IDAHO POWER®

DEMAND-SIDE MANAGEMENT ANNUAL REPORT 2024

Supplement 1: Cost-Effectiveness

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SUPPLEMENT 1: COST-EFFECTIVENESS

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

When possible, Idaho Power leverages the experiences of other utilities in the region and/or throughout the country to help identify specific program parameters. This is accomplished through discussions with other utilities' program managers and researchers. Idaho Power also uses electric industry research organizations, such as E Source, Northwest Energy Efficiency Alliance (NEEA), Regional Emerging Technology Advisory Committee (RETAC), the Consortium for Energy Efficiency (CEE), American Council for an Energy-Efficient Economy (ACEEE), and Advanced Load Control Alliance (ALCA) to identify similar programs and their results. Additionally, Idaho Power relies on the results of program impact evaluations and recommendations from consultants.

Goals

Idaho Power's goal is for all energy efficiency programs to have benefit/cost (B/C) ratios greater than 1.0 for the utility cost test (UCT) in Idaho, and the total resource cost (TRC) test in Oregon, at the program and measure level. In addition, Idaho Power looks at both the UCT and TRC, as well as the participant cost test (PCT) at the program and measure level, where appropriate. Each cost-effectiveness test provides a different perspective, and Idaho Power believes each test provides value when evaluating program performance. In 2020, Idaho Power transitioned to the UCT as the primary cost-effectiveness test in Idaho as directed by the Idaho Public Utilities Commission (IPUC) in Order No. 34503. Programs and measures offered in Oregon must still use the TRC as the primary cost-effectiveness test as directed by the Public Utility Commission of Oregon (OPUC) in Order No. 94-590. The company will continue calculating the UCT, TRC, and PCT because each perspective can help inform the company and stakeholders about the effectiveness of a particular program or measure.

Idaho Power's goal is for all demand response programs is to minimize or delay the need to build new supply-side resources. Unlike energy efficiency programs or supply-side resources, demand response programs must acquire and retain participants each year to maintain deployable demand-reduction capacity for the company.

When an existing energy efficiency program or measure is not cost-effective or is expected to become not cost-effective from either the UCT perspective in Idaho or the TRC perspective in

Oregon, Idaho Power works with the Energy Efficiency Advisory Group (EEAG) to get additional input about next steps. The company demonstrates why the non-cost-effective measures or programs were implemented, or continue to be offered, and communicates the steps the company plans to take to improve cost-effectiveness or end the offering. This aligns with the expectations of the IPUC and OPUC.

In OPUC Order No. 94-590, issued in UM 551, the OPUC outlines specific cost-effectiveness guidelines for energy efficiency measures and programs managed by program administrators. The OPUC expects that measures and programs offered in Oregon pass the TRC test. If Idaho Power determines a program or measure is not cost-effective but meets one or more of the exceptions set forth by Order No. 94-590, the company files an exceptions request with the OPUC to continue offering the measure or program within its Oregon service area.

Non-cost-effective measures and programs may be offered by a utility if they meet one or more of the following additional conditions specified by Section 13 of OPUC Order No. 94-590:

A. The measure produces significant non-quantifiable non-energy benefits (NEB)
B. Inclusion of the measure will increase market acceptance and is expected to lead to reduced cost of the measure
C. The measure is included for consistency with other demand-side management (DSM)
D. programs in the region
E. Inclusion of the measure helps increase participation in a cost-effective program
F. The package of measures cannot be changed frequently, and the measure will be cost-effective during the period the program is offered
G. The measure or package of measures is included in a pilot or research project intended to be offered to a limited number of customers
H. The measure is required by law or is consistent with OPUC policy and/or direction

For operational and administrative efficiency, Idaho Power endeavors to offer identical programs in both its Oregon and Idaho jurisdictions; however, due to the different primary cost-effectiveness tests in each state, measures may not be offered in both states.

Methodology

For its cost-effectiveness methodology, Idaho Power relies on the Electric Power Research Institute (EPRI) End Use Technical Assessment Guide (TAG); the California Standard Practice Manual and its subsequent addendum; the National Action Plan for Energy Efficiency's (NAPEE) Understanding Cost Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers.

For energy efficiency programs, each program's cost-effectiveness is reviewed annually from a one-year perspective. The annual energy-savings benefit value is summed over the life of the measure or program and is discounted to reflect 2024 dollars.

Idaho Power determines cost-effectiveness for its demand response programs using the approved method for valuing demand response under IPUC case IPC-E-21-32 (Order No. 35336) and OPUC ADV 1355/Advice No. 21-12. The avoided cost calculation for demand response programs is as follows:

(Levelized Fixed Costs – Additional Benefits) x Effective Load Carrying Capacity (ELCC) of Annual DR Capacity Compared to Proxy Resource = $ per kW year DR Avoided Costs

Each of the three components have been updated:

1. From the *2023 Integrated Resource Plan (IRP)*, the 2024 levelized fixed cost value of a Simple-Cycle Combustion Turbine (SCCT) was determined to be $145.94 per kW per year.
2. From the *2023 IRP*, to determine the additional ancillary benefits provided by the SCCT compared to demand response, an analysis was performed where demand response was replaced with an equivalent SCCT and the fixed costs of the SCCT were removed from the model. The analysis resulted in additional SCCT benefits of $1.66 per kW per year.
3. The updated ELCC of approximately 323 MW of demand response capacity compared to a SCCT using *2023 IRP* assumptions is 43.24%.

Assumptions

Idaho Power relies on third-party research to obtain savings and cost assumptions for various measures. These assumptions are routinely reviewed internally and with EEAG and updated as new information becomes available. For many of the residential and irrigation measures, savings and costs were derived from either the Regional Technical Forum (RTF) or the Idaho Power Energy Efficiency Potential Study conducted by Applied Energy Group (AEG).

The RTF regularly reviews, evaluates, and recommends eligible energy efficiency measures and provides the estimated savings and costs associated with those measures. As the RTF updates these savings and cost assumptions, Idaho Power applies them to current program offerings and assesses the need to make any program changes. Idaho Power staff participates in the RTF by attending monthly meetings and contributing to various sub-committees. Depending on the workbook referenced, data from the RTF is in either 2012 or 2016 dollars and must be escalated to 2024 dollars. For costs in 2012 dollars, the costs are escalated by 32.9%. For costs in 2016

dollars, the costs are escalated by 24.5%. These percentages are provided by the RTF in workbook RTFStandardInformationWorkbook_v4_8.xlsx.

Idaho Power uses a technical reference manual (TRM) developed by ADM Associates, Inc. for the savings and cost assumptions in the Commercial and Industrial (C&I) Energy Efficiency Program's New Construction and Retrofits options and the Multifamily Energy Efficiency Program. In 2020, the company began the process to update the assumptions in the C&I TRM based on the 2018 International Energy Conservation Code (IECC). The updated C&I TRM is the source for most prescriptive savings values for the New Construction and Retrofits options in the C&I Energy Efficiency program and have been implemented as of mid-2021. In 2023, Idaho Power contracted with ADM Associates to create a Multifamily TRM.

Idaho Power also relies on other sources for savings and cost assumptions, such as the Northwest Power and Conservation Council (NWPCC), Northwest Energy Efficiency Alliance (NEEA), the Database for Energy Efficiency Resources (DEER), the Energy Trust of Oregon (ETO), the Bonneville Power Administration (BPA), third-party consultants, and other regional utilities. Occasionally, Idaho Power will also use internal engineering estimates and calculations for savings and costs based on information gathered from previous projects.

The company freezes savings assumptions when the budgets and goals are established for the next calendar year unless a code changes, a standard changes, or program updates necessitate a need to use updated savings. These assumptions are discussed in more detail in the cost-effectiveness sections for each program in the Demand-Side Management 2024 Annual Report. Generally, the 2024 energy savings reported for most programs will use the assumptions set at the beginning of the year. One exception was regarding the lighting savings assumption.

The remaining inputs used in the cost-effectiveness calculations are obtained from the IRP process. Idaho Power's *2023 IRP* was acknowledged by the IPUC under case IPC-E-23-23 on June 18, 2024, and with the OPUC under case LC 84 on August 26, 2024. The *2023 IRP i*s the source for all financial and cost-effectives analysis for the 2024 energy efficiency programs. As noted earlier, the *2023 IRP* is also used to determine the cost-effectiveness threshold for the demand response programs.

On September 29, 2023, Idaho Power filed its *2023 IRP* with the IPUC under case IPC-E-23-23 and with the OPUC under case LC 84. At the EEAG meeting on August 17, 2023, Idaho Power presented its proposal to use avoided costs from the most recently "filed" IRP rather than the most recently "acknowledged" IRP for DSM program planning. The intent of this shift is to reduce lag time between when the avoided costs are updated and used for program planning and cost-effectiveness evaluations. *Appendix C—Technical Appendix* of *Idaho Power's 2023 IRP* contains the financial assumptions— such as discount rate, escalation rate and line losses--used in the energy efficiency cost-effectiveness analysis. DSM avoided costs vary by season and time

of day and are applied to an end-use load shape to obtain the value of a particular measure or program. DSM avoided energy costs are based on both the projected fuel costs of a peak-load serving resource and forward electricity prices as determined by Idaho Power's power supply model, AURORAxmp® Electric Market Model. The avoided capital cost of capacity is based on a gas-fired, simple-cycle turbine. Transmission and distribution (T&D) benefits are also included in the cost-effectiveness analyses.

