25.8

Event performance and realization rates for the 2021 season were similar to prior years in the program with the exception of 2020 due to COVID-19 impacts.

Marketing Activities

Though the terms of IPUC Order No. 32923 and OPUC Order No. 13-482 do not require program marketing, Idaho Power energy advisors regularly communicated with interested customers and current participants and encouraged them to enroll new sites.

In 2021, the company ran a My Account pop-up ad promoting enrollment to large commercial customers. Additionally, a LinkedIn post in April promoted program enrollment and a thank you note to participants was posted on LinkedIn in August. The company also continued to include the Flex Peak Program in its C&I Energy Efficiency Program collateral. Additional details can be found in the Commercial/Industrial Sector Overview.

Cost-Effectiveness

Idaho Power determines cost-effectiveness for its demand response program under the terms of IPUC Order No. 32923 and OPUC Order No. 13 482. Under the terms of the orders and the settlement, all of Idaho Power's demand response programs were cost-effective for 2021.

The Flex Peak Program was dispatched for 20 event hours and achieved a maximum load reduction of 30.6 MW. The total cost of the program in 2021 was $501,973. Had the Flex Peak Program been used for the full 60 hours, the cost would have been approximately $707,473.

A complete description of Idaho Power cost-effectiveness of its demand response programs is included in *Supplement 1: Cost-Effectiveness*.

Evaluations

As required each year by the IPUC and OPUC, Idaho Power conducted an internal evaluation of the program's potential load-reduction impacts. A copy of this study is in *Supplement 2: Evaluation*.

In preparation for program changes and to gather customer feedback, the company conducted a survey in early summer 2021 and held an informational webinar in the fall to share possible program changes identified in preparing the 2021 IRP. See the complete survey results in *Supplement 2: Evaluation*.

Additionally, Idaho Power engaged a third-party contractor to conduct an impact evaluation of the Flex Peak Program. The evaluation found the Flex Peak Program to have been operated effectively in 2021, and the method for calculating demand reductions to have been appropriately applied with only minor discrepancies, mostly related to rounding practices.

The evaluation calculated an average realization rate of 77.7%, compared with Idaho Power's calculation of 77.9%. The realization rate is calculated as the percentage of load reduction achieved (average demand reduction) divided by the amount of load reduction committed (average nominated reduction). The evaluation stated the current 3-in-10 baseline methodology is appropriate and recommended consistent rounding practices; a streamlined analytical approach through computer scripting; developing documentation regarding rules for handling errors, missing data and other data validation steps; and continuing to work with customers to refine their nominated load reductions. See the complete analysis report in *Supplement 2: Evaluation*.

Idaho Power will consider all recommendations made in the impact evaluation, and any changes to the program will be reported in the *Demand-Side Management 2022 Annual Report*.

2022 Program and Marketing Strategies

For the 2022 program season, Idaho Power will implement changes recently authorized by the IPUC and OPUC, including lengthening the season to September 15; changing the event window

to later in the evening; increasing the variable incentive; changing the threshold from three to four events for when the variable incentive is paid; modifying the non-performance penalty for events after the first three; and modifying the day-of adjustment calculation.

The company will continue to communicate the program value with enrolled customers and the importance of active participation when events are called. Idaho Power will meet with existing participants during the off-season to discuss past season performance and upcoming season details.

For the upcoming season, Idaho Power will continue its focus on retaining currently enrolled participants and will consider using email marketing and other new tactics to boost program enrollment, with a focus on enrolling national chain stores within Idaho Power's service area. The program will also continue to be marketed along with the C&I Energy Efficiency Program.

Oregon Commercial Audits

	2021	2020
Participation and Savings		
Participants (audits)	3	2
Energy Savings (kWh)	n/a	n/a
Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$0	$0
Oregon Energy Efficiency Rider	$4,401	$1,374
Idaho Power Funds	$0	$
Total Program Costs—All Sources	$4,401	$1,374
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	n/a	n/a
Total Resource Levelized Cost ($/kWh)	n/a	n/a
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	n/a	n/a
Total Resource Benefit/Cost Ratio	n/a	n/a

Description

Oregon Commercial Audits identifies opportunities for all Oregon commercial and industrial building owners, governmental agencies, schools, and small businesses to achieve energy savings. Initiated in 1983, this statutory required program (ORS 469.865) is offered under Oregon Tariff Schedule No. 82.

Through this program, Idaho Power provides no-cost energy audits, evaluations, and educational products to customers through a third-party contractor. During the audits, the contractor inspects the building shell, HVAC equipment, lighting systems, and operating schedules, if available, and reviews past billing data. These visits provide an opportunity for the contractor to discuss available incentives and specific business operating practices for energy savings. The contractor may also distribute energy efficiency program information and remind customers that Idaho Power personnel can offer additional energy-savings tips and information. Business owners can decide to change operating practices or make capital improvements designed to use energy wisely.

Program Activities

In 2021, the program contractor conducted three audits at separate facilities for one customer. COVID-19 restrictions still had an impact on this program in 2021, as in-person site visits were reduced from prior years, and certain customers still had their own business policies that limited in-person visits.

Marketing Activities

Idaho Power sent its annual direct-mailing to 1,590 Oregon commercial customers in August to explain the program's no-cost or low-cost energy audits and the available incentives and resources.

Cost-Effectiveness

As previously stated, the Oregon Commercial Audits program is a statutory program offered under Oregon Schedule 82, the Commercial Energy Conservation Services Program. Because the required parameters of the Oregon Commercial Audits program are specified in Oregon Schedule 82 and the company abides by these specifications, this program is deemed to be cost-effective. Idaho Power claims no energy savings from this program.

2022 Program and Marketing Strategies

Idaho Power does not expect to make any operational changes in 2022. The company will continue to market the program through the annual customer notification and will consider additional opportunities to promote the program to eligible customers via its energy advisors.

Small Business Direct Install

		2021*	2020**
Participation and Savings			
	Participants (audits)	452	139
	Energy Savings (kWh)	2,421,842	780,260
	Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source			
	Idaho Energy Efficiency Rider	$1,052,943	$322,463
	Oregon Energy Efficiency Rider	-($20,887)	$16,981
	Idaho Power Funds	$0	$386
	Total Program Costs—All Sources	$1,032,056	$339,830
Program Levelized Costs			
	Utility Levelized Cost ($/kWh)	$0.062	$0.058
	Total Resource Levelized Cost ($/kWh)	$0.062	$0.058
Benefit/Cost Ratios			
	Utility Benefit/Cost Ratio	0.99	1.04
	Total Resource Benefit/Cost Ratio	1.54	1.61

* 2021 Oregon activity of $8.3k charged to the Idaho Rider was reversed and charged to the Oregon Rider in the first quarter of 2022.
**2020 Idaho activity of $15.9K charged to the Oregon Rider was reversed and charged to the Idaho Rider in the first quarter of 2021.

Description

Idaho Power launched the SBDI program in November 2019 targeting typically hard-to-reach, small business customers in Idaho who use less than 25,000 kWh annually. Idaho Power pays 100% of the cost to assess eligibility and install lighting measures for these customers, using a third-party contractor to operate the program. SBDI is offered to eligible customers in a strategic geo-targeted approach.

Program Activities

In 2021, the company continued offering the SBDI program to customers in eastern Idaho, adding the company's southern portion of the South-East Region in June. Idaho Power sent direct-mail letters to customers informing them of their eligibility to participate, and the contractor followed up with calls offering another opportunity to hear about the program and to declare their interest in participating. As customers responded to the letters and follow-up calls, lighting assessments were scheduled. Customers who agreed to have LEDs installed at their facility were scheduled for project installation. The SBDI contractor continued to implement COVID-19 safety protocols and scheduled 561 lighting assessments, completed 452 project installations, and completed 55 post-installation inspections.

The Southern Region energy advisors began sending thank-you cards to participating SBDI customers in 2021.

Marketing Activities

Idaho Power sent 913 direct-mail letters to business customers in the Eastern Region and 1,869 letters to business customers in the Southern Region in 2021. The program contractor followed up with 1,900 phone calls about a week after they received the letter, resulting in 561 scheduled lighting assessments.

Cost-Effectiveness

In 2021, the projects in the SBDI program were all lighting upgrades. Idaho Power's third-party contractor calculates the savings based on the existing fixture wattage, the replacement fixture wattage, and the HOU. The UCT and TRC ratios for the program are 0.99 and 1.54 respectively. Non-energy impacts were applied in 2021 based on an estimated per kWh value by commercial and industrial end-uses. These values were provided by a third-party as part of the 2019 impact evaluation of the New Construction and Retrofits options. The cost-effectiveness ratios include the costs associated with the 2020 process evaluation which was completed in 2021. If the evaluation costs are removed, the UCT and TRC ratios for the program would be 1.00 and 1.55 respectively. The company will continue to monitor the programs cost-effectiveness as it expands the offering to the Capital and Canyon-West regions (Figure 2) of the service area in 2022.

Details for the program cost-effectiveness are in *Supplement 1: Cost-Effectiveness*.

Customer Satisfaction

Idaho Power's third-party program implementer sent 452 customer satisfaction surveys to program participants in 2021, of which 139 surveys were completed. Key highlights include the following:

- Over 96% of respondents said they were "very satisfied" with the program, and nearly 3% of respondents indicated they were "somewhat satisfied."
- Nearly 96% of respondents reported they were "very satisfied" with the equipment installed, and nearly 4% of respondents indicated they were "somewhat satisfied."
- All respondents found the program easy to participate in, with nearly 98% indicating the program was "very easy" and over 2% reporting it was "somewhat easy" to participate in.
- All respondents reported they would be likely to recommend the program to other small businesses, with nearly 98% saying they were "very likely" and over 2% saying they were "somewhat likely" to recommend the program.

- When asked how their opinion of Idaho Power has changed since participating in the program, over 58% of respondents reported having a more favorable opinion of Idaho Power, and just over 42% of respondents reported no change in opinion.

A copy of the survey results is included in *Supplement 2: Evaluation*.

Evaluations

Idaho Power contracted a third party to conduct a process evaluation for the SBDI program. The evaluation was intended to be completed in 2020; however, due to COVID-19 restrictions, the evaluation was delayed allowing for additional installations. The evaluation found that Idaho Power and its program implementers developed strategies and documentation, and made effective early adjustments, that resulted in a successful launch of the new program. Following are the recommendations of the process evaluation and Idaho Power's response to each.

- *Continue to monitor how lessons learned in each region affect the contents of the Outreach Plan and Program Operations Manual.* The SBDI team holds region wrap-up meetings, as well as annual program review meetings, to identify lessons learned. A plan is then developed to address the lessons learned, and updates are incorporated into the Outreach Plan and Program Operations Manual, as needed. This process will continue through the duration of the SBDI program.
- *Consider additional customer satisfaction follow-up with nonresponding customers.* Idaho Power will work with the SBDI contractor to identify the nonresponding customers, and Idaho Power will begin sending follow-up email surveys in 2022 to customers who did not respond to the survey from the SBDI contractor.
- *Review insurance requirements with the SBDI contractor.* Idaho Power discussed this recommendation with the SBDI contractor in 2021. They were able to adjust some of the insurance requirements to help address a barrier to installer recruitment.
- *Work with the SBDI contractor to ensure a streamlined and efficient process for contractors if reimbursement amounts cannot be increased.* In 2022, the SBDI contractor will begin conducting quality checks on the assessments performed on larger and/or more complex projects prior to scheduling the installation appointment with the customer. The intent of this pre-installation quality check is to ensure the scope of work the installer receives is accurate. This will ensure the installer has the correct equipment to perform the work and understands the installation details. In addition, the SBDI contractor will use geo-targeted mapping when assigning projects to installers to reduce travel time between installations.