As recommended by the NAPEE's Understanding Cost-Effectiveness of Energy Efficiency Programs¸ Idaho Power's weighted average cost of capital (WACC) of 7.12% is used to discount future benefits and costs to today's dollars. Once the DSM avoided costs and load shapes are applied to the annual

kWh savings of a measure or program, the WACC is used to calculate the net present value (NPV) of the annual benefit for the UCT and TRC test B/C ratios. However, determining the appropriate discount rate for participant cost and benefits is difficult because of the variety of potential discount rates that can be used by participants. Because the participant benefit is based on the anticipated bill savings of the customer, Idaho Power believes an alternate discount rate in place of the WACC is appropriate.

The participant bill savings are based on Idaho Power's 2023 average customer segment rate and are not escalated. The participant bill savings are discounted using a real discount rate of 4.405%, which is based on the *2023 IRP's* WACC of 7.12% and an escalation rate of 2.6%. The real discount rate is used to calculate the NPV of any participant benefits or costs for the PCT or ratepayer impact measure (RIM) B/C ratios. The formula to calculate the real discount rate is as follows:

$$((1 + \text{WACC}) \div (1 + \text{Escalation})) - 1 = \text{Real}$$

Line-loss percentages are applied to the metered-site energy savings to find the energy savings at the generation level. The *Demand-Side Management 2024 Annual Report* shows the estimated electrical savings at the customer meter level. Cost-effectiveness analyses are based on generation-level energy savings. The demand response program reductions are reported at the generation level with the line losses. For the cost-effectiveness calculations of the energy efficiency programs, the system line-loss factor of 6.0% and the summer peak line-loss factor of 6.5% from the *2023 IRP* were utilized. The line-loss percentages were re-evaluated in preparation for the *2023 IRP*.

Conservation Adder

The Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act) states the following:

> …any conservation or resource shall not be treated as greater than that of any non-conservation measure or resource unless the incremental system cost of such conservation or resource is in excess of 110 per centum of the incremental system cost of the non-conservation measure or resource.
>
> As a result of the Northwest Power Act, most utilities in the Pacific Northwest add a 10% conservation adder in energy efficiency cost-effectiveness analyses. In OPUC Order No. 94-590, the OPUC states:
>
> We support the staff's position that the effect of conservation in reducing uncertainty in meeting load growth is included in the ten percent cost adder and that no separate adjustment is necessary.

Additionally, in IPUC Order No. 32788 in Case No. GNR-E-12-01, "Staff noted that Rocky Mountain Power and Avista use a 10% conservation adder when calculating the cost-effectiveness of all their DSM programs." Staff recommended the utilities have the option to use a 10% adder, and the IPUC agreed with the recommendation to allow utilities to use the 10% adder in the cost-effectiveness analyses for low-income programs.

After reviewing the practices of other utilities in the Pacific Northwest, as well as the OPUC Order No. 94-590 and IPUC Order 32788, Idaho Power applies the 10% conservation adder in all energy efficiency measure and program cost-effectiveness analyses when calculating the TRC test.

Net-to-Gross

Net-to-gross (NTG), or net-of-free-ridership (NTFR), is defined by NAPEE's *Understanding Cost-Effectiveness of Energy Efficiency Programs* as a ratio that does the following:

> Adjusts the impacts of the programs so that they only reflect those energy efficiency gains that are the result of the energy efficiency program. Therefore, the NTG deducts energy savings that would have been achieved without the efficiency program (e.g., 'free-riders') and increases savings for any 'spillover' effect that occurs as an indirect result of the program. Since the NTG attempts to measure what the customers would have done in the absence of the energy efficiency program, it can be difficult to determine precisely.

Capturing the effects of Idaho Power's energy efficiency efforts on free-ridership and spillover is difficult. Due to the uncertainty surrounding NTG percentages, Idaho Power used an NTG of 100% for nearly all measure and program cost-effectiveness analyses.

Sensitivity analyses are conducted to show what the minimum NTG percentage needs to be for a program to remain (or become) cost-effective from either the TRC or UCT perspective. These NTG percentages are shown in the program cost-effectiveness pages of this supplement.

Results

Idaho Power calculates cost-effectiveness on a program basis and, where relevant, a measure basis. As part of *Supplement 1: Cost-Effectiveness* and where applicable, Idaho Power publishes the

cost-effectiveness by measure, the PCT and RIM test at the program level, the assumptions associated with cost-effectiveness, and the sources and dates of metrics used in the cost-effectiveness calculation.

The B/C ratio from the participant cost perspective is not calculated for the following programs: Educational Distributions, Home Energy Report Program, Shade Tree Program, Weatherization Assistance for Qualified Customers (WAQC) in Idaho and Oregon, and Weatherization Solutions for Eligible Customers. These programs have few or no participant-related costs. For energy efficiency programs, the cost-effectiveness analyses do not assume ongoing participant costs. However, anticipated future costs are used to develop the life-cycle cost-effectiveness analysis for the Home Energy Report Program.

This supplement contains annual cost-effectiveness metrics for each program using actual information from 2024 and includes results of the UCT, TRC, PCT, and RIM. Current customer energy rates are used in the calculation of the B/C ratios from a PCT and RIM perspective. Rate increases are not forecasted or escalated. A summary of the cost-effectiveness by program can be found in Table 1.

Table 1. Cost-effectiveness summary by energy efficiency program 2024

Program/Sector	UCT	TRC	Ratepayer Impact Measure (RIM)	PCT
Educational Distributions	2.31	2.69	0.51	n/a
Heating & Cooling Efficiency Program	0.95	0.39	0.34	0.93
Home Energy Report Program	1.31	1.44	0.41	n/a
Multifamily Energy Efficiency Program	1.16	0.75	0.37	2.14
Rebate Advantage	1.16	0.47	0.28	1.64
Residential New Construction Program	1.04	1.09	0.29	3.20
Shade Tree Project[1]	–	–	–	–
Weatherization Assistance for Qualified Customers (Idaho)	0.16	0.22	0.11	n/a
Weatherization Assistance for Qualified Customers (Oregon)	0.06	0.20	0.05	n/a
Weatherization Solutions for Eligible Customers	0.14	0.21	0.10	n/a
Residential Energy Efficiency Sector[2]	**1.25**	**0.95**	**0.39**	**3.37**
Commercial and Industrial Energy Efficiency Program				
Custom Projects	2.21	0.91	0.71	1.18
New Construction	2.46	2.32	0.70	3.06
Retrofits	1.96	0.96	0.70	1.20
Small Business Lighting Program	0.25	0.35	0.20	1.89
Commercial/Industrial Energy Efficiency Sector	**2.22**	**1.12**	**0.71**	**1.44**
Irrigation Efficiency Rewards	1.65	3.86	0.66	4.04
Irrigation Energy Efficiency Sector[3]	**1.65**	**3.86**	**0.66**	**4.04**
Energy Efficiency Portfolio[4]	**1.72**	**1.64**	**0.62**	**2.18**

[1] Program closed in 2024, cost-effectiveness not calculated.

[2] Residential sector cost-effectiveness excludes WAQC benefits and costs. If included, the UCT, TRC, RIM, and PCT would be 0.88, 0.71, 0.34, and 2.73, respectively.

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

[4] Portfolio cost-effectiveness excludes WAQC benefits and costs. If included, the UCT, TRC, RIM, and PCT would be 1.63, 1.59, 0.60, and 2.16, respectively.

Non-Cost-Effective Programs

In 2024, most of Idaho Power's energy efficiency programs were cost-effective from the UCT perspective, except for Heating & Cooling Efficiency, Small Business Lighting, and the two weatherization programs for income-qualified customers (Table 1).

The Heating & Cooling Efficiency Program had a UCT of 0.95 and TRC of 0.39. The program's overall cost-effectiveness was impacted by the decline in participation from 1,035 participants in 2023 to 622 in 2024, a decrease of 40.3%. As a result, the program savings decreased by 21.2% in 2024. Despite the lower savings, the UCT ratio increased from 0.94 in 2023 to 0.95 in 2024. This increase was driven largely by modifications made to several of the program's incentives. The updated avoided costs from the 2023 IRP also benefited most measures in the program.

Small Business Lighting had a UCT of 0.25 and TRC of 0.35. Nine projects were completed in 2024, driving 22,967 kWh of savings. The program was not expected to be cost-effective in 2024 due to its launch being in the final quarter of the program year. The company is expecting participation to increase and for the program to become cost-effective for the 2025 program year.