- *Continue to improve the process for preparing the customer for the installation.* Idaho Power's SBDI contractor began addressing this recommendation in 2021. Steps taken to better prepare customers for the installation phase included: adding a one-page document to the enrollment form that highlights installation-day expectations; an SBDI field representative verbally communicating to customers what to expect with their particular installation (e.g., any lighting fixtures that are out-of-scope and the reason); and the SBDI call center representative reminding some customers to move equipment or other items to allow installation access.

See the complete analysis report in *Supplement 2: Evaluation*.

2022 Program and Marketing Strategies

Idaho Power will continue to operate and market this program as described above. The company plans to continue to roll out the offering as planned to its Capital and Canyon regions in 2022, which will include some Oregon areas.

Irrigation Sector Overview

The irrigation sector is comprised of agricultural customers operating water pumping or water delivery systems to irrigate agricultural crops or pasturage. End-use electrical equipment primarily consists of agricultural irrigation pumps and center pivots. The irrigation sector does not include water pumping for non-agricultural purposes, such as the irrigation of lawns, parks, cemeteries, golf courses, or domestic water supply.

In July 2021, the active irrigation service locations totaled 21,063 system-wide, which is an increase of 1.2% compared to July 2020. The increase is primarily caused by adding service locations for pumps and center pivot irrigation systems as land is converted from furrow and surface irrigation to sprinkler irrigation.

Irrigation customers accounted for 2,125,733 MWh of energy usage in 2021, versus 1,987,418 MWh in 2020. The approximately 7% increase is primarily because of less rain during the irrigation season and hotter weather. This sector represented nearly 13.7% of Idaho Power's total electricity sales, and approximately 27% of July sales. Though annual electricity use may vary substantially for weather-related reasons, and there are now more irrigation customers, the energy usage trend for this sector has not changed significantly in many years because of the following:

- The added energy usage from new customers is relatively small compared to the energy use of the average existing customer.
- Ongoing improvements through energy efficiency efforts and system replacement offset much of the added energy use.

The Irrigation Efficiency Rewards program, including the GMI, experienced decreased annual savings: from 12,884 MWh in 2020 to 9,700 MWh in 2021. This is due primarily to a decrease in the savings from small maintenance upgrades in the Menu portion of the program.

Idaho Power re-enrolled the majority of 2020 Irrigation Peak Rewards participants in 2021, with 2,235 service points and a maximum load reduction potential of 319.5 MW. Table 20 summarizes the overall expenses and program performance for both programs and shows the actual load reduction was 255.5 MW on June 28, with three groups participating in the load reduction event.

Table 20. Irrigation sector program summary, 2021

Program	Participants	Total Cost		Savings	
		Utility	Resource	Annual Energy (kWh)	Peak Demand (MW)
Demand Response					
Irrigation Peak Rewards	2,235 service points	$ 7,013,315	$ 7,013,315		256
Total		**$ 7,013,315**	**$ 7,013,315**		**256**
Energy Efficiency					
Irrigation Efficiency Rewards	1,019 projects	2,607,200	19,133,627	9,680,497	
Green Motors Initiative—Irrigation	12 motor rewinds	0	87,254	19,352	
Total		**$ 2,607,200**	**$ 19,220,881**	**9,699,849**	

Notes:
See Appendix 3 for notes on methodology and column definitions.
Totals may not add up due to rounding.

Energy Efficiency Programs

Irrigation Efficiency Rewards. An energy efficiency program designed to encourage customers to replace or improve inefficient irrigation systems and components. Customers receive incentives through the Custom Incentive Option for extensive retrofits and new systems and through the Menu Incentive Option for small maintenance upgrades.

Green Motor Initiative. Under the GMI, service center personnel are trained and certified to repair and rewind motors to improve reliability and efficiency. If a rewind returns a motor to its original efficiency, the process is called a "Green Rewind." Idaho Power pays service centers to rewind qualified irrigation motors. Half of this incentive is then given to the customer as a credit on the rewind invoice.

Demand Response Program

Irrigation Peak Rewards. A program designed to reduce peak load from irrigation pumps. Participating service points are automatically controlled by Idaho Power switches or manually interrupted by the customer for very large pumping installations or when switch communication is not available.

Marketing

In 2021, the company mailed a winter edition of *Irrigation News* to all irrigation customers in its service area. In part, the newsletter educated customers about how to sign up for new or upgraded service and communicated changes about the Irrigation Efficiency Rewards program.

The application was put into a tear-pad version so during one-on-one visits, agricultural representatives (ag reps) could easily tear off an application and provide to irrigator.

The company also placed numerous ads in print agricultural publications to reach the target market in smaller farming communities. Publications included the *Capital Press*, *Power County Press/Aberdeen Times*, *Potato Grower* magazine, *Owyhee Avalanche*, and *The Ag Expo East and West* programs. Idaho Power used radio advertising to show support for the Future Farmers of America and Ag Week conferences.

January through March, the company ran 726 radio ads promoting the Irrigation Efficiency Rewards program. The 30-second spots ran in eastern and southern Idaho on a variety of stations, including news/talk, sports, classic rock, adult hits, and country. Social media was used to promote virtual irrigation workshops in quarter 1.

Customer Satisfaction

Idaho Power conducts the *Burke Customer Relationship Survey* each year. In 2021, on a scale of zero to ten, irrigation survey respondents rated Idaho Power 8.03 regarding offering programs to help customers save energy, and 7.98 related to providing customers with information on how to save energy and money. Thirty-three percent of irrigation respondents indicated they have participated in at least one Idaho Power energy efficiency program. Of the irrigation survey respondents who have participated in at least one Idaho Power energy efficiency program, 96% are "very" or "somewhat" satisfied with the program.

Training and Education

Idaho Power continued to market its irrigation programs by varying the location of workshops and offering new presentations to irrigation customers.

In 2021, during to COVID-19 restrictions, Idaho Power provided three virtual and three in-person irrigation workshops and participated in two additional vendor-hosted workshops promoting the Irrigation Efficiency Rewards program; due to COVID-19 restrictions, this number was lower than a typical year. Approximately 150 customers attended virtual workshops or in-person workshops held in Caldwell, Mountain Home, and Weiser, Idaho. Due to COVID-19 restrictions the company did not participate in or have exhibits at any agricultural trade shows.

Field Staff Activities

Idaho Power ag reps were available to be on-site with customers for several months in 2021, offering Idaho Power energy efficiency and demand response program information; education; training; and irrigation system assessments and audits across the service area. Early in 2021, due to COVID-19 restrictions, ag reps were only able to stay in contact with their customers via phone call, email, and text. Later in 2021 on-site work resumed, adhering to COVID-19 safety protocols.

Also, in 2021, ag reps continued their engagement with agricultural irrigation equipment dealers with the goal of sharing expertise about energy-efficient system designs and increasing

awareness about the program. Ag reps and the irrigation segment coordinator, a licensed agricultural engineer, participated in training sponsored by the nationally based Irrigation Association to maintain or obtain their Certified Irrigation Designer and Certified Agricultural Irrigation Specialist accreditations.

Irrigation Efficiency Rewards

		2021	2020*
Participation and Savings			
	Participants (projects)	1,031	1,041
	Energy Savings (kWh)	9,699,849	12,883,970
	Demand Reduction (MW)	n/a	n/a
Program Costs by Funding Source			
	Idaho Energy Efficiency Rider	$2,350,620	$3,165,075
	Oregon Energy Efficiency Rider	$221,523	$194,044
	Idaho Power Funds	$35,057	$42,553
	Total Program Costs—All Sources	$2,607,200	$3,401,673
Program Levelized Costs			
	Utility Levelized Cost ($/kWh)	$0.023	$0.025
	Total Resource Levelized Cost ($/kWh)	$0.166	$0.125
Benefit/Cost Ratios**			
	Utility Benefit/Cost Ratio	3.32	4.00
	Total Resource Benefit/Cost Ratio	4.49	4.09

* 2020 total includes 36,147 kWh of energy savings from 23 Green Motors projects. 2021 total includes 19,352 kWh of energy savings from 12 Green Motors projects.

** 2020 and 2021 cost-effectiveness ratios include evaluation expenses. If evaluation expenses were removed from the program's cost-effectiveness, the 2020 UCT and TRC would be 4.03 and 4.09 and the 2021 UCT and TRC would be 3.34 and 4.49, respectively.

Description

Initiated in 2003, the Irrigation Efficiency Rewards program encourages energy-efficient equipment use and design in irrigation systems. Qualified irrigators in Idaho Power's service area can receive financial incentives and reduce their electricity usage through participation in the program. Two options help meet the needs for major or minor changes to new or existing systems: Custom Incentive and Menu Incentive. Irrigation customers can also qualify for an incentive when they "rewind" their irrigation motors.

Custom Incentive Option

The Custom Incentive Option is offered for extensive retrofits to existing systems or the installation of an efficient, new irrigation system.

For a new system, Idaho Power determines whether the equipment is more energy efficient than the standard before approving the incentive. If an existing irrigation system is changed to a new water source, it is considered a new irrigation system under this program. The incentive for a new system is 25 cents per annual kWh saved, not to exceed 10% of the project cost.

For existing system upgrades, the incentive is 25 cents per annual kWh saved or $450 per kW demand reduction, whichever is greater. The incentive is limited to 75% of the total project cost.

The qualifying energy efficiency measures include any hardware changes that result in a reduction of the potential kWh use of an irrigation system or that result in a potential demand reduction. Idaho Power reviews, analyzes, and makes recommendations on each project after considering prior usage history, invoices, and, in most situations, post-installation demand data to verify savings and incentives.

Menu Incentive Option

The Menu Incentive Option covers a portion of the costs of repairing and replacing specific components that help the irrigation system use less energy. This option is designed for systems where small maintenance upgrades provide energy savings from these 11 measures:

- New flow-control type nozzles
- New nozzles for impact, rotating, or fixed head sprinklers
- New or rebuilt impact or rotating type sprinklers
- New or rebuilt wheel-line levelers
- New complete low-pressure pivot package (sprinkler, regulator, and nozzle)
- New drains for pivots or wheel-lines
- New riser caps and gaskets for hand lines, wheel lines, and portable main lines
- New wheel-line hubs (Thunderbird)
- New pivot gooseneck and drop tube
- Leaky pipe repair
- New center pivot base boot gasket

Incentives are based on a predetermined kWh savings per component from the RTF. Based on the evaluation of the RTF completed in 2021, the kWh annual savings changed for many components with some components being removed because the savings were no longer supported. On January 1, 2022, Idaho Power changed the list of eligible components to exclude new wheel-line hubs, goosenecks, pipe repair and center pivot base boot gaskets. Any invoice dated prior to January 1, 2022, will be eligible for the previous measures and incentive amounts for up to one year from the date of the invoice.

Green Motors Initiative

Idaho Power also participates in the GMPS's GMI. Under the initiative, Idaho Power pays service centers $2 per hp for motors 15 to 5,000 hp that received a verified Green Rewind. Half of that incentive is passed on to irrigation customers as a credit on their rewind invoice.