In 2024, Idaho Power began separating its cost-effectiveness reporting for the WAQC program by state (Idaho and Oregon). WAQC Idaho had a UCT Ratio of 0.16 and a TRC of 0.22, which includes the savings and costs associated with re-weatherization. Excluding re-weatherization, the program has a UCT ratio of 0.17 and TRC ratio of 0.22. The UCT and TRC ratios for re-weatherization in Idaho are 0.07 and 0.08, respectively. WAQC Oregon had a UCT Ratio of 0.06 and TRC of 0.20. Weatherization Solutions for Eligible Customers had a UCT of 0.14 and TRC of 0.21

To calculate the cost-effectiveness for the income-qualified weatherization programs, Idaho Power adopted the following IPUC staff recommendations from Case No. GNR-E-12-01:

- Applied a 100% NTG.
- Claimed 100% of energy savings for each project.
- Included indirect administrative overhead costs. The overhead costs of 5.152% were calculated from the $2,069,530 of indirect program expenses divided by the total DSM expenses of
- $40,166,589, as shown in Appendix 3 of the *Demand-Side Management 2024 Annual Report*.
- Applied the 10% conservation preference adder.
- Amortized evaluation expenses over a three-year period.
- Claimed one dollar of NEBs for each dollar of utility and federal funds invested in health, safety, and repair measures.

While the WAQC and Weatherization Solutions for Eligible Customers remain not cost-effective, Idaho Power will continue to offer the programs to the company's limited-income customers on an ongoing basis, unless the Idaho and Oregon commissions direct otherwise. Idaho Power will also continue to consult with EEAG and the weatherization managers at the Community Action Partnerships to look for ways to improve the programs' cost-effectiveness.

Sector and Portfolio Cost-Effectiveness

The sector cost-effectiveness ratios include all the benefits and costs associated with programs that produce quantifiable energy savings. The portfolio cost-effectiveness is the sum of all energy efficiency activities, including those that do not have savings associated, such as overhead expenses. For 2024, the commercial and industrial sector had a UCT of 2.22 and TRC

of 1.12, and irrigation sector had a UCT of 1.65 and TRC of 3.86. The residential portfolio cost-effectiveness was calculated with and without the benefits associated with WAQC. While the program provides real savings to customers that would otherwise be unable to afford to weatherize their home, it remains not cost-effective. Presenting the cost-effectiveness of the residential sector with and without WAQC remains consistent with how other Idaho utilities present their sector and portfolio cost-effectiveness results. Without WAQC, the residential sector has a UCT of 1.25 and TRC of 0.95 and the portfolio has a UCT of 1.72 and TRC of 1.64. With WAQC, the residential sector has a UCT of 0.88 and TRC of 0.71 and the portfolio has a UCT of 1.63 and TRC of 1.59.

Exception Requests

A total of 120 out of 324 individual measures in various programs are not cost-effective from either the UCT or TRC perspective. Of the 120 measures, 41 are not cost-effective from the UCT perspective. Twenty-one additional measures would be cost-effective without the inclusion of administration expenses. There are 22 new measures with the addition of the Multifamily Energy Efficiency Program.

For most of the measures offered in Oregon that fail the TRC, Idaho Power filed cost-effectiveness exception requests with the OPUC in compliance with Order No. 94-590. Measures and programs that do not pass these tests may be offered by the utility if they meet one or more of the additional conditions specified by Section 13 of Order No. 94-590. These exception requests were approved under UM-1710 or with the specific program advice filings. The filings and exception requests are noted in Table 2.

Table 2. 2024 non-cost-effective measures

Program	Number of Measures	Number of Non-Cost-Effective Measures	Number Fail UCT	Number Fail TRC	Notes
Custom Projects-Energy Management	6	5	5	4	Five offerings fail UCT. Without admin costs, all offerings pass UCT and all but one offering pass TRC.
Custom Projects-Green Motors	34	1	0	1	One offering falls short of TRC but passes TRC with admin costs excluded.
Educational Distributions	3	0	0	0	
Heating & Cooling Efficiency Program	12	10	4	10	Four measures fail UCT, but all would pass UCT with admin costs excluded. Of the ten measures that fail TRC, two would be cost effective with admin costs removed. Exception request for the program request and approved with UM-1710, Order No. 23-110.
Irrigation Efficiency Rewards	7	0	0	0	
Irrigation Efficiency-Green Motors	34	0	0	0	
Multifamily Energy Efficiency Program	19	15	2	15	All measures pass UCT with admin costs excluded. Of the measures that fail TRC, one would become cost-effective with admin costs excluded. Exception request for the program requested and approved with ADV-1540, Order No. 23-10.
New Construction	60	25	13	22	13 measures fail UCT. Two measures pass UCT with the exclusion of admin costs. No measures change in TRC cost-effectiveness when admin costs are excluded.
Rebate Advantage	12	12	0	12	All measures pass UCT, no measures pass TRC.
Residential New Construction	3	2	2	1	One additional measure passes UCT when admin costs are excluded.
Retrofits	132	49	15	49	One additional measure passes UCT when admin costs are excluded.
Small Business Lighting	2	1	0	1	Of the two measure categories, both pass UCT and one passes TRC.
Total	**324**	**120**	**41**	**115**	

2024 DSM Detailed Expenses by Program

Table 3 details the program expenses shown in Appendix 2 of the *Demand-Side Management 2024 Annual Report*. These expenses are broken out by funding source and major-expense type (labor/administration, materials, other expenses, purchased services, and incentives).

Table 3. 2024 DSM detailed expenses by program (dollars)

Sector/Program	Idaho Rider	Oregon Rider	Idaho Power	Total Program
Energy Efficiency/Demand Response	**$19,880,628**	**$712,508**	**$1,662,978**	**$22,256,114**
Residential	**3,229,080**	**65,059**	**478,367**	**3,772,506**
Easy Savings: Low-Income Energy Efficiency Education	**125,050**	–	**29,596**	**154,646**
Labor/Administrative Expense	–	–	29,596	29,596
Materials & Equipment	13	–	0	13
Other Expense	37	–	–	37
Purchased Services	125,000	–	–	125,000
Educational Distributions	**737,775**	**13,280**	–	**751,055**
Labor/Administrative Expense	–	–	–	-
Materials & Equipment	631,769	11,595	–	643,365
Other Expense	(21,189)	(1,115)	–	(22,304)
Purchased Services	127,194	2,800	–	129,994
Heating & Cooling Efficiency Program	**331,068**	**27,002**	**160,935**	**519,004**
Labor/Administrative Expense	0	8,470	160,935	169,405
Other Expense	36,479	2,139	–	38,619
Purchased Services	94,255	4,942	–	99,197
Incentives	200,334	11,450	–	211,784
Home Energy Audit	**72,571**	**(0)**	**85,715**	**158,287**
Labor/Administrative Expense	90	(0)	80,050	80,140
Materials & Equipment	–	–	(0)	(0)
Other Expense	14,622	–	5,666	20,288
Purchased Services	57,859	–	–	57,859
Home Energy Reports	**783,117**	–	**48,998**	**832,115**
Labor/Administrative Expense	–	–	48,998	48,998
Purchased Services	196,559	–	–	196,559
Incentives	586,558	–	–	586,558
Multi-Family Energy Efficiency	**30,985**	**1,072**	**11,152**	**43,208**
Labor/Administrative Expense	–	605	11,152	11,757
Other Expense	9,415	466	–	9,881
Purchased Services	1,593	–	–	1,593
Incentives	19,978	–	–	19,978
Oregon Residential Weatherization	–	**14,007**	–	**14,007**
Labor/Administrative Expense	–	6,307	–	6,307
Other Expense	–	41	–	41
Purchased Services	–	6,032	–	6,032
Incentives	–	1,627	–	1,627
Rebate Advantage	**128,849**	**9,281**	**38,604**	**176,734**
Labor/Administrative Expense	92	1,726	38,604	40,422
Other Expense	6,757	355	–	7,112
Purchased Services	18,600	1,200	–	19,800
Incentives	103,400	6,000	–	109,400