Program Activities

In 2021, 1,019 projects were completed as follows: 867 used the Menu Incentive Option and provided an estimated 4,608 MWh of energy savings, and 152 used the Custom Incentive Option and provided 5,073 MWh of energy savings (87 new systems and 65 existing systems).

Also, a total of 12 irrigation customers' motors were rewound under the GMI and accounted for 19,352 kWh in savings.

In 2020, Idaho Power contracted with a third party to conduct an impact and process evaluation on the Irrigation Efficiency Rewards program. The recommendations made in the process and impact evaluations were thoughtfully considered and implemented throughout 2021.

The three main process evaluation recommendations and actions taken are described below:

1. *Continue to develop program manual.* The program manual is maintained by the agriculture engineer and the program specialist in an electronic format located in a shared file and accessible by ag reps and others. Continued edits and updates have been made to the program manual.
2. *Continue creating an electronic filing system for all project records.* Menu projects have an attachment option to place all supporting documents in an electronic file associated with the project identification number.
3. *Consider a more systematic method for reviewing vendor activity levels.* The irrigation vendor supply information for each project identification number has been added to the program download worksheet. The program specialist will run a query each quarter and share the information with the ag reps and/or irrigation supply companies. This is a way to reward high participation and identify irrigation suppliers the company may want to contact about increasing participation in the program.

The impact evaluation recommendations and actions taken are described below:

- *Formalize data collection of system operating conditions for custom projects.* A data collection sheet has been developed and will be included in the application package as a single place to store equipment information and operating parameters. The information will include parameters for necessary components, such as nozzles, filters, or end guns. The agriculture representatives will collect make, model and/or specification sheets of critical components of the irrigation systems.

- *Streamline custom calculations.* The baseline for an existing project is the energy used by the existing irrigation system. This will continue to be the baseline because it captures the behavior of irrigators and the equipment in use. The baseline for new projects will be based on supplying an amount of water appropriate for each region. For instance, the Canyon-West Region irrigation systems will have the capability to deliver a larger volume of water per acre than a similar project in the South-East Region.
- *Increase documentation for critical system components.* A sheet that documents the following has been added to the analysis of the installed energy efficiency project information:
  - Pump: brand, model, and impeller trim
  - Sprinkler package description for center pivots and other irrigation systems
  - Documentation of pipe type and size
  - Specific section for product specification sheets

Marketing Activities

In addition to training, education, and marketing activities mentioned in the Irrigation Sector Overview, the Idaho Power ag rep and program specialist worked one-on-one with irrigation dealers and vendors who are key to the successful promotion of the program. In March 2021, the agriculture representatives held three virtual workshops. The content was the same but offered a morning, noon, and afternoon option on three different days so customers could easily join. The virtual seminar focused on the Irrigation Efficiency Rewards program, Idaho Power's website, and self-help tools. The ag rep also visited each irrigation vendor in their area to distribute new menu efficiency applications and explain the program changes and why.

Cost-Effectiveness

Idaho Power calculates cost-effectiveness using different savings and benefits assumptions and measurements for the Custom Incentive Option and the Menu Incentive Option.

Each application under the Custom Incentive Option received by Idaho Power undergoes an assessment to estimate the energy savings that will be achieved through a customer's participation in the program. On existing system upgrades, Idaho Power calculates the savings of a project by determining what changes are made and comparing it to the service point's previous five years of electricity usage on a case-by-case basis. On new system installations, the company uses standard practices as the baseline and determines the efficiency of the applicant's proposed project. Based on the specific equipment to be installed, the company calculates the estimated post-installation energy consumption of the system. The company verifies the completion of the system design through aerial photographs, maps, and field visits

to ensure the irrigation system is installed and used in the manner the applicant's documentation describes.

Each application under the Menu Incentive Option received by Idaho Power also undergoes an assessment to ensure deemed savings are appropriate and reasonable. Payments are calculated on a prescribed basis by measure. In some cases, the energy-savings estimates are adjusted downward from deemed RTF savings to better reflect known information on how the components are actually being used. For example, a half-circle rotation center pivot will save half as much energy per sprinkler head as a full-circle rotation center pivot. All deemed savings are based on seasonal operating hour assumptions by region. If a system's usage history indicates it has lower operating hours than the assumptions, like the example above, the deemed savings are adjusted.

For three years the company has been working with the RTF and the irrigation subcommittee to better understand the maintenance practices of program participants and evaluate the analysis made by the RTF staff. The subcommittee developed an irrigation hardware survey, and in February 2020, Idaho Power mailed the survey to irrigation customers. The company received a 23% response rate, and the RTF reviewed the survey results from Idaho Power, BPA, and PacifiCorp. The results of the analysis were discussed at the March and April 2021 RTF meetings. While measure savings did not change much, the survey results did support an increase in the measure life from 4 to 5 years to 6 to 7 years. For four of the measures (wheel line hubs, goosenecks with drop tube, cut and pipe press or weld repair, and new center pivot base boot gaskets), the research showed little to no savings and the measures were removed from the updated irrigation workbook. With no supported savings, Idaho Power will remove the measures from the Menu offering in 2022.

The longer life improved the cost-effectiveness of the individual measures and allowed for the company to increase the incentives offered for nozzles and wheel line levelers. However, now that lower savings were confirmed for impact or rotating type sprinklers, the incentives needed to be lowered to allow the measure to remain cost-effective. The changes to the measure offerings were effective on December 31, 2021. Any invoice dated December 31, 2021, or before and submitted within one year will be processed under the prior program measure incentive list. For invoices with dates of January 1, 2022, and later, the updated measure list and incentive levels changes are in effect.

The UCT and TRC for the program are 3.32 and 4.49, respectively. If the amount incurred for the 2021 evaluation was removed from the program's cost-effectiveness, the UCT would be 3.34, while the TRC would be 4.49.

Complete measure-level details for cost-effectiveness can be found in *Supplement 1: Cost-Effectiveness*.

Evaluations

In 2020, Idaho Power contracted with a third party to conduct an impact and process evaluation of the Irrigation Efficiency Rewards program. Idaho Power's responses to evaluation recommendations are listed in the Program Activities section above. A copy of the impact and process evaluation is available in the *Demand-Side Management 2020 Annual Report, Supplement 2.*

2022 Program and Marketing Strategies

Irrigation Efficiency Rewards program marketing plans typically include conducting at least six customer-based irrigation workshops to promote energy efficiency, technical education, and program understanding. Assuming COVID-19 policies allow, Idaho Power has committed to a booth at the Idaho Irrigation Equipment Show & Conference, Western Ag Expo, Idaho Potato Show, and the Southern Ag Expo. The focus of the booth material and conversations will be around changes to the Irrigation Efficiency Rewards program and the recently approved program changes to the Irrigation Peak Rewards program. Marketing the program to irrigation supply companies will continue to be a priority, especially to help remind them of the program changes and to distribute program information.

The company will promote the program in agriculturally focused editions of newspapers, magazines, and radio ads. The radio ads will run during the winter/spring throughout the company's South-East region.

Irrigation Peak Rewards

	2021	2020
Participation and Savings		
Participants (service points)	2,235	2,292
Energy Savings (kWh)	n/a	n/a
Demand Reduction (MW)	256	292
Program Costs by Funding Source		
Idaho Energy Efficiency Rider	$239,101	$264,843
Oregon Energy Efficiency Rider	$167,041	$185,224
Idaho Power Funds	$6,607,173	$5,957,345
Total Program Costs—All Sources	$7,013,315	$6,407,412
Program Levelized Costs		
Utility Levelized Cost ($/kWh)	n/a	n/a
Total Resource Levelized Cost ($/kWh)	n/a	n/a
Benefit/Cost Ratios		
Utility Benefit/Cost Ratio	n/a	n/a
Total Resource Benefit/Cost Ratio	n/a	n/a

Description

Idaho Power's Irrigation Peak Rewards program is a voluntary, demand response program available to agricultural irrigation customers with metered service locations who have participated in the past. Initiated in 2004, one of the purposes of the program is to minimize or delay the need to build new supply-side resources.

The program pays irrigation customers a financial incentive to interrupt the operation of specific irrigation pumps using one or more control devices and offers two interruption options: Automatic Dispatch Option and Manual Dispatch Option. Automatic Dispatch Option pumps are controlled by an AMI or cellular device that remotely turns off the pump(s). Manual Dispatch Option pumps can participate if they have 1,000 cumulative hp or if Idaho Power has determined the AMI or cellular technology will not function properly at that location. These customers nominate a kW reduction and are compensated based on the actual load reduction during the event.

Program event guidelines for both interruption options are listed below:

- June 15 to August 15 (excluding Sundays and holidays)
- Up to four hours per day between 1 and 9 p.m.
- Up to 15 hours per week

- No more than 60 hours per season
- At least three events per season

The incentive structure consists of fixed and variable payments. The fixed incentive is $5.00 per kW with an energy credit of $0.0076 per kWh. The demand (kW) credit is calculated by multiplying the monthly billing kW by the demand-related incentive amount. The energy (kWh) credit is calculated by multiplying the monthly billing kWh usage by the energy-related incentive amount. The incentive is applied to monthly bills, and credits are prorated for periods when reading/billing cycles do not align with the program season dates. An additional variable credit of $0.148 per kWh applies to the fourth and subsequent events that occur between 1 p.m. and 8 p.m. The variable credit is increased to $0.198 per kWh when customers allow Idaho Power to interrupt their pumps until 9 p.m.

Program rules allow customers to opt out of dispatch events up to five times per service point. The first three opt outs incur a penalty of $5 per kW, while the remaining two incur a penalty of $1 per kW based on the current month's billing kW. The opt-out penalties will not exceed the total credit that would have been paid with full participation.

Program Activities

In 2021, Idaho Power enrolled 2,235 (80.6%) of the eligible service points in its service area. The total billing demand of participating service locations was 402.8 MW versus 400.5 MW in 2020. The total maximum potential reduction (capacity) for the program was 319.5 MW in 2021 versus 298 MW in 2020. The key factor impacting the higher maximum capacity was due to the weather in 2021 that caused a higher percentage of enrolled pumps to be running on any given day throughout the season.

Device failure identification and correction is an on-going effort pre-season and during season that requires urgency due to the strict timeline of the program. The company used four electrical contractors in 2021 to maintain, troubleshoot, repair, and exchange the AMI devices and cellular devices for dispatching. In May 2021, the company replaced cell device locations with AMI devices where possible. The cell-to-AMI device exchange was possible because additional substations were equipped with the AMI hardware and software. The exchanges will ensure a larger data set on the same technology platform, including analysis of hourly data. The cell device does not allow for hourly monitoring. The removed cell devices were retired.

Table 21 shows the event performance by date and group. The total load reduction shown in 2021 is less than 2020 because not all participants were called on any of the event dates. Not dispatching all four groups on any one day allowed the company to use the program more frequently to match system needs. The program was dispatched for eight event days for a total of 32 event hours and achieved a maximum demand reduction of 255.5 MW (at generation level) on June 28, with only approximately two thirds of participants.

Table 21. Irrigation Peak Rewards demand response event details

Event Details	Friday, June 18	Monday, June 28	Monday, July 12	Friday, July 16	Monday, July 26	Thursday, July 29	Friday, July 30	Thursday, August 12
Event Time	2–8 p.m.	2–9 p.m.	4–9 p.m.	2–8 p.m.	3–9 p.m.	2–8 p.m.	4–8 p.m.	4–9 p.m.
Groups	B, C	A, C, D	A, D	B, C	A, B, D	B, C	A, D	A, B, D
High Temperature*	97	103	102	96	102	99	100	100
Maximum Load Reduction (MW)	173.30	255.52	103.89	181.99	121.13	131.49	69.32	117.32

*National Weather Service, recorded in the Boise area

Marketing Activities

Idaho Power used virtual workshops, direct-mailings, and outreach calls to encourage past participants to re-enroll in the program. The brochure, enrollment worksheet, and contact worksheet were mailed to all eligible participants in March 2021. See the Irrigation Sector Overview section for additional marketing activities.

Cost-Effectiveness

Idaho Power determines cost-effectiveness for the demand response programs under the terms of IPUC Order No. 32923 and OPUC Order No. 13-482. Under the terms of the orders and the settlement, all Idaho Power's demand response programs were cost-effective for 2021.

The Irrigation Peak Rewards program was dispatched for 32 event hours and achieved a maximum demand reduction of 255.5 MW. The total expense for 2021 was $7.0 million and would have been approximately $9.7 million if the program was operated for the full 60 hours.

A complete description of cost-effectiveness results for Idaho Power's demand response programs is included in *Supplement 1: Cost-Effectiveness*.

Evaluations

Each year, Idaho Power produces an internal report of the Irrigation Peak Rewards program. This report includes a load-reduction analysis, cost-effectiveness information, and program changes. A breakdown of the load reduction for each event day and each event hour, including line losses, is shown in Table 22.

In preparation for program changes and to gather customer feedback, the company conducted a survey in early summer 2021 and held an informational webinar in the fall to share possible program changes identified in preparing the 2021 IRP. See the complete survey results in *Supplement 2: Evaluation*.

In addition, in 2021, Idaho Power engaged a third-party contractor to conduct an external impact evaluation of the Irrigation Peak Rewards program. The evaluation found a well-managed program with comprehensive support from Idaho Power staff. The evaluation

calculated realization rates for the events between 76% and 91%, with an average event realization rate of 88%.

The contractor recommended the continuation of the current load reduction calculation methodology and calculating event realization rates as the difference between potential load and achieved load reduction (potential load is defined as the load called in an event that is on at the time of the event, and represents the maximum load reduction that can be expected from a given event). The evaluation also recommended the continued improvement of program infrastructure to reduce data and communication gaps as well as a recommendation to streamline load calculations using computer code. See the complete analysis report in *Supplement 2: Evaluation*.

Idaho Power will consider all recommendations made in the report, and any changes to the program will be reported in the *Demand-Side Management 2022 Annual Report*.

Table 22. Irrigation Peak Rewards program MW load reduction for events

Event Date	2–3 pm	3–4 pm	4–5 pm	5–6 pm	6–7 pm	7–8 pm	8–9 pm
6/18/2021	7.28	92.95	173.30	173.30	166.02	80.35	
6/28/2021	8.83	22.01	203.03	255.52	246.69	233.51	52.49
7/12/2021			60.45	103.89	103.89	103.89	43.43
7/16/2021	8.08	21.18	181.99	181.99	173.91	160.81	0.00
7/26/2021		37.84	90.82	121.13	121.13	83.28	30.31
7/29/2021	3.78	16.98	131.49	131.49	127.71	114.50	
7/30/2021			69.32	69.32	69.32	69.32	
8/12/2021			86.16	117.32	117.32	117.32	31.16

2022 Program and Marketing Strategies

For the 2022 program season, Idaho Power will implement changes recently authorized by the IPUC and OPUC to lengthen the season to September 15; change the event window to later in the evening; increase the incentives; change the threshold from 3 to 4 events for when the variable incentive is paid; modify the opt-out penalty for events after the first three; and open enrollment to all agricultural irrigation customers.

Irrigation Peak Rewards enrollment packets will be sent to all irrigation customers whereas in most recent years only the past participants received an enrollment packet. Each customer will be sent a comprehensive packet containing an informational brochure, enrollment worksheet and a contact worksheet. For all new pump sign-ups, a demand response unit will need to be installed by a contracted electrician prior to June 15, 2022.

Idaho Power will have an informational booth at the local 2022 Ag Expos including Western, Eastern, and Southern. The Irrigation Peak Rewards program will be the focus of in-person and virtual irrigation workshops presented by Idaho Power ag reps in the spring of 2022. The ag

reps will continue to remind and inform customers and encourage program participation in person and by phone.

Other Programs and Activities

Idaho Power's Internal Energy Efficiency Commitment

Renovation projects continued at the Idaho Power Corporate Headquarters (CHQ) in downtown Boise, with a project to exchange the old T-12 parabolic lighting fixtures with LED fixtures on floors six and eight. Remodels continued to incorporate energy efficiency measures, such as lower partitions for better transfer of daylight, other lighting retrofits, and automated lighting controls.

The CHQ building also participated in the Flex Peak Program again in 2021 and committed to reduce up to 200 kW of electrical demand during events. Unlike other program participants, Idaho Power does not receive any financial incentives for its participation.

Local Energy Efficiency Funds

The purpose of Local Energy Efficiency Funds (LEEF) is to provide modest funding for short-term projects that do not fit within Idaho Power's energy efficiency programs but provide a direct benefit to the promotion or adoption of beneficial energy efficiency behaviors or activities. Because Idaho Power has been modifying its existing programs and expanding programs over the years to include as many cost-effective energy efficiency measures as possible for all customers, there has been decreasing participation in the LEEF offering.

In 2021, Idaho Power received two LEEF applications. The first was related to a residential central A/C and windows. The application was reviewed, and the products referenced in the submittal were found to be standard, widely available products, and therefore not appropriate for LEEF. A residential program specialist followed up with the applicant to provide information on incentives currently available through Idaho Power's H&CE Program.

The second LEEF application for funding related to LED lighting upgrades. The scope of work looked to be eligible for lighting incentives in the Retrofit option of the C&I Energy Efficiency program, so a commercial program specialist followed up with the applicant to investigate further.

Market Transformation

Idaho Power's energy efficiency programs and activities are gradually transforming markets by changing customers' knowledge, use, and application of energy-efficient technologies and principles. The traditional market transformation definition is an effort to permanently change the existing market for energy efficiency goods and services by engaging and influencing large national companies to manufacture or supply more energy-efficient equipment. Through market transformation activities, there is promotion of the adoption of energy-efficient materials and practices before they are integrated into building codes or become standard equipment. Idaho Power achieves market transformation savings primarily through its

participation in NEEA. Although, in 2020, Idaho Power and Avista did partner to engage with another third party to explore potential opportunities for traditional market transformation efforts that could benefit customers in both utilities' service areas beyond what NEEA is currently supporting. This engagement resulted in a market transformation pilot being started in 2021 for DHPs in both Idaho Power's and Avista's service areas.

NEEA

Idaho Power has funded NEEA since its inception in 1997. NEEA's role is to look to the future to find emerging opportunities for energy efficiency and to create a path forward to make those opportunities a reality in the region.

Pursuant to IPUC Order No. 34556, Idaho Power participates in NEEA with funding from the Idaho Rider. The current NEEA contract is for the five years from 2020 to 2024. NEEA categorizes the saving it achieves in five categories: total regional savings, baseline savings, local program savings, net market effects, and co-created saving created by NEEA and its utility funders working collaboratively. Of the 360 to 500 average megawatts (aMW) of savings forecast for 2020 to 2024, NEEA expects 70 to 100 aMW to be net market effects, and 115 to 152 aMW will be co-created savings. The current contract commits Idaho Power to paying NEEA $14.7 million, or approximately $2.9 million annually.

In 2021, Idaho Power participated in all NEEA committees and workgroups, including representation on the Regional Portfolio Advisory Committee (RPAC) and the Board of Directors. Idaho Power representatives participate in the RPAC, Cost-Effectiveness Advisory Committee, Commercial Advisory Committee, RETAC and the Idaho Energy Code Collaborative. The company also participated in NEEA's initiatives, including the Residential Building Stock Assessment (RBSA), Commercial Code Enhancement (CCE), SEM, Top-Tier Trade Ally (NXT Level), and LLLC.

For the 2020 to 2024 funding cycle, NEEA and its funders have reorganized the "advisory" committees. NEEA now has two coordinating committees: Products Coordinating Committee and Integrated Systems Coordinating Committee. NEEA and its funders will form working groups as needed in consultation with the RPAC. The RPAC will continue, as well as the Cost-Effectiveness Advisory and the RETAC committees. The Idaho Energy Code Collaborative will also remain intact.

NEEA performed several market progress evaluation reports (MPER) on various energy efficiency efforts this year. In addition to the MPER, NEEA provides market research reports through third-party contractors for energy efficiency initiatives throughout the Northwest. Copies of these and other reports mentioned below are referenced in *Supplement 2: Evaluation* and on NEEA's website under Resources & Reports. For information about all committee and workgroup activities, see the NEEA Activities information below.

In 2022, Idaho Power will work with Avista and hire an independent third-party contractor to conduct an evaluation of the savings NEEA claims and the allocation of those savings to Idaho Power to determine if NEEA is a cost-effective resource, a prudent investment, and in the best interest of Idaho Power customers.

NEEA Marketing

To support NEEA efforts, Idaho Power educated residential customers on HPWH and DHPs and educated commercial customers and participating contractors on NXT Level Lighting Training and LLLC.

Idaho Power promoted DHPs and HPWHs as part of its H&CE Program. Full details can be found in the H&CE Program's Marketing section.

Idaho Power participated in NEEA's residential consumer awareness HPWH marketing campaign from April 1 to May 30. The campaign ran throughout most areas of Oregon and Washington, and in select areas in Idaho and Montana. The campaign creative pieces ran on digital channels including Facebook, Instagram, YouTube, and display ads. Display ads are shown to a person based on their demographics, related to online articles they viewed, or their use of a particular mobile web page or app. The ads reached 95% of the intended audience and viewers saw ads 17.8 times. The creative concept was intended to grab the viewers' attention and play off the idea that nobody really thinks about their water heater.

Idaho Power continued to encourage trade allies to take the NXT Level Lighting Training. Idaho Power posted NXT Level Lighting Training information on its website and on LinkedIn in May. To promote LLLC, Idaho Power continued using a link to an informational LLLC flyer on the main Retrofits and Lighting web pages. The company also posted about LLLCs on LinkedIn in May.

NEEA Activities: All Sectors

Cost-Effectiveness Advisory Committee

The advisory group meets four times a year to review evaluation reports, cost-effectiveness, and savings assumptions. One of the primary functions of the work group is to review all savings assumptions updated since the previous reporting cycle. The committee also reviews NEEA evaluation studies and data collection strategies and previews forthcoming research and evaluations.

Idaho Energy Code Collaborative

Since 2005, the State of Idaho has been adopting a state-specific version of the IECC. The Idaho Energy Code Collaborative was formed to assist the Idaho Building Code Board (IBCB) in the vetting and evaluation of future versions of the IECC for the residential and commercial building sectors. The group is comprised of individuals having diverse backgrounds in the building industry and energy code development. Building energy code evaluations are presented by the group at the IBCB public meetings. The group also educates the building community and

stakeholders to increase energy code knowledge and compliance. Idaho Power is an active member. The work is facilitated by NEEA.