Sector/Program	Idaho Rider	Oregon Rider	Idaho Power	Total Program
Residential New Construction Program	**209,809**	–	**42,652**	**252,461**
Labor/Administrative Expense	6,951	–	42,652	49,603
Other Expense	16,406	–	–	16,406
Purchased Services	21,452	–	–	21,452
Incentives	165,000	–	–	165,000
Shade Tree Project	**59,627**	**(0)**	**18,675**	**78,302**
Labor/Administrative Expense	605	–	18,675	19,280
Other Expense	5,706	–	–	5,706
Purchased Services	12,435	–	–	12,435
Incentives	40,881	(0)	–	40,881
Weatherization Assistance for Qualified Customers (Idaho)	**638,289**	–	**53,536**	**691,825**
Labor/Administrative Expense	841	–	53,536	54,376
Materials & Equipment	47	–	–	47
Other Expense	0	–	–	0
Purchased Services	637,401	–	(0)	637,401
Weatherization Assistance for Qualified Customers (Oregon)	–	**418**	**(12,500)**	**(12,082)**
Labor/Administrative Expense	–	337	3,270	3,607
Materials & Equipment	–	0	2	3
Other Expense	–	–	–	–
Purchased Services	–	81	(15,773)	(15,692)
Weatherization Solutions for Eligible Customers	**111,940**	–	**1,004**	**112,944**
Labor/Administrative Expense	183	–	1,004	1,187
Other Expense	1	–	–	1
Purchased Services	111,756	–	–	111,756
Commercial/Industrial	**15,421,764**	**587,526**	**820,854**	**16,830,144**
Custom Projects	**8,595,184**	**499,816**	**484,826**	**9,579,826**
Labor/Administrative Expense	5,866	25,828	484,826	516,520
Other Expense	304,010	8,497	–	312,506
Purchased Services	1,718,547	51,905	–	1,770,452
Incentives	6,566,761	413,587	–	6,980,348
New Construction	**3,696,504**	**23,328**	**195,280**	**3,915,111**
Labor/Administrative Expense	4,661	10,570	195,280	210,511
Materials & Equipment	0	–	–	0
Other Expense	4,876	255	–	5,130
Purchased Services	381,639	9,722	–	391,361
Incentives	3,305,328	2,781	–	3,308,109
Retrofits	**3,117,026**	**64,382**	**108,098**	**3,289,506**
Labor/Administrative Expense	658	5,755	108,098	114,510
Materials & Equipment	696	37	–	732
Other Expense	15,018	-	1	15,019
Purchased Services	572,051	29,416	–	601,467
Incentives	2,528,603	29,174	–	2,557,777
Small Business Lighting (SBL) Program	**13,050**	**0**	**32,650**	**45,700**
Labor/Administrative Expense	773	0	32,650	33,423
Other Expense	2,240	–	–	2,240

Sector/Program	Idaho Rider	Oregon Rider	Idaho Power	Total Program
Purchased Services	850	–	–	850
Incentives	9,187	–	–	9,187
Irrigation	**1,229,784**	**59,923**	**363,757**	**1,653,465**
Irrigation Efficiency Rewards	**1,229,784**	**59,923**	**363,757**	**1,653,465**
Labor/Administrative Expense	23,686	14,872	363,767	402,325
Materials & Equipment	8,188	431	–	8,619
Other Expense	40,388	1,304	(10)	41,683
Purchased Services	(731)	(44)	–	(775)
Incentives	1,158,254	43,360	–	1,201,613
Market Transformation	**3,203,890**	**168,626**	**–**	**3,372,515**
Northwest Energy Efficiency Alliance	**3,203,890**	**168,626**	**–**	**3,372,515**
Purchased Services	3,203,890	168,626	–	3,372,515
Other Programs and Activities	**$1,373,403**	**$134,755**	**$1,222,135**	**$2,730,292**
Commercial/Industrial Energy Efficiency Overhead	**152,095**	**46,416**	**740,865**	**939,376**
Labor/Administrative Expense	25,094	40,898	740,865	806,857
Materials & Equipment	0	–	–	0
Other Expense	104,105	4,313	–	108,418
Purchased Services	22,896	1,205	–	24,101
Energy Efficiency Direct Program Overhead	**54,880**	**15,439**	**239,288**	**309,607**
Labor/Administrative Expense	20,091	13,656	239,288	273,034
Other Expense	34,789	1,783	–	36,572
Oregon Commercial Audit	**–**	**6,419**	**–**	**6,419**
Labor/Administrative Expense	–	1,949	–	1,949
Other Expense	–	1,670	–	1,670
Purchased Services	–	2,800	–	2,800
Residential Energy Efficiency Education Initiative	**246,737**	**8,749**	**58,194**	**313,680**
Labor/Administrative Expense	(4,161)	2,851	58,194	56,884
Materials & Equipment	186,955	2,850	–	189,805
Other Expense	62,973	2,997	–	65,970
Purchased Services	970	51	–	1,021
Residential Energy Efficiency Overhead	**919,691**	**57,732**	**183,787**	**1,161,210**
Labor/Administrative Expense	7,774	10,172	183,787	201,734
Other Expense	889,021	46,355	–	935,376
Purchased Services	22,896	1,205	–	24,101
Indirect Program Expenses	**$1,275,369**	**$102,863**	**$691,299**	**$2,069,530**
Energy Efficiency Accounting & Analysis	**1,274,151**	**95,715**	**646,657**	**2,016,524**
Labor/Administrative Expense	7,209	29,034	638,118	674,361
Materials & Equipment	606,495	31,921	–	638,416
Other Expense	27,432	1,444	465	29,341
Purchased Services	633,015	33,317	8,075	674,407
Energy Efficiency Advisory Group	**1,263**	**491**	**10,008**	**11,761**
Labor/Administrative Expense	-	458	10,008	10,465
Other Expense	1,263	33	–	1,295

Sector/Program	Idaho Rider	Oregon Rider	Idaho Power	Total Program
Oregon Energy Efficiency Advisory Group	–	**4,631**	–	**4,631**
Labor/Administrative Expense	–	3,347	–	3,347
Other Expense	–	1,283	–	1,283
Special Accounting Entries	**(45)**	**2,027**	**34,634**	**36,615**
Labor/Administrative Expense	0	2,027	34,634	36,660
Materials & Equipment	(45)	–	–	(45)
Demand Response	**$179,214**	**$315,970**	**$9,242,951**	**$9,738,136**
Residential	**(242,227)**	**(5,589)**	**417,056**	**169,241**
A/C Cool Credit	**(242,227)**	**(5,589)**	**417,056**	**169,241**
Labor/Administrative Expense	3,649	3,936	71,268	78,854
Materials & Equipment	(749,424)	(39,467)	–	(788,892)
Other Expense	109,134	5,744	–	114,878
Purchased Services	394,415	20,469	–	414,885
Incentives	–	3,729	345,788	349,517
Commercial/Industrial	**7,783**	**205,573**	**577,356**	**790,712**
Flex Peak Program	**7,783**	**205,573**	**577,356**	**790,712**
Labor/Administrative Expense	2,645	3,960	72,473	79,077
Materials & Equipment	48	3	–	51
Other Expense	5,090	268	–	5,358
Incentives	–	201,343	504,883	706,226
Irrigation	**413,658**	**115,986**	**8,248,539**	**8,778,184**
Irrigation Peak Rewards	**413,658**	**115,986**	**8,248,539**	**8,778,184**
Labor/Administrative Expense	(510)	6,922	148,627	155,039
Materials & Equipment	107,496	48,505	–	156,001
Other Expense	47,995	2,719	–	50,714
Purchased Services	256,399	14,170	–	270,569
Incentives	2,278	43,669	8,099,912	8,145,860
Grand Total	**$25,912,503**	**$1,434,722**	**$12,819,363**	**$40,166,589**

Note: Totals do not sum due to rounding.

2024 Demand Response Programs

The result of the one-year demand response perspective is shown in Table 4 and the Cost-Effectiveness Tables by Program section in this supplement. Based on the avoided cost calculation for demand response programs, the avoided cost threshold is $62.39 per kW year; DR program costs must be less than this value to be considered cost-effective. The calculated dollar per kW year for each demand response program in Table 4 shows all three programs were cost-effective in 2024.

Table 4. 2024 Demand response program and portfolio $ per kW year

Program	Maximum Potential Demand Reduction (MW)	Maximum Potential Demand Reduction (kW)	2024 Expenses	2024 Estimated Max Expenses (60 Hours)[1]	$ per kW year[2]
A/C Cool Credit	24.0	23,999	$169,241	$1,133,900	$47.25
Flex Peak Programs	40.6	40,612	$790,712	$1,118,399	$27.54
Irrigation Peak Rewards	258.8	258,775	$8,778,184	$11,755,142	$45.43
Total Demand Response Portfolio	**323.4**	**323,386**	**$9,738,136**	**$14,007,441**	**$43.31**

[1] 2024 expenses with estimated variable payments based on maximum 60 hours of operation. A/C Cool Credit Estimated Max Expenses adjusted for demand response units purchased in bulk in 2023 and transferred to Energy Efficiency Accounting and Analysis in 2024. Total does not sum due to rounding.

[2] $ per kW year = 2024 Estimated Max Expenses 60 Hours/Max Demand Capacity kW.

COST-EFFECTIVENESS TABLES BY PROGRAM

The following series of tables lists the annual program cost-effectiveness results, including measure-level cost-effectiveness. Exceptions to the measure-level tables are programs that are analyzed at the project level, such as the Custom Projects option of the C&I Energy Efficiency Program, the Custom Incentive Option of Irrigation Efficiency Rewards, Small Business Lighting Program, WAQC (Idaho) and WAQC (Oregon), and Weatherization Solutions for Eligible Customers.

The measure-level cost-effectiveness includes the following inputs: measure life, energy savings, incremental cost, incentives, program administration cost, and non-energy impacts/benefits. Program administration costs include all non-incentive costs, such as: labor, marketing, training, education, purchased services, and evaluation. Energy and expense data have been rounded to the nearest whole unit.