On January 1, 2021, new building and energy codes went into effect in the state of Idaho for residential and commercial buildings. The Idaho Energy Code Collaborative provided statewide resources throughout 2021 to builders and related stakeholders in support of the new codes. The resources included monthly classroom-style online training sessions, a monthly technical newsletter by email, and a robust website—IdahoEnergyCode.com. Idaho Power will continue to participate in the Idaho Energy Code Collaborative.

Regional Emerging Technology Advisory Committee

Idaho Power participated in the RETAC, which met quarterly to review RETAC's emerging technology pipeline that was developed with assistance from the BPA, NEEA, and the Northwest Power and Conservation Council (NWPCC) Seventh Power Plan. The emerging technology pipeline held approximately 45 products and technologies at the end of 2021. At each of the RETAC sessions, the complete pipeline was reviewed and prioritized by the members. Throughout 2021, RETAC focused primarily on space- and water-heating products and their technologies for residential and commercial markets. The technologies centered on heat pumps. RETAC discussed the current state of the technologies and their associated gaps and issues. In each RETAC session, the group discussed ways NEEA and the regional utilities could help address those gaps and issues. This work will continue in 2022.

Regional Portfolio Advisory Committee

RPAC is responsible for overseeing NEEA's market transformation programs and their advancement through key milestones in the "Initiative Lifecycle." RPAC members must reach a full consent vote at selected milestones for a program to advance to the next stage. In 2018, NEEA and RPAC formed an additional group called the RPAC Plus (RPAC+), which included marketing subject matter experts to help coordinate NEEA's marketing activities with those of the funders. RPAC convenes quarterly meetings and adds other webinars as needed.

In 2021, RPAC conducted four quarterly meetings, all of which were virtual. Throughout 2021, RPAC received updates of savings forecasts, portfolio priorities, and committee reports.

In the first regular quarterly meeting on February 24, NEEA staff went over the changes to NEEA's initiative life cycle and RPAC voting milestones. NEEA also presented a variable-speed heat pump program concept and portfolio fit, which RPAC voted to advance into the program development stage. NEEA staff updated the committee on carbon offsets, and research and staff made the committee aware of the following emerging concepts for programs in the NEEA portfolio: fan motor systems integration with the extended motor products program; thin triple-windows; commercial heat pump water heaters for restaurants and hospitality industry; and commercial rooftop HVAC systems with electric heating and cooling capabilities.

On June 1, NEEA staff updated RPAC on recent developments and asked for concept advancement votes on thin triple-pane windows, efficient commercial rooftop units, and fan motor systems integration with the Extended Motor Products program.

At the September 1 meeting, NEEA gave an overview of the thin triple pane windows concept and portfolio fit and RPAC supported advancing it to program development. NEEA also presented their 2022 Operations Plan and timeline.

At the November 2 meeting, NEEA gave RPAC members an overview of the progress on the Extended Motor Products for Pumps initiative and made the committee aware of NEEA's latest work developing a new television test procedure that more accurately reflects real-world usage, its adoption by industry and the Environmental Protection Agency (EPA), and the regional energy savings potential.

NEEA Activities: Residential

The company currently has representation on the NEEA Products Coordinating Committee and the Integrated Systems Coordinating Committee. Meetings were held in each quarter of 2021 for both committees. These committees provide utilities with the opportunity to give meaningful input into the design and implementation of NEEA programs, as well as to productively engage with each other.

NEEA provides BetterBuiltNW online builder and contractor training and manages the regional homes database, AXIS.

Residential Building Stock Assessment

NEEA began work on the RBSA in mid-2020. The RBSA is conducted approximately every five years. Its purpose is to determine common attributes of residential homes and to develop a profile of the existing residential buildings in the Northwest. The information is used by the regional utilities and the NWPCC to determine load forecast and energy-savings potential in the region.

Idaho Power participated in monthly work group meetings to discuss the study's objectives, framework, sampling design, and communication plan. Site visits in the region began at the end of 2021 and will continue through 2022. For residential customers who choose to participate, the third-party contractor will schedule a site visit with a field technician who collects information on the home's characteristics. A COVID-19 safety plan was developed and approved by each utility prior to the start of the site visits.

It is anticipated that Idaho Power customers will be contacted for this study in mid-2022. A final report will be available by the beginning of 2023.

NEEA Activities: Commercial/Industrial

NEEA continued to provide support for commercial and industrial energy efficiency activities in Idaho in 2021, which included partial funding of the IDL for trainings and additional tasks.

Commercial Code Enhancement

NEEA facilitated regional webinars for the CCE initiative for new construction to discuss how utilities can effectively align code changes and utility programs. The CCE is a NEEA initiative comprised of people with varying backgrounds and levels of association with the building construction industry. The group's goal is to enable the continual advancement of commercial construction and energy codes and identify opportunities to highlight above-code best practices in local markets. This work will continue in 2022.

Top-Tier Trade Ally (NXT Level)

NEEA began transitioning long-term delivery of the Top Tier Trade Ally program to a third-party contractor in 2021. One electrical contractor company in the Idaho Power service area achieved NXT Level designation status in 2021. This addition would have resulted in four designated companies; however, one company went out of business in 2021. NXT Level training in-person classes were not offered in Idaho Power's service area in 2021 due to the ongoing COVID-19 pandemic.

Luminaire Level Lighting Controls

NEEA completed the LLLC MPER in 2021. The report centered on first-year tracking of market progress indicators and other research objectives for purposes of gathering additional market intelligence. NEEA reports the key findings in the study include the following:

- Northwest installation companies and design/specification companies have a high level of awareness of LLLC.
- Customers who install LLLC see value in the flexibility of zoning and granularity of control, although market barriers remain. These include higher first cost compared to other types of controls, and a perception of LLLC as complex.
- The study recommends continued training of supply-chain market actors, especially on the LLLC value proposition and best applications.

In 2021, NEEA assisted the IDL in Boise in installing an LLLC system in its office for LLLC training and demonstration purposes. NEEA produced a variety of LLLC educational resources for use by utilities and the public to promote LLLC. The library of educational materials is found at BetterBricks.com.

Throughout 2021, NEEA partnered with utilities and professional associations to offer training opportunities to further develop trade ally understanding and capabilities on the topic of networked lighting controls (NLC) and LLLC systems. Idaho Power hosted the Making Controls

Simple: LLLC Myths & Installation Advantages webinar for its trade allies and large customers in December 2021.

NEEA Funding

In 2020, Idaho Power and NEEA commenced a five-year agreement for the funding cycle of 2020 to 2024. Per this agreement, NEEA implements market transformation programs in the company's service area and Idaho Power is committed to fund NEEA based on a quarterly estimate of expenses up to the five-year total direct funding amount of $14.7 million, or approximately $2.9 million annually. Of this amount, in 2021, 100% was funded through the Idaho and Oregon riders. Funding for the 2020 to 2024 five-year cycle was submitted to IPUC for approval on October 21, 2019. On February 20, 2020, Idaho Power received IPUC Order No. 34556, supporting Idaho Power's participation in NEEA from 2020 to 2024 with such participation to be funded through the Idaho Rider and subject to a prudency review.

In 2021, Idaho Power paid $2,977,678 to NEEA: $2,828,794 from the Idaho Rider for the Idaho jurisdiction and $148,884 from the Oregon Rider for the Oregon jurisdiction. Other expenses associated with Idaho Power's participation in NEEA activities, such as administration and travel, were also paid from the Idaho and Oregon Riders.

Final NEEA savings for 2021 will be released later in the year. Preliminary estimates reported by NEEA for 2021 indicate Idaho Power's share of regional market transformation savings as 17,870 MWh. These savings are reported in two categories: 1) codes-related and standards-related savings of 14,429 MWh (81%) and 2) non-codes-related and non-standards-related savings of 3,440 MWh (19%).

In the *Demand Side Management 2020 Annual Report*, preliminary funding-share estimated savings reported were 15,991 MWh. The final savings included in this report for 2020 final funding-share NEEA savings are 17,614 MWh and include savings from code-related initiatives as well as non-code related initiatives. Idaho Power relies on NEEA to report the energy savings and other benefits of NEEA's regional portfolio of initiatives. For further information about NEEA, visit their website at neea.org.

Regional Technical Forum

The RTF is a technical advisory committee to the NWPCC, established in 1999 to develop standards to verify and evaluate energy efficiency savings. Since 2004, Idaho Power has supported the RTF by providing annual financial support, regularly attending monthly meetings, participating in subcommittees, and sharing research and data beneficial to the forum's efforts.

The forum is made up of both voting members and corresponding members from investor-owned and public utilities, consultant firms, advocacy groups, ETO, and BPA, all with varied expertise in engineering, evaluation, statistics, and program administration. The RTF advises the

NWPCC during the development and implementation of the regional power plan regarding the following RTF charter items:

- Developing and maintaining a readily accessible list of eligible conservation resources, including the estimated lifetime costs and savings associated with those resources and the estimated regional power system value associated with those savings.
- Establishing a process for updating the list of eligible conservation resources as technology and standard practices change, and an appeal process through which utilities, trade allies, and customers can demonstrate that different savings and value estimates should apply.
- Developing a set of protocols by which the savings and system value of conservation resources should be estimated, with a process for applying the protocols to existing or new measures.
- Assisting the NWPCC in assessing 1) the current performance, cost, and availability of new conservation technologies and measures; 2) technology development trends; and 3) the effect of these trends on the future performance, cost, and availability of new conservation resources.
- Tracking regional progress toward the achievement of the region's conservation targets by collecting and reporting regional research findings and energy savings annually.

The current agreement to sponsor the RTF extends through 2024. Under this agreement, Idaho Power is the fourth largest RTF funder, at a rate of $713,300 for the five-year period. For this funding cycle, gas utilities and the gas portion dual-fuel utilities are also funding the RTF.

When appropriate and when the work products are applicable to the climate zones and load characteristics in Idaho Power's service area, Idaho Power uses the savings estimates, measure protocols, and supporting work documents provided by the RTF. In 2021, Idaho Power staff participated in all RTF meetings and the RTF Policy Advisory Committee. At the end of 2021, an Idaho Power analyst was selected to be a voting member of the RTF and will serve as an RTF member for a three-year term effective January 2022.

Throughout the year, Idaho Power reviews any changes enacted by the RTF to savings, costs, or parameters for existing and proposed measures. The company then determines how the changes might be applicable to, or whether they impact, its programs and measures. The company accounted for all implemented changes in planning and budgeting for 2022.

Residential Energy Efficiency Education Initiative

Idaho Power recognizes the value of general energy efficiency awareness and education in creating behavioral change and customer demand for, and satisfaction with, its programs.

The REEEI promotes energy efficiency to the residential sector. The company achieves this by creating and delivering educational materials and programs that result in wise and informed choices regarding energy use and increased participation in Idaho Power's energy efficiency programs.

Kill A Watt Meter Program

The Kill A Watt™ Meter Program remained active in 2021. Idaho Power's Customer Service Center and field staff continued to encourage customers to learn about the energy used by specific appliances and activities within their homes by visiting a local library to check out a Kill A Watt meter.

Figure 21. Kill A Watt meter

Teacher Education

As in previous years, Idaho Power continued to strengthen the energy education relationship with secondary school educators through participation on the Idaho Science, Technology, Engineering, and Mathematics (iSTEM) Steering Committee. In 2021, Idaho Power and Intermountain Gas expanded their reach by adding a second professional development workshop for middle and high school teachers at the summer institutes sponsored by the Idaho STEM Action Center. In addition to the four-day, two-credit professional development workshop offered at the College of Western Idaho, Idaho Power and Intermountain Gas co-sponsored a session at Idaho State University. Due to COVID-19 restrictions, teachers participated virtually while facilitators and guest speakers broadcast from their respective universities.

Customer Education and Marketing

REEEI produced one *Energy Efficiency Guide* in 2021, which was distributed primarily as an insert in local newspapers. The summer-themed guide was published and distributed by 24 newspapers in Idaho Power's service area the week of June 27. The guide focused on information that would be useful to customers as they spend more time at home during the COVID-19 pandemic, including a profile on a customer's recent shed-turned-home-office project, how to choose an electric lawnmower, induction cooking, and how customers can use energy efficiency and other helpful programs to help Idaho Power reach its clean energy goal and to lower customers' own "energy footprint."

Idaho Power promoted the guide on its homepage and on social media. The *Idaho Statesman* published two ads encouraging readers to look for the guide. Digital ads on idahostatesman.com included a homepage takeover on June 28 and July 1, as well as banner ads that ran between June 20 and July 3, earning 150,000 impressions. Digital ads drove traffic to the *Energy Efficiency Guide* on idahopower.com.

On its website, Idaho Power provides links to current seasonal guides and past guides.

REEEI distributed energy efficiency messages through a variety of other communication methods in 2021. Idaho Power increased customer awareness of energy-saving ideas via continued distribution of the fifth printing of the 96-page booklet *30 Simple Things You Can Do to Save Energy*, a joint publishing project between Idaho Power and The EarthWorks Group. In 2021, the program distributed 1,160 copies directly to customers. This was accomplished primarily by fulfilling direct web requests from customers, through energy advisors during in-home visits, and in response to inquiries received by Idaho Power's Customer Care Center.

Idaho Power continues to recognize that educated employees are effective advocates for energy efficiency and Idaho Power's energy efficiency programs. Idaho Power energy efficiency program specialists connected with energy advisors and other employees from each of Idaho Power's geographical regions and the Customer Care Center to discuss educational initiatives and answer questions about the company's energy efficiency programs.

Due to COVID-19 restrictions, Idaho Power participated in a limited number of in-person awareness events. Program specialists and EOEAs looked for virtual opportunities to continue sharing messages regarding low-cost and no-cost energy-saving opportunities. In 2021, despite the COVID-19 pandemic challenges, Idaho Power's EOEAs connected with over 900 groups, and gave over 350 presentations, sharing information, including energy-saving messages, with audiences of all ages. Additionally, Idaho Power's energy efficiency program specialists responded with detailed answers to 216 customer questions about energy efficiency and related topics received via Idaho Power's website.

Because of COVID-19 restrictions for in-person activities, REEEI increased digital communication efforts to bring a variety of energy-saving and money-saving tips to customers. Idaho Power's social media channels and *News Briefs* focused on content designed to help customers save energy while spending more time at home, including working on do-it-yourself (DIY) home improvement projects. COVID-conscious energy efficiency tips continued through the rest of the year, including in a December bill insert and email that provided all residential customers with easy steps to get their home ready for winter heating and behavioral tips for reducing energy use.

Figure 22. DIY winter weatherization tips

Idaho Power promoted National Energy Awareness Month on social media in October. *News Briefs* and the regular KTVB television spots also highlighted Energy Awareness Month activities.

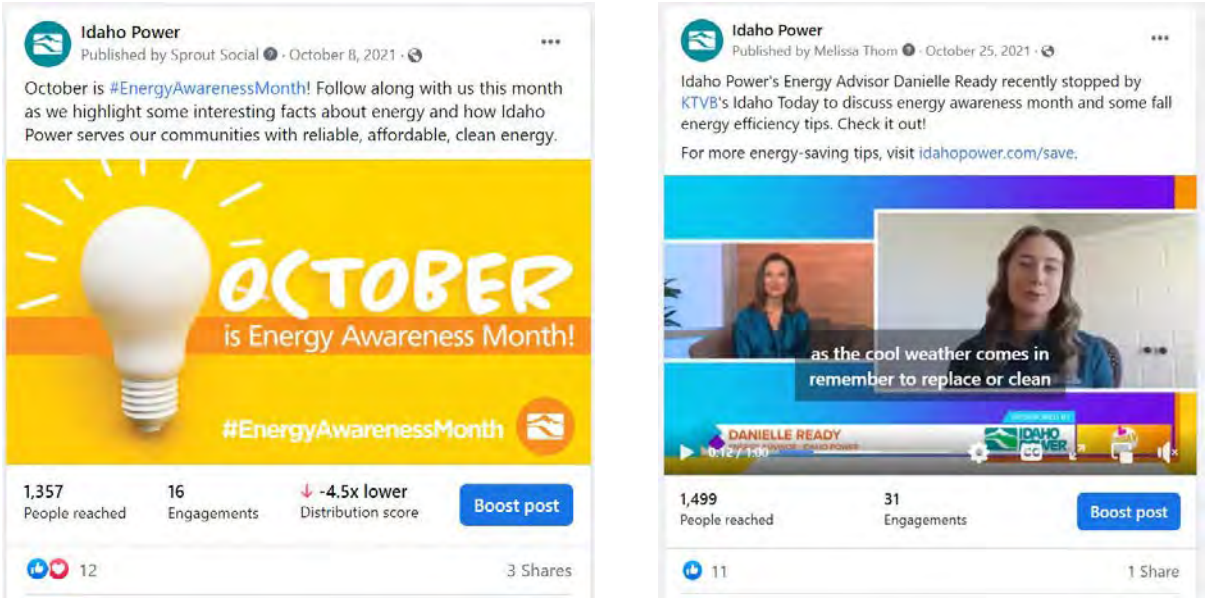

Figure 23. Energy Awareness social media posts

The REEEI continued to provide energy efficiency tips in response to media inquiries and in support of Idaho Power's social media posts. In addition to supplying information for publications, such as *Connections* and Idaho Power's social media pages, energy efficiency tips and content were provided for *News Briefs* and KTVB and KMVT live news segments focusing on energy efficiency.

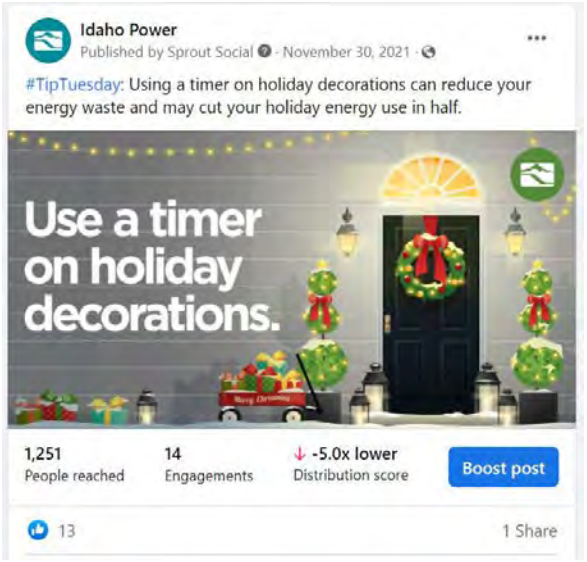

Figure 24. Tip Tuesday post

2022 Program and Marketing Strategies

The initiative's 2022 goals are to improve customer awareness of the wise use of energy, increase program participation, and promote educational and energy-saving ideas that result in energy-efficient, conservation-oriented behaviors.

In addition to producing and distributing educational materials, the initiative will continue to manage the company's Educational Distributions program. Examples of activities conducted under Educational Distributions include developing LED lighting education material, distributing LED nightlights, administering the SEEK program, distributing welcome kits, and the HER Program.

The initiative will continue to educate customers using a multi-channel approach to explore new technologies and/or program opportunities that incorporate a behavioral component.

University of Idaho Integrated Design Lab

Idaho Power is a founding supporter of the IDL (idlboise.com), which is dedicated to the development of high-performance, energy-efficient buildings in the Intermountain West. Idaho Power has worked with the IDL since its inception in 2004 to educate the public about how energy-efficient business practices benefit the business and the customer. In 2021, Idaho Power entered into an agreement with the IDL to perform the tasks and services described below.

Foundational Services

The goal of this task was to provide energy efficiency technical assistance and project-based training to building industry professionals and customers. Requests for IDL involvement in building projects are categorized into one of three types:

- Phase I projects are simple requests that can be addressed with minimal IDL time.
- Phase II projects are more complex requests that require more involvement and resources from the lab.
- Phase III projects are significantly more complex and must be co-funded by the customer.

The IDL provided technical assistance on 16 new projects in Idaho Power's service area in 2021: nine Phase I projects, three Phase II projects, two Phase III projects, and two additional projects that are currently being evaluated to determine the scope of work. Eight of the projects were on new buildings, seven were on existing buildings and one was not specified. The number of projects stayed the same in 2021. The related report is in the IDL section of *Supplement 2: Evaluation*.

Lunch & Learn

The goal of the Lunch & Learn task was to educate architects, engineers, and other design and construction professionals about energy efficiency topics through a series of educational lunch sessions.

In 2021, the IDL scheduled 14 technical training lunches that were conducted virtually due to COVID-19 restrictions. All 14 sessions were available to the public; a total of 104 architects, engineers, designers, project managers, and others attended.

The topics of the lunches (and the number performed of each) were: IAQ and Energy Efficiency in Buildings (1); Daylight in Buildings: Getting the Details Right (1); The Architect's Business Case for Energy Performance Modeling (3); Luminaire Level Lighting Control (1); High-Performance Classrooms (1); High Efficiency Heat Recovery (2); Dedicated Outdoor Air Systems (DOAS) Integration (1); OpenStudio® Parametric Analysis Tool (1); LEED V4.1 Daylighting Credits (1); ASHRAE 209 Energy Simulation Aided Design (1); and ASHRAE 36 High Performance Sequence of Operations for HVAC Systems (1). The related report is in the IDL section of *Supplement 2: Evaluation*.

Building Simulation Users Group

The goal of this task was to facilitate the Idaho BSUG, which is designed to improve the energy efficiency related simulation skills of local design and engineering professionals.

In 2021, six BSUG sessions were hosted by the IDL. All six sessions were hosted virtually due to COVID-19 restrictions. The sessions were attended by 154 professionals. Evaluation forms were completed by attendees for each session. On a scale of 1 to 5, with 5 being "excellent" and 1 being "poor," analyzing results from the first six questions, the average session rating was 4.42 for 2021. For the final question, "The content of the presentation was…" on a scale of 1 to 5, with 1 being "too basic," 3 being "just right," and 5 being "too advanced," the average session rating was 3.53 for 2021.

Each presentation was archived for remote access anytime, along with general BSUG content through the IDL website. The related report is in the IDL section of *Supplement 2: Evaluation*.

New Construction Verification

The goal of this task was to continue random post-project verification on 10% of the total completed C&I Energy Efficiency Program New Construction projects. In 2021, the IDL conducted 12 random on-site, post-project verifications. The purpose of this verification was to confirm program guidelines and requirements, and help participants provide accurate information regarding measure installations. See the New Construction option in the C&I Energy Efficiency Program section for a summary of these activities. The complete verification report is in the IDL section of *Supplement 2: Evaluation*.