Educational Distributions

Segment: Residential

2024 Program Results

Cost Inputs		Ref
Program Administration	$ 751,055	
Program Incentives	-	I
Total UC	**$ 751,055**	P
Measure Equipment and Installation (Incremental Participant Cost)	$ -	M

Net Benefit Inputs			Ref
Resource Savings			
2024 Annual Gross Energy (kWh)	3,900,277		
NPV Cumulative Energy (kWh)	24,832,346	$ 1,731,419	S
10% Credit (Northwest Power Act)		173,142	
Total Electric Savings		**$ 1,904,561**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 2,654,486	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
Non-Energy Benefits		$ 112,251	NEB

Summary of Cost-Effectiveness Results

Test	Benefit	Cost	Ratio
UC Test	$ 1,731,419	$ 751,055	2.31
TRC Test	2,016,812	751,055	2.69
RIM Test	1,731,419	3,405,541	0.51
PCT	N/A	N/A	N/A

Benefits and Costs Included in Each Test

UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P
RIM Test	= S * NTG	= P + (B * NTG)
PCT	N/A	N/A

Assumptions for Levelized Calculations

Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	43%
Average Customer Segment Rate/kWh	$0.098
System Losses	6.00%

Notes:

NEBs for student kit include the NPV of therm savings.

No participant costs.

Year: 2024 **Program:** Educational Distributions **Market Segment:** Residential **Program Type:** Energy Efficiency

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/ Notes
Nightlight Giveaway	LED night light	Baseline lightbulb	Lamp	ResLightingExterior	8	12.00	$ 5.35	$ -	$ -		$ 0.193	2.32	2.55	1
Student Energy Efficiency Kit (SEEK) Program	2023 - 2024 kit offering. Kits Include: high-efficiency showerhead, shower timer, 3 LEDs, FilterTone alarm, digital thermometer, LED nightlight.	No kit	Kit	ResLightingInteriorAnd Exterior	10	229.22	$ 119.57	$ -	$ -		$ 0.193	2.71	2.98	2
Welcome Kit	Two LED lightbulbs, two nightlights.	No kit	Kit	ResLightingExterior	8	24.00	$ 10.70	$ -	$ -		$ 0.525	1.00	1.10	1

(a) Average measure life.
(b) Estimated kWh savings measured at the customer's meter, excluding system losses.
(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the Northwest Power Act.
(d) No participant costs.
(e) Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2024 actuals.
(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)
(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))
(1) DNV GL. Idaho Power Educational Distributions Impact and Process Evaluation. 2020
(2) Tinker. Idaho Power Student Energy Efficiency Kit Program. School Year 2023-2024 Annual Report. Nightlight savings modified to match other IPC nightlight offerings.

Heating & Cooling Efficiency Program

Segment: Residential

2024 Program Results

Cost Inputs		Ref
Program Administration	$ 307,220	
Program Incentives	211,784	I
Total UC	**$ 519,004**	P
Measure Equipment and Installation (Incremental Participant Cost)	$ 1,392,196	M

Net Benefit Inputs			Ref
Resource Savings			
2024 Annual Gross Energy (kWh)	819,224		
NPV Cumulative Energy (kWh)	8,211,791	$ 494,959	S
10% Credit (Northwest Power Act)		49,496	
Total Electric Savings		**$ 544,455**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 957,769	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
Non-Energy Benefits		$ 118,580	NEB

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
UC Test	$ 494,959	$ 519,004	0.95
TRC Test	663,035	1,699,416	0.39
RIM Test	494,959	1,476,773	0.34
PCT	1,288,133	1,392,196	0.93

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P + ((M-I)*NTG)
RIM Test	= S * NTG	= P + (B * NTG)
PCT	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	105%
Average Customer Segment Rate/kWh	$0.098
System Losses	6.00%

Note:

Participant costs offset by applicable tax credits available as part of the Inflation Reduction Act of 2022.

Year: 2024 **Program:** Heating Cooling Efficiency **Market Segment:** Residential **Program Type:** Energy Efficiency

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/ Notes
Ductless Heat Pump	Zonal to DHP. (Heating & Cooling Zone Weighted Average)	Zonal Electric	Unit	R-All-HVAC-ERconvertDHP-weighted	15	1,255.97	$ 600.06	$ 840.99	$ 3,677.17	$ 500.00	$ 0.375	0.62	0.36	1, 2
Electronically Commutated Motor (ECM) Blower Motor	ECM Blower Motor	Permanent split capacitor (PSC) motor	Unit	R-All-Bld-Bldg-All-All-R	18	900.17	$ 592.41	$ -	$ 300.00	$ 50.00	$ 0.375	1.53	1.02	3
Evaporative Cooler	Evaporative Cooler	Central Air Conditioning	Unit	R-All-HVAC-CAC-All-All-E	12	653.12	$ 676.07	$ -	$ 220.70	$ 150.00	$ 0.375	1.71	1.60	4
Ground Source Heat Pump	Ground source heat pump - 3.5 COP (Heating & Cooling Zone Weighted Average)	Electric resistance/Oil Propane	Unit	R-All-HVAC-ASHP-All-All-E	20	8,523.00	$ 5,638.17	$ -	$ 10,653.78	$ 3,000.00	$ 0.375	0.91	0.45	1, 5
Heat Pump Conversion	Existing and New Construction Single Family and Manufactured Home HVAC Conversion to Heat Pump with Commissioning and Sizing (Heating & Cooling Zone Weighted Average)	Conversion to high efficiency heat pump	Unit	R-All-HVAC-ASHP-All-All-E	18	4,326.42	$ 2,747.56	$ -	$ 6,155.50	$ 800.00	$ 0.375	1.13	0.39	6
Heat Pump Water Heater	Weighted average of tier 2 and tier 3, heating and cooling zone, and indoor, basement, garage install location.	Electric water heater	Unit	R-All-WH-WHConvert-All-All-N	13	1,660.60	$ 957.08	$ -	$ 447.08	$ 300.00	$ 0.375	1.04	0.98	7
High Efficiency Air Conditioner	Minimum 15 SEER but <17 SEER/16.3 SEER2; minimum 12 EER/11.5 EER2	Current practice baseline	Unit	R-All-HVAC-CAC-All-All-E	18	95.12	$ 119.18	$ -	$ 110.50	$ 50.00	$ 0.375	1.39	0.90	8
High Efficiency Air Conditioner	Minimum 17 SEER/16.3 SEER2; minimum 13 EER/12.5 EER2	Current practice baseline	Unit	R-All-HVAC-CAC-All-All-E	18	206.16	$ 258.30	$ -	$ 565.29	$ 150.00	$ 0.375	1.14	0.44	8
Open Loop HP	Open loop water source heat pump for new construction - 14.00 EER 3.5 COP (Heating & Cooling Zone Weighted Average)	Electric resistance/Oil Propane	Unit	R-All-HVAC-ASHP-All-All-E	20	9,478.75	$ 6,270.42	$ -	$ 14,135.70	$ 1,000.00	$ 0.375	1.38	0.39	4
Prescriptive Duct Sealing - Single Family	Duct Tightness - PTCS Duct Sealing - Average Heating System. Weighted average of Heating Zones 1-3.	Pre-existing duct leakage	Unit	R-All-HVAC-ER-All-All-E	20	444.72	$ 259.11	$ -	$ 576.84	$ 200.00	$ 0.375	0.71	0.38	1, 9
Smart Thermostat	Smart Thermostat	Non wi-fi enabled thermostat/no thermostat	Unit	R-All-HVAC-ER-All-All-E	7	337.23	$ 101.03	$ -	$ 247.74	$ 50.00	$ 0.375	0.57	0.30	1, 10

Year: 2024 **Program:** Heating Cooling Efficiency **Market Segment:** Residential **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/ Notes
Whole House Fan	Whole House Fan	Displaced forced air dx cooling	Unit	R-All-HVAC-CAC-All-All-E	18	456.60	$ 572.07	$ -	$ 700.00	$ 200.00	$ 0.375	1.54	0.72	3

(a) Average measure life.
(b) Estimated kWh savings measured at the customer's meter, excluding system losses.
(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the Northwest Power Act.
(d) Incremental participant cost prior to customer incentives.
(e) Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2024 actuals.
(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)
(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))
(1) Measure cost-effective from UCT perspective with admin costs excluded.
(2) RTF. ResDHPforZonal_v6_1.xlsm. 2023. Weighted average of 2023 participants in heating and cooling zones 1-3.
(3) Idaho Power engineering calculations based on Integrated Design Lab inputs. 2015.
(4) New Mexico Technical Resource Manual for the Calculation of Energy Efficiency Savings. Evaporative Cooling. Sante Fe. Discounted by 44.4% for proportion evaporative coolers replacing refrigerated air. 2019.
(5) RTF. ResGSHP_v2_7. 2016. Weighted average of 2023 participants in heating and cooling zones 1-3.
(6) RTF. ResSF&MHExistingHVAC_v6_1.xlsx. 2022. Weighted average of 2023 participants in heating and cooling zones 1-3.
(7) RTF. ResHPWH_v6_3.xlsm. 2023.
(8) RTF. ResEfficientCentralAC_v2_2.xlsm. 2023.
(9) RTF. ResSFDuctSealing_v7_3.xlsm. 2023.
(10) RTF. ResConnectedTstats_v3.1.xlsm. 2023.