This task also included the desk review of all daylight photo-control incentives to improve the quality of design and installation.

Energy Resource Library

The ERL gives customers access to resources for measuring and monitoring energy use on various systems. The goal of this task was to operate and maintain the library, which includes a web-based loan tracking system, and to teach customers how to use the resources in the library.

The inventory of the ERL consists of over 900 individual pieces of equipment. In 2021, 10 new tools were added to replace old data logging models, complete tool kits, and added accessories for kits and other various tools. The tools and manuals are available at no cost to customers, engineers, architects, and contractors in Idaho Power's service area to aid in the evaluation of energy efficiency projects and equipment they are considering. Due to COVID-19 restrictions, a contactless pick-up and drop-off system is in place.

In 2021, nine of the 10 tool loan requests were completed by three unique users from four locations, including three new users. The ERL web page recorded 1,483 visits in 2021. The related report is in the IDL section of *Supplement 2: Evaluation*.

Energy Impacts of IAQ Devices

In 2021, the IDL examined the energy impacts of IAQ devices. The IDL used the energy modeling software, EnergyPlus™, to estimate the effects of adding higher-rated filters, in-room High Efficiency Particulate Air (HEPA) filters, ultraviolet irradiation, ionization devices, and increasing the percentage of outdoor air. The IDL selected eight of the 16 prototype models from the Pacific Northwest National Lab to simulate these operational adjustments. The IDL created a one-page reference document outlining the major points and energy impacts of each IAQ strategy for Idaho facility managers and owners. The related report for this task is in the IDL section of *Supplement 2: Evaluation*.

2022 IDL Strategies

In 2022, the IDL will continue work on Foundational Services, Lunch & Learn sessions, BSUG, New Construction Verifications, ERL, and two new tasks: Power Over Ethernet Demonstration Project and LLLC Workshop Development.

Distributed Energy Resources

Pursuant to Order Nos. 32846 and 32925 in Case No. IPC-E-12-27 and Order No. 34955 in Case No. IPC-E-20-30, Idaho Power files its annual *Distributed Energy Resources (DER) Status Report* with the IPUC in April each year. The report provides updates on participation levels of customer generation, system reliability considerations, and accumulated excess net energy credits. The report can be accessed on Idaho Power's website (idahopower.com/solar); links to

the three most recent reports are located to the right on the web page, in the section labeled *Annual Net Metering Status Reports*.

LIST OF ACRONYMS

A/C—Air Conditioning or Air Conditioner

Ad—Advertisement

AIA—American Institute of Architects

AMI—Advanced Metering Infrastructure

aMW—Average Megawatt

ASHRAE—American Society of Heating, Refrigeration, and Air Conditioning Engineers

B/C—Benefit/Cost

BCASEI—Building Contractors Association of Southeast Idaho

BCASWI—Building Contractors Association of Southwestern Idaho

BOMA—Building Owners and Managers Association

BPA—Bonneville Power Administration

BPI—Building Performance Institute

BSUG—Building Simulation Users Group

C&I—Commercial and Industrial

CAP—Community Action Partnership

CAPAI—Community Action Partnership Association of Idaho, Inc.

CCE—Commercial Code Enhancement

CCNO—Community Connection of Northeast Oregon, Inc.

CDC—Centers for Disease Control and Prevention

CDD—Cooling Degree Days

CEI—Continuous Energy Improvement

CEL—Cost-Effective Limit

CFM—Cubic Feet per Minute

CHQ—Corporate Headquarters (Idaho Power)

CINA—Community in Action

COP—Coefficient of Performance

CR&EE—Customer Relations and Energy Efficiency

CSI—College of Southern Idaho

DHP—Ductless Heat Pump

DIY—Do It Yourself

DOE—US Department of Energy

DR—Demand Response

DSM—Demand-Side Management

EA5—EA5 Energy Audit Program

ECM—Electronically Commutated Motor

EEAG—Energy Efficiency Advisory Group

EICAP—Eastern Idaho Community Action Partnership

EIWC—Eastern Idaho Water Cohort

EL ADA—El Ada Community Action Partnership

EM&V—Evaluation, Measurement, and Verification

EPA—Environmental Protection Agency

EOEA—Education and Outreach Energy Advisors

ERL—Energy Resource Library

ESK—Energy-Saving Kit

ETO—Energy Trust of Oregon

ft—Feet

ft^2—Square Feet

GMI—Green Motors Initiative

GMPG—Green Motors Practice Group

gpm—Gallons per Minute

H&CE—Heating & Cooling Efficiency

HEPA—High Efficiency Particulate Air

hp—Horsepower

HOU—Hours of Use

HPWH—Heat Pump Water Heater

HSPF—Heating Seasonal Performance Factor

HVAC—Heating, Ventilation, and Air Conditioning

IAQ—Indoor Air Quality

IBCA—Idaho Building Contractors Association

IBCB—Idaho Building Code Board

IBEW—International Brotherhood of Electrical Workers

ID—Idaho

IDHW—Idaho Department of Health and Welfare

IDL—Integrated Design Lab

IECC—International Energy Conservation Code

IPMVP—International Performance Measurement and Verification Protocol

IPUC—Idaho Public Utilities Commission

IRP—Integrated Resource Plan

ISM—In-Stadium Marketing

iSTEM—Idaho Science, Technology, Engineering, and Mathematics

kW—Kilowatt

kWh—Kilowatt-hour

LDL—Lighting Design Lab

LEEF—Local Energy Efficiency Funds

LIHEAP—Low Income Home Energy Assistance Program

LLLC—Luminaire Level Lighting Controls

M&V—Measurement and Verification

MPER—Market Progress Evaluation Report

MVBA—Magic Valley Builders Association

MW—Megawatt

MWh—Megawatt-hour

MWSOC—Municipal Water Supply Optimization Cohort

n/a—Not Applicable

NEB—Non-Energy Benefit

NEEA—Northwest Energy Efficiency Alliance

NEEC—Northwest Energy Efficiency Council

NEEM—Northwest Energy-Efficient Manufactured Home Program

NEMA—National Electrical Manufacturers Association

NLC—Networked Lighting Controls

NPR—National Public Radio

NTG—Net to Gross

NWPCC—Northwest Power and Conservation Council

O&M—Operation and Maintenance

OPUC—Public Utility Commission of Oregon

OR—Oregon

ORS—Oregon Revised Statute

OTT—Over-the-Top

PAI—Professional Assistance Incentive

PCA—Power Cost Adjustment

PCT—Participant Cost Test

PLC—Powerline Carrier

PR—Public Relations

PSC—Permanent Split Capacitor

PTCS—Performance Tested Comfort System

QA—Quality Assurance

QC—Quality Control

RAC—Residential Advisory Committee

RBSA—Residential Building Stock Assessment

RCT—Randomized Control Trial

REEEI—Residential Energy Efficiency Education Initiative

RESNET—Residential Energy Services Network

RETAC—Regional Emerging Technology Advisory Committee

RFP—Request for Proposal

Rider—Energy Efficiency Rider

RIM—Ratepayer Impact Measure

RPAC—Regional Portfolio Advisory Committee

RPAC+—Regional Portfolio Advisory Committee Plus

RTF—Regional Technical Forum

SBDI—Small Business Direct Install

SCCAP—South Central Community Action Partnership

SCE—Streamlined Custom Efficiency

SEEK—Student Energy Efficiency Kits

SEICAA—Southeastern Idaho Community Action Agency

SEM—Strategic Energy Management

SIR—Savings-to-Investment Ratio

SRVBCA—Snake River Valley Building Contractors Association

TRC—Total Resource Cost

TRM—Technical Reference Manual

TSV—Thermostatic Shower Valve

UCT—Utility Cost Test

VFD—Variable Frequency Drive

WAP—Weatherization Assistance Program

WAQC—Weatherization Assistance for Qualified Customers

WHF—Whole-House Fan

WWEEC—Wastewater Energy Efficiency Cohort

APPENDICES

Appendix 1. Idaho Rider, Oregon Rider, and NEEA payment amounts (January–December 2021)

Idaho Energy Efficiency Rider		
2021 Beginning Balance	$	(12,230,374)
2021 Funding plus Accrued Interest as of Dec. 31, 2021		33,235,765
Total 2021 Funds		**21,005,391**
2021 Expenses as Dec. 31, 2021		(27,943,096)
Ending Balance as of Dec. 31, 2021	**$**	**(6,937,705)**
Oregon Energy Efficiency Rider		
2021 Beginning Balance	$	(995,040)
2021 Funding plus Accrued Interest as of Dec. 31, 2020		2,032,148
Total 2021 Funds		**1,037,108**
2021 Expenses as of Dec. 31, 2021		(1,721,091)
Ending Balance as of Dec. 31, 2021	**$**	**(683,982)**
NEEA Payments		
2021 NEEA Payments as of Dec. 31, 2021	$	2,977,678
Total	**$**	**2,977,678**

Appendix 2. 2021 DSM expenses by funding source (dollars)

Sector/Program	Idaho Rider	Oregon Rider	Non-Rider Funds	Total
Energy Efficiency/Demand Response				
Residential				
A/C Cool Credit	$ 420,376	$ 25,366	$ 306,247	$ 751,989
Easy Savings: Low-Income Energy Efficiency Education	—	—	145,827	145,827
Educational Distributions	433,963	15,826	—	449,790
Energy Efficient Lighting	41,438	2,194	—	43,631
Energy House Calls	17,375	882	—	18,257
Heating & Cooling Efficiency Program	600,636	34,522	25	635,182
Home Energy Audit	70,448	—	—	70,448
Home Energy Reports	970,197	—	—	970,197
Multifamily Energy Savings Program	65,525	3,449	—	68,973
Oregon Residential Weatherization	—	4,595	—	4,595
Rebate Advantage	164,243	8,950	—	173,193
Residential New Construction Program	246,245	1,356	—	247,600
Shade Tree Project	184,680	—	—	184,680
Weatherization Assistance for Qualified Customers	—	—	1,186,839	1,186,839
Weatherization Solutions for Eligible Customers	54,793	—	2,863	57,656
Commercial/Industrial				
Commercial and Industrial Energy Efficiency Program				
Custom Projects	7,966,164	633,110	9,630	8,608,903
New Construction	2,673,925	17,246	—	2,691,171
Retrofits	3,735,093	91,657	—	3,826,750
Commercial Energy-Saving Kits	71,501	3,117	—	74,617
Flex Peak Program	101,236	175,121	225,617	501,973
Small Business Direct Install	1,052,943	(20,887)	—	1,032,056
Irrigation				
Irrigation Efficiency Rewards	2,350,620	221,523	35,057	2,607,200
Irrigation Peak Rewards	239,101	167,041	6,607,173	7,013,315
Energy Efficiency/Demand Response Total	**$ 21,460,500**	**$ 1,385,066**	**$ 8,519,278**	**$ 31,364,844**
Market Transformation				
NEEA	2,828,794	148,884	—	2,977,678
Market Transformation Total	**$ 2,828,794**	**$ 148,884**	**$ —**	**$ 2,977,678**
Other Programs and Activities				
Commercial/Industrial Energy Efficiency Overhead	742,155	39,474	(3)	781,626
Energy Efficiency Direct Program Overhead	279,095	16,987	—	296,082
Oregon Commercial Audit	—	4,401	—	4,401
Residential Energy Efficiency Education Initiative	470,432	12,635	—	483,067
Residential Energy Efficiency Overhead	1,091,701	57,501	—	1,149,202
Other Programs and Activities Total	**$ 2,583,383**	**$ 130,997**	**$ (3)**	**$ 2,714,377**
Indirect Program Expenses				
Energy Efficiency Accounting & Analysis	1,043,916	54,802	170,043	1,268,761
Energy Efficiency Advisory Group	10,479	552	—	11,031
Local Energy Efficiency Funds	—	—	—	—
Special Accounting Entries	16,024	789	—	16,814
Indirect Program Expenses Total	**$ 1,070,419**	**$ 56,143**	**$ 170,043**	**$ 1,296,605**
Grand Total	**$ 27,943,096**	**$ 1,721,091**	**$ 8,689,318**	**$ 38,353,505**