Home Energy Report Program

Segment: Residential

2024 Program Results

Cost Inputs		Ref
Program Administration	$ 832,115	
Program Incentives	-	I
Total UC	**$ 832,115**	P
Measure Equipment and Installation (Incremental Participant Cost)	$ -	M

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
UC Test	$ 1,091,843	$ 832,115	1.31
TRC Test	1,201,027	832,115	1.44
RIM Test	1,091,843	2,662,945	0.41
PCT	N/A	N/A	N/A

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P
RIM Test	= S * NTG	= P + (B * NTG)
PCT	N/A	N/A

Net Benefit Inputs			Ref
Resource Savings			
2024 Annual Gross Energy (kWh)	18,596,812		
NPV Cumulative Energy (kWh)	18,596,812	$ 1,091,843	S
10% Credit (Northwest Power Act)		109,184	
Total Electric Savings		**$ 1,201,027**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 1,830,830	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
Non-Energy Benefits		$ -	NEB

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	76%
Average Customer Segment Rate/kWh	$0.098
System Losses	6.00%

Note:

Third-party reported 2024 savings as reported is 18,679,000 kWh. Idaho Power discounting savings by 0.44% for reporting and analysis as recommended by evaluators to account for potential double-counting of savings. Percentage will be reviewed in future evaluations.

Multifamily Energy Efficiency Program

Segment: Residential

2024 Program Results

Cost Inputs			Ref
Program Administration	$	23,231	
Program Incentives		19,978	I
Total UC	**$**	**43,208**	P
Measure Equipment and Installation (Incremental Participant Cost)	$	55,340	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
UC Test	$	50,271	$	43,208	1.16
TRC Test		59,093		78,571	0.75
RIM Test		50,271		137,696	0.37
PCT		118,260		55,340	2.14

Net Benefit Inputs				Ref
Resource Savings				
2024 Annual Gross Energy (kWh)	84,977			
NPV Cumulative Energy (kWh)	823,007	$	50,271	S
10% Credit (Northwest Power Act)			5,027	
Total Electric Savings		**$**	**55,298**	A
Participant Bill Savings				
NPV Cumulative Participant Bill Savings		$	94,488	B
Other Benefits				
Non-Utility Rebates/Incentives		$	-	NUI
Non-Energy Benefits		$	3,795	NEB

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P
RIM Test	= S * NTG	= P + (B * NTG)
PCT	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	86%
Average Customer Segment Rate/kWh	$0.098
System Losses	6.00%

Note:

Savings include multifamily measures from living units as well as shared common areas.

See C&I New Construction and C&I Retrofits for common-area measure assumptions.

NEB/impacts on a $/kWh for common-area measures. Based on 2019 impact evaluation of C&I programs.

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Building Shell	Reflective roof treatment	Existing roofing	Square Foot	R-All-HVAC-CAC-All-All-E	15	0.09	$ 0.11	$ -	$ 0.05	$ 0.05	$ 0.273	1.41	1.55	1
Continuous Exhaust Fan	ENERGY STAR Continuous Exhaust fan, bathroom	Standard exhaust fan	Unit	R-All-Bld-Bldg-All-All-R	19	125.83	$ 84.62	$ -	$ 103.17	$ 25.00	$ 0.273	1.42	0.68	2
Ductless Heat Pump	Ductless Mini-split Heat Pump <5 tons, ENERGY STAR	Zonal Electric	Ton	R-All-HVAC-ASHP-All-All-E	15	415.92	$ 241.68	$ -	$ 1,300.00	$ 125.00	$ 0.273	1.01	0.19	2
Efficient Windows, tier 1	Efficient windows in low rise buildings, 3 stories or less.	Inefficient window	Square Foot	R-All-HVAC-ER-All-All-E	45	2.76	$ 1.98	$ -	$ 0.71	$ 0.25	$ 0.273	1.97	1.49	2
Efficient Windows, tier 2	Efficient windows in low rise buildings, 3 stories or less.	Inefficient window	Square Foot	R-All-HVAC-ER-All-All-E	45	5.81	$ 4.17	$ -	$ 1.50	$ 0.50	$ 0.273	2.00	1.49	2
Efficient Windows, tier 3	Efficient windows in low rise buildings, 3 stories or less.	Inefficient window	Square Foot	R-All-HVAC-ER-All-All-E	45	9.99	$ 7.17	$ -	$ 2.57	$ 1.00	$ 0.273	1.92	1.49	2
Heat Pump (HP) Units	Air-Source Heat Pumps (<5 tons), CEE Tier 1	IECC 2018 Code Standard	Ton	R-All-HVAC-ASHP-All-All-E	15	355.42	$ 206.52	$ -	$ 526.00	$ 75.00	$ 0.273	1.20	0.36	2
Heat Pump (HP) Units	Air-Source Heat Pumps (<5 tons), CEE Tier 2	IECC 2018 Code Standard	Ton	R-All-HVAC-ASHP-All-All-E	15	380.90	$ 221.33	$ -	$ 578.00	$ 125.00	$ 0.273	0.97	0.36	2,3
Low E Storm Window	Weatherization treatment fitted on existing window.	Pre-conditions	Square foot window area	R-All-HVAC-ER-All-All-E	20	20.11	$ 11.72	$ -	$ 18.08	$ 1.00	$ 0.273	1.80	0.55	4
Manual Exhaust Fan	ENERGY STAR Most Efficient Manual Exhaust Fan, bathroom	Standard exhaust fan	Unit	R-All-Bld-Bldg-All-All-R	19	178.50	$ 120.04	$ -	$ 136.00	$ 25.00	$ 0.273	1.63	0.71	2
Package Terminal Air Conditioner (PTAC)	Packaged Terminal Air Conditioning, 10% greater than code, New Construction / Major Renovation	Code standards	Ton	R-All-HVAC-CAC-All-All-E	15	38.45	$ 45.04	$ -	$ 201.00	$ 25.00	$ 0.273	1.27	0.23	2
Package Terminal Air Conditioner (PTAC)	Packaged Terminal Air Conditioning, 10% greater than code, Retrofit	Existing PTAC	Ton	R-All-HVAC-CAC-All-All-E	15	85.47	$ 100.12	$ -	$ 1,599.00	$ 50.00	$ 0.273	1.36	0.07	2
Package Terminal Air Conditioner (PTAC)	Packaged Terminal Air Conditioning, 20% greater than code, New Construction / Major Renovation	Code standards	Ton	R-All-HVAC-CAC-All-All-E	15	70.20	$ 82.23	$ -	$ 301.50	$ 50.00	$ 0.273	1.19	0.28	2
Package Terminal Air Conditioner (PTAC)	Packaged Terminal Air Conditioning, 20% greater than code, Retrofit	Existing PTAC	Ton	R-All-HVAC-CAC-All-All-E	15	117.12	$ 137.19	$ -	$ 2,499.00	$ 75.00	$ 0.273	1.28	0.06	2

Year: 2024 **Program:** Multifamily Energy Efficiency Program **Market Segment:** Residential **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Package Terminal Heat Pump (PTHP)	Packaged Terminal Heat Pump, 10% greater than code. New Construction / Major Renovation	Code standards	Ton	IPC_PTHP-MF	15	336.39	$ 184.06	$ -	$ 328.00	$ 75.00	$ 0.273	1.10	0.48	2
Package Terminal Heat Pump (PTHP)	Packaged Terminal Heat Pump, 10% greater than code. Retrofit	Existing PTHP	Ton	IPC_PTHP-MF	15	586.05	$ 320.66	$ -	$ 1,783.00	$ 75.00	$ 0.273	1.36	0.18	2
Package Terminal Heat Pump (PTHP)	Packaged Terminal Heat Pump, 20% greater than code. New Construction / Major Renovation	Code standards	Ton	IPC_PTHP-MF	15	394.90	$ 216.07	$ -	$ 2,170.50	$ 100.00	$ 0.273	1.04	0.10	2
Package Terminal Heat Pump (PTHP)	Packaged Terminal Heat Pump, 20% greater than code. Retrofit	Existing PTHP	Ton	IPC_PTHP-MF	15	655.58	$ 358.71	$ -	$ 3,789.00	$ 100.00	$ 0.273	1.28	0.10	2
Smart Thermostat	Smart Thermostat	Non Wi-Fi enabled thermostat	Unit	R-All-HVAC-ER-All-All-E	7	337.23	$ 101.03	$ -	$ 210.24	$ 30.00	$ 0.273	0.83	0.37	5

(a) Average measure life.
(b) Estimated kWh savings measured at the customer's meter, excluding system losses.
(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the Northwest Power Act.
(d) Incremental participant cost prior to customer incentives.
(e) Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2024 actuals.
(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)
(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))
(1) Idaho Power TRM prepared by ADM Associates, Inc. 2021.
(2) Idaho Power Multifamily TRM prepared by ADM Associates, Inc. 2023.
(3) Measure cost-effective when admin fees excluded.
(4) RTF. ResMFWeatherization_v6_1.xlsm. 2023.
(5) RTF. ResConnectedTstats_v3_1.xlsm. 2023.

Rebate Advantage

Segment: Residential

2024 Program Results

Cost Inputs		Ref
Program Administration	$ 67,334	
Program Incentives	109,400	I
Total UC	**$ 176,734**	P
Measure Equipment and Installation (Incremental Participant Cost)	$ 409,958	M

Net Benefit Inputs			Ref
Resource Savings			
2024 Annual Gross Energy (kWh)	283,227		
NPV Cumulative Energy (kWh)	4,065,005	$ 204,765	S
10% Credit (Northwest Power Act)		20,476	
Total Electric Savings		**$ 225,241**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 564,881	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
Non-Energy Benefits		$ -	NEB

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
UC Test	$ 204,765	$ 176,734	1.16
TRC Test	225,241	477,292	0.47
RIM Test	204,765	741,615	0.28
PCT	674,281	409,958	1.64

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P + ((M-I)*NTG)
RIM Test	= S * NTG	= P + (B * NTG)
PCT	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	86%
Average Customer Segment Rate/kWh	$0.098
System Losses	6.00%

Year: 2024 **Program:** Rebate Advantage **Market Segment:** Residential **Program Type:** Energy Efficiency

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
ENERGY STAR manufactured home	Estar_electric_HZ1_CZ3	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	45	2,070.80	$ 1,498.48	$ -	$ 3,508.14	$ 1,000.00	$ 0.238	1.00	0.41	1,2
ENERGY STAR manufactured home	Estar_electric_HZ2_CZ1	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	45	3,020.26	$ 2,185.53	$ -	$ 3,508.14	$ 1,000.00	$ 0.238	1.27	0.57	1,2
ENERGY STAR manufactured home	Estar_electric_HZ2_CZ2	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	45	3,022.11	$ 2,186.87	$ -	$ 3,508.14	$ 1,000.00	$ 0.238	1.27	0.57	1,2
ENERGY STAR manufactured home	Estar_electric_HZ2_CZ3	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	45	3,024.85	$ 2,188.85	$ -	$ 3,508.14	$ 1,000.00	$ 0.238	1.27	0.57	1,2
ENERGY STAR manufactured home	Estar_electric_HZ3_CZ1	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	45	3,819.13	$ 2,763.61	$ -	$ 3,508.14	$ 1,000.00	$ 0.238	1.45	0.69	1,2
ENERGY STAR manufactured home	Estar_electric_HZ3_CZ2	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	45	3,820.98	$ 2,764.95	$ -	$ 3,508.14	$ 1,000.00	$ 0.238	1.45	0.69	1,2
NEEM manufactured home	NEEM_electric_HZ1_CZ3	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	43	2,612.39	$ 1,875.32	$ -	$ 5,805.66	$ 1,000.00	$ 0.238	1.16	0.32	1,2
NEEM manufactured home	NEEM_electric_HZ2_CZ1	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	43	3,733.25	$ 2,679.93	$ -	$ 5,805.66	$ 1,000.00	$ 0.238	1.42	0.44	1,2
NEEM manufactured home	NEEM_electric_HZ2_CZ2	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	43	3,735.67	$ 2,681.67	$ -	$ 5,805.66	$ 1,000.00	$ 0.238	1.42	0.44	1,2
NEEM manufactured home	NEEM_electric_HZ2_CZ3	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	43	3,739.15	$ 2,684.17	$ -	$ 5,805.66	$ 1,000.00	$ 0.238	1.42	0.44	1,2
NEEM manufactured home	NEEM_electric_HZ3_CZ1	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	44	4,679.39	$ 3,372.95	$ -	$ 5,805.66	$ 1,000.00	$ 0.238	1.60	0.54	1,2
NEEM manufactured home	NEEM_electric_HZ3_CZ2	Manufactured home built to Housing and Urban Development (HUD) code.	Home	R-CustomRebateAdvShape	44	4,681.81	$ 3,374.70	$ -	$ 5,805.66	$ 1,000.00	$ 0.238	1.60	0.54	1,2

(a) Average measure life.
(b) Estimated kWh savings measured at the customer's meter, excluding system losses.
(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the Northwest Power Act.
(d) Incremental participant cost prior to customer incentives.
(e) Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2024 actuals.
(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)
(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))
(1) RTF. ResSF&MHExistingHVAC_v5_1.xlsx. 2023.
(2) Measue not cost-effective from TRC perspective

Residential New Construction Program

Segment: Residential

2024 Program Results

Cost Inputs		Ref
Program Administration	$ 87,461	
Program Incentives	165,000	I
Total UC	**$ 252,461**	P
Measure Equipment and Installation (Incremental Participant Cost)	$ 297,501	M

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
UC Test	$ 261,328	$ 252,461	1.04
TRC Test	417,693	384,962	1.09
RIM Test	261,328	908,462	0.29
PCT	951,233	297,501	3.20

Net Benefit Inputs			Ref
Resource Savings			
2024 Annual Gross Energy (kWh)	304,424		
NPV Cumulative Energy (kWh)	4,504,325	$ 261,328	S
10% Credit (Northwest Power Act)		26,133	
Total Electric Savings		**$ 287,461**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 656,001	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
Non-Energy Benefits		$ 130,232	NEB

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P + ((M-I)*NTG)
RIM Test	= S * NTG	= P + (B * NTG)
PCT	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	97%
Average Customer Segment Rate/kWh	$0.098
System Losses	6.00%

Note:

2018 International Energy Conservation Code (IECC) with amendments adopted in Idaho in 2021.

Participant costs offset by $2,500 tax credit available to the home builder as part of the Inflation Reduction Act of 2022, Section 45L Tax Credit for Energy Efficient New Homes.

Year: 2024 **Program:** Residential New Construction Program **Market Segment:** Residential **Program Type:** Energy Efficiency

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Next Step Home - 10% to 14.99% above code	Next Step Home - average per home savings.	Home built to IECC 2018 Code. Adopted 2021.	Home	RNC_Custom_Loads hape	58	1,199.91	$ 1,026.91	$ 239.450	$ 2,886.70	$ 1,200.00	$ 0.287	0.66	0.42	1, 2
Next Step Home - 15% to 19.99% above code	Next Step Home - average per home savings.	Home built to IECC 2018 Code. Adopted 2021.	Home	RNC_Custom_Loads hape	60	2,351.07	$ 2,012.09	$ 261.390	$ 1,504.36	$ 1,500.00	$ 0.287	0.92	1.14	1, 3
Next Step Home - 20% or more above code'	Next Step Home - average per home savings.	Home built to IECC 2018 Code. Adopted 2021.	Home	RNC_Custom_Loads hape	58	4,023.98	$ 3,456.43	$ 286.130	$ 2,318.36	$ 2,000.00	$ 0.287	1.10	1.18	1

(a) Average measure life.
(b) Estimated kWh savings measured at the customer's meter, excluding system losses.
(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the Northwest Power Act.
(d) Incremental participant cost prior to customer incentives.
(e) Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2024 actuals.
(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)
(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))
(1) NEEA circuit rider code enforcement initiative. 2024 average per home savings. Costs and NEBs from RTF. RESNCMTHouse_ID_v3_1_.xlsm. 2019.
(2) Measure not cost-effective. Will continue to be monitored in 2025.
(3) Measure cost-effective when admin is excluded.

Weatherization Assistance for Qualified Customers (Idaho)

Segment: Residential

2024 Program Results

Cost Inputs	WAQC Only	Re-Weatherization	Total	Ref.
Program Administration	$ 132,566	15,354	147,920	
Community Action Partnership (CAP) Agency Payments	1,172,375	153,540	1,325,914	
Total UC	**$ 1,304,940**	**168,894**	**1,473,834**	P
Accruals/Reversal of Carryover Dollars	(782,009)	-	(782,009)	
Total Program Expenses	**$ 522,931**	**168,894**	**691,825**	
Idaho Power Indirect Overhead Expense Allocation - 5.152%	$ 67,235	8,702	75,937	OH
Additional State Funding	861,270	-	861,270	M

Net Benefit Inputs	WAQC Only	Re-Weatherization	Total	Ref.
Resource Savings				
2024 Annual Gross Energy (kWh)	346,638	19,790	366,428	
NPV Cumulative Energy (kWh)	4,552,704	259,920	4,812,624	
Avoided Costs	$ 228,006	13,017	241,023	S
10% Credit (Northwest Power Act)	$ 22,801	1,302	24,102	
Total Electric Savings	**$ 250,806**	**14,319**	**265,125**	A
Participant Bill Savings				
NPV Cumulative Participant Bill Savings	$ 586,875	33,505	620,380	B
Other Benefits				
Non-Utility Rebates/Incentives	$ -	-	-	NUI
Non-Electric Benefits				
Heath & Safety	$ 256,394	-	256,394	
Repair	$ 10,324	-	10,324	
Other	$ -	-	-	
Non-Energy Benefits	**$ 266,718**	**-**	**266,718**	NEB

Notes:

Savings updated in 2020 and based on a billing analysis of the 2016-2018 weatherization projects.