Appendix 3. 2021 DSM program activity

Program	Participants		Total Costs: Program Administrator [b]	Total Costs: Resource [c]	Savings: Annual Energy (kWh)	Savings: Peak Demand [d] (MW)	Measure Life (Years)	Nominal Levelized Costs [a]: Utility ($/kWh)	Nominal Levelized Costs [a]: Total Resource ($/kWh)
Demand Response[1]									
A/C Cool Credit	20,846	homes	$ 751,989	$ 751,989	n/a	26.7	n/a	n/a	n/a
Flex Peak Program	139	sites	501,973	501,973	n/a	30.6	n/a	n/a	n/a
Irrigation Peak Rewards	2,235	service points	7,013,315	7,013,315	n/a	255.5	n/a	n/a	n/a
Total			**$ 8,267,278**	**$ 8,267,278**		**312.8**			
Energy Efficiency									
Residential									
Easy Savings: Low-Income Energy Efficiency Education	0	HVAC tune-ups	145,827	145,827	0		3	n/a	n/a
Educational Distributions	47,027	kits/giveaways	449,790	449,790	2,931,280		10	0.02	0.02
Energy Efficient Lighting	0	lightbulbs	43,631	43,631	0		14	n/a	n/a
Energy House Calls	11	homes	18,257	18,257	14,985		18	0.10	0.10
Heating & Cooling Efficiency Program	1,048	projects	635,182	2,223,826	1,365,825		15	0.04	0.16
Home Energy Audit	37	audits	70,448	75,461	3,768		11	2.17	2.33
Home Energy Report Program[2]	115,153	treatment size	970,197	970,197	15,929,074		1	0.06	0.06
Multifamily Energy Savings Program	0	units	68,973	68,973	0		11	n/a	n/a
Oregon Residential Weatherization	0	audits/projects	4,595	4,595	0		45	n/a	n/a
Rebate Advantage	88	homes	173,193	327,190	235,004		45	0.05	0.09
Residential New Construction Program	90	homes	247,600	524,876	389,748		61	0.04	0.08
Shade Tree Project	2,970	trees	184,680	184,680	44,173		40	0.27	0.27
Weatherization Assistance for Qualified Customers	162	homes/non-profits	1,186,839	1,690,152	291,105		30	0.25	0.37
Weatherization Solutions for Eligible Customers	7	homes	57,656	57,656	12,591		30	0.32	0.32
Sector Total			**$ 4,256,869**	**$ 6,785,110**	**21,217,554**		**5**	**$ 0.04**	**$ 0.07**
Commercial/Industrial									
Commercial Energy-Saving Kits	906	kits	74,617	74,617	296,751		11	0.03	0.03
Custom Projects	135	projects	8,608,903	22,550,062	53,728,267		13	0.02	0.04
Green Motors—Industrial	4	motor rewinds		12,172	20,430		8		
New Construction	95	projects	2,691,171	4,160,999	17,536,004		12	0.02	0.03
Retrofits	787	projects	3,826,750	11,534,413	21,181,022		12	0.02	0.06
Small Business Direct Install	452	projects	1,032,056	1,032,056	2,421,842		11	0.06	0.06
Sector Total			**$ 16,233,498**	**$ 39,364,320**	**95,184,315**		**13**	**$ 0.02**	**$ 0.04**

Appendix 3. 2021 DSM Program Activity

Program	Participants	Total Costs: Program Administrator [b]	Total Costs: Resource [c]	Savings: Annual Energy (kWh)	Savings: Peak Demand [d] (MW)	Measure Life (Years)	Nominal Levelized Costs [a]: Utility ($/kWh)	Nominal Levelized Costs [a]: Total Resource ($/kWh)
Irrigation								
Green Motors—Irrigation	12 motor rewinds		$ 87,254	19,352		21	n/a	n/a
Irrigation Efficiency Reward	1,019 projects	2,607,200	19,133,627	9,680,497		19	$ 0.02	$ 0.17
Sector Total		**$ 2,607,200**	**$ 19,220,881**	**9,699,849**		**19**	**$ 0.02**	**$ 0.17**
Energy Efficiency Portfolio Total		**$ 23,097,567**	**$ 65,370,310**	**126,101,719**		**12**	**$ 0.02**	**$ 0.06**
Market Transformation								
Northwest Energy Efficiency Alliance (codes and standards)				14,429,280				
Northwest Energy Efficiency Alliance (other initiatives)				3,440,238				
Northwest Energy Efficiency Alliance Totals[3]		**$ 2,977,678**	**$ 2,977,678**	**17,869,518**				
Other Programs and Activities								
Residential								
Residential Energy Efficiency Education Initiative		483,067	483,067					
Commercial								
Oregon Commercial Audits	3 audits	4,401	4,401					
Other								
Energy Efficiency Direct Program Overhead		2,226,910	2,226,910					
Total Program Direct Expense		**$ 37,056,900**	**$ 79,329,643**	**143,971,237**	**313**			
Indirect Program Expenses		1,296,605	1,296,605					
Total DSM Expense		**$ 38,353,505**	**$ 80,626,249**					

[a] Levelized Costs are based on financial inputs from Idaho Power's 2017 IRP, and calculations include line-loss adjusted energy savings.

[b] The Program Administrator Cost is the cost incurred by Idaho Power to implement and manage a DSM program.

[c] The Total Resource Cost is the total expenditures for a DSM program from the point of view of Idaho Power and its customers as a whole.

[d] Demand response program reductions are reported with 9.7% peak loss assumptions.

[1] Peak Demand is the peak performance of each respective program and not combined performance on the actual system peak hour.

[2] Savings have been reduced by 5% to avoid double counting of savings in other energy efficiency programs.

[3] Savings are preliminary estimates provided by NEEA. Final savings for 2021 will be provided by NEEA April 2022.

Appendix 4. 2021 DSM program activity by state jurisdiction

Program	Idaho Participants	Idaho Program Administrator Costs	Idaho Demand Reduction (MW)/ Annual Energy Savings (kWh)	Oregon Participants	Oregon Program Administrator Costs	Oregon Demand Reduction (MW)/ Annual Energy Savings (kWh)
Demand Response[1]						
A/C Cool Credit	20,602 homes	$ 726,623	26.4	244 homes	$ 25,366	0.3
Flex Peak Program	130 sites	326,852	24.8	9 sites	175,121	5.8
Irrigation Peak Rewards	2,187 service points	6,845,971	247.1	48 service points	167,344	8.4
Total		**$ 7,899,446**	**298**		**$ 367,831**	**14**
Energy Efficiency						
Residential						
Easy Savings: Low-Income Energy Efficiency Education	0 HVAC tune-ups	145,827	0	0 HVAC tune-ups	0	
Educational Distributions	45,778 kits/giveaways	433,963	2,822,817	1,249 kits/giveaways	15,826	108,463
Energy Efficient Lighting	0 lightbulbs	41,438	0	0 lightbulbs	2,194	0
Energy House Calls	11 homes	17,375	14,985	0 homes	882	0
Heating & Cooling Efficiency Program	1,017 projects	600,660	1,324,350	31 projects	34,523	41,475
Home Energy Audit	37 audits	70,448	3,768	0 audits	0	
Home Energy Report Program	115,153 treatment size	970,197	15,929,074	0 treatment size	0	
Multifamily Energy Savings Program	33 units	65,525	0	0 projects	3,449	
Oregon Residential Weatherization	n/a			0 audits/projects	4,595	0
Rebate Advantage	84 homes	164,243	223,870	4 homes	8,950	11,134
Residential New Construction Program	90 homes	246,245	389,748	0 homes	1,356	
Shade Tree Project	2,970 trees	184,680	44,173	0 trees		
Weatherization Assistance for Qualified Customers	161 homes/non-profits	1,177,366	289,353	1 homes/non-profits	9,473	1,752
Weatherization Solutions for Eligible Customers	7 homes	57,656	12,591	0 homes	0	
Sector Total		**$ 4,175,622**	**21,054,790**		**$ 81,247**	**162,824**
Commercial						
Commercial Energy-Saving Kits	868 kits	71,501	282,553	38 kits	3,117	14,198
Custom Projects	115 projects	7,975,312	49,487,770	20 projects	633,591	4,240,497
Green Motors—Industrial	4 motor rewinds		20,430	0 motor rewinds		0
New Construction	93 projects	2,673,925	17,503,823	2 projects	17,246	32,181

Appendix 4. 2021 DSM Program Activity by State Jurisdiction

Program	Idaho Participants	Idaho Program Administrator Costs	Idaho Demand Reduction (MW)/ Annual Energy Savings (kWh)	Oregon Participants	Oregon Program Administrator Costs	Oregon Demand Reduction (MW)/ Annual Energy Savings (kWh)
Retrofits	779 projects	3,735,093	20,820,801	8 projects	91,657	360,221
Small Business Direct Install[2]	452 projects	1,052,943	2,421,842	0 projects	(20,887)	0
Sector Total		**$ 15,508,774**	**90,537,219**		**$ 724,723**	**4,647,097**
Irrigation						
Green Motors—Irrigation	12 motor rewinds		19,352	0 motor rewinds		0
Irrigation Efficiency Rewards	983 projects	2,383,924	8,697,322	36 projects	223,276	983,175
Sector Total		**$ 2,383,924**	**8,716,675**		**$ 223,276**	**983,175**
Market Transformation						
Northwest Energy Efficiency Alliance (codes and standards)			13,707,816			721,464
Northwest Energy Efficiency Alliance (other initiatives)			3,268,226			172,012
Northwest Energy Efficiency Alliance Totals[3]		**$ 2,828,794**	**16,976,042**		**$ 148,884**	**893,476**
Other Programs and Activities						
Residential						
Residential Energy Efficiency Education Initiative		470,432			12,635	
Commercial						
Oregon Commercial Audits				3 audits	4,401	
Other						
Energy Efficiency Direct Program Overhead		2,112,948			113,962	
Total Program Direct Expense		**$ 35,379,941**			**$ 1,676,958**	
Indirect Program Expenses		1,231,960			64,646	
Total Annual Savings			**137,284,665**			**6,686,572**
Total DSM Expense		**$ 36,611,901**			**$ 1,741,604**	

[a.] Levelized Costs are based on financial inputs from Idaho Power's 2017 IRP and calculations include line loss adjusted energy savings.

[1.] Peak demand is the peak performance of each respective program and not the combined performance on the actual system peak hour.

[2.] Oregon administrator costs are negative due to account adjustments. Amount charged to the Oregon rider was reversed and charged to the Idaho rider

[3.] Savings are preliminary estimates provided by NEEA. Final savings for 2021 will be provided by NEEA by April 2022.