Program cost-effectiveness incorporated Idaho Public Utilities Commission (IPUC) staff recommendations from case GNR-E-12-01. Recommendations include:

Claimed 100% of savings; increased NTG to 100%; added a 10% conservation preference adder; health, safety, and repair non-energy benefits, and allocation of indirect overhead expenses.

No customer participant costs. Costs shown are from the DOE state weatherization assistance program.

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
Total Program			
UC Test	241,023	1,549,771	0.16
TRC Test	531,843	2,411,041	0.22
RIM Test	241,023	2,170,151	0.11
PCT	N/A	N/A	N/A
WAQC Only			
UC Test	228,006	1,372,176	0.17
TRC Test	494,724	2,233,446	0.22
RIM Test	228,006	1,959,050	0.12
PCT	N/A	N/A	N/A
Re-Weatherization Only			
UC Test	$ 13,017	$ 177,596	0.07
TRC Test	14,319	177,596	0.08
RIM Test	13,017	211,101	0.06
PCT	N/A	N/A	N/A

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P + OH
TRC Test	= (A + NUI + NEB) * NTG	= P + OH + M
RIM Test	= S * NTG	= P + OH + (B * NTG)
PCT	N/A	N/A

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	643%
Average Customer Segment Rate/kWh	$0.098
System Losses	6.00%

Weatherization Assistance for Qualified Customers (Oregon)

Segment: Residential

2024 Program Results

Cost Inputs			Ref
Program Administration		$ 4,357	
Community Action Partnership (CAP) Agency Payments		6,061	
Total UC		**$ 10,418**	P
Accruals/Reversal of Carryover Dollars		(22,500)	
Total Program Expenses		**$ (12,082)**	
Idaho Power Indirect Overhead Expense Allocation - 5.152%		$ 537	OH
Additional State Funding		2,321	M
Net Benefit Inputs			**Ref**
Resource Savings			
2024 Annual Gross Energy (kWh)	1,023		
NPV Cumulative Energy (kWh)	13,436	$ 673	S
10% Credit (Northwest Power Act)		67	
Total Electric Savings		**$ 740**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 1,732	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
NEBs			
Health and Safety		$ 1,906	
Repair		$ -	
Other		$ -	
Non-Energy Benefits		**$ 1,906**	NEB

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
UC Test	$ 673	$ 10,954	0.06
TRC Test	2,646	13,275	0.20
RIM Test	673	12,686	0.05
PCT	N/A	N/A	N/A

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P + ((M-I)*NTG)
RIM Test	= S * NTG	= P + (B * NTG)
PCT	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	1628%
Average Customer Segment Rate/kWh	$0.098
System Losses	6.00%

Notes:

Savings updated in 2020 and based on a billing analysis of the 2016-2018 weatherization projects.

Program cost-effectiveness incorporated Idaho Public Utilities Commission (IPUC) staff recommendations from case GNR-E-12-01. Recommendations include:

Claimed 100% of savings; increased NTG to 100%; added a 10% conservation preference adder; health, safety, and repair non-energy benefits, and allocation of indirect overhead expenses.

No customer participant costs. Costs shown are from the DOE state weatherization assistance program.

Weatherization Solutions for Eligible Customers

Segment: Residential

2024 Program Results

Cost Inputs		Ref
Program Administration	$ 13,258	
Program Incentives	99,687	
Total Program Expenses	**$ 112,944**	
Total UC	**$ 112,944**	P
Idaho Power Indirect Overhead Expense Allocation-5.152%	$ 5,819	OH
Additional State Funding	$ -	M

Net Benefit Inputs			Ref
Resource Savings			
2024 Annual Gross Energy (kWh)	25,784		
NPV Cumulative Energy (kWh)	338,644	$ 16,960	S
10% Credit (Northwest Power Act)		1,696	
Total Electric Savings		**$ 18,656**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 43,654	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
NEBs			
Health and Safety		$ 4,586	
Repair		$ -	
Other		$ 1,834.00	
NEBs Total		$ 6,420.00	NEB

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
UC Test	$ 16,960	$ 118,764	0.14
TRC Test	25,076	118,764	0.21
RIM Test	16,960	162,417	0.10
PCT	N/A	N/A	N/A

Benefits and Costs Included = S * NTG		
UC Test	= S * NTG	= P + OH
TRC Test	= (A + NUI + NEB) * NTG	= P + OH + M
RIM Test	= S * NTG	= P + OH + (B * NTG)
PCT	N/A	N/A

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	700%
Average Customer Segment Rate/kWh	$0.098
System Losses	6.00%

Notes:

Savings updated in 2020 and based on a billing analysis of the 2016-2018 weatherization projects.

Program cost-effectiveness incorporated Idaho Public Utilities Commission (IPUC) staff recommendations from case GNR-E-12-01. Recommendations include:

Claimed 100% of savings; increased NTG to 100%; added a 10% conservation preference adder; health, safety, and repair non-energy benefits, and allocation of indirect overhead expenses.

No customer participant costs.

Custom Projects

Segment: Industrial

2024 Program Results

Cost Inputs		Ref
Program Administration	$ 2,599,479	
Program Incentives	6,980,348	I
Total UC	**$ 9,579,826**	P
Measure Equipment and Installation (Incremental Participant Cost)	$ 23,942,839	M

Net Benefit Inputs			Ref
Resource Savings			
2024 Annual Gross Energy (kWh)	60,076,877		
NPV Cumulative Energy (kWh)	423,617,241	$ 21,184,147	S
10% Credit (Northwest Power Act)		2,118,415	
Total Electric Savings		**$ 23,302,562**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 20,237,772	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
Non-Energy Benefits		$ 934,773	NEB

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
UC Test	$ 21,184,147	$ 9,579,826	2.21
TRC Test	24,237,335	26,542,318	0.91
RIM Test	21,184,147	29,817,599	0.71
PCT	28,152,893	23,942,839	1.18

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P + ((M-I)*NTG)
RIM Test	= S * NTG	= P + (B * NTG)
PCT	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	45%
Average Customer Segment Rate/kWh	$0.041
System Losses	6.00%

Notes:

Energy savings are unique by project and are reviewed by Idaho Power engineering staff of third-party consultants. Each project must complete a certification inspection.

Green Rewind initiative is available to agricultural, commercial, and industrial motor rewinds are paid under Custom Projects, but the savings are not included in the program cost-effectiveness.

Green Rewind savings are included in the sector cost-effectiveness.

NEB/impacts on a $/kWh for each end-use. Based on 2019 impact evaluation of other C&I programs.

Year: 2024 **Program:** Custom Projects **Market Segment:** Industrial **Program Type:** Energy Efficiency

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/ Notes
Campus Cohort for Energy Efficiency	strategic energy management cohort	Baseline	Cohort	I-All-SecTotal-All-All-All-E	1	2,836,018.00	$ 154,552.96	$ -	$ 120,108.23	$ 70,917.50	$ 0.044	0.79	0.70	1, 2
Compressed Air Leak Repairs	energy management offering	Baseline	Cohort	I-All-SecTotal-All-All-All-E	1	419,992.00	$ 22,888.08	$ -	$ 6,186.48	$ 6,186.48	$ 0.044	0.93	1.03	1, 2
Continuous Energy Improvement Cohort for Schools	strategic energy management cohort	Baseline	Cohort	Commercial-School-Misc	1	972,098.00	$ 43,157.85	$ -	$ 50,253.00	$ 24,302.46	$ 0.044	0.65	0.51	1, 2
Energy Management	energy management offering	Baseline	Cohort	I-All-SecTotal-All-All-All-E	1	2,499,797.00	$ 136,230.10	$ -	$ 60,025.34	$ 53,756.83	$ 0.044	0.84	0.89	1, 2
Find & Fix	energy management offering	Baseline	Cohort	I-All-SecTotal-All-All-All-E	1	188,296.00	$ 10,261.47	$ -	$ 4,920.00	$ 4,707.40	$ 0.044	0.79	0.86	1, 2
Industrial Energy Efficiency Cohort	strategic energy management cohort	Baseline	Cohort	I-WaterSupply-Mot-All-All-All-U	1	9,970,975.00	$ 545,845.35	$ -	$ 113,641.44	$ 46,714.84	$ 0.044	1.13	1.09	1
Green Motors Program Rewind: Motor size 15HP	Green Motors Program Rewind: Motor size 15HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	7	525.20	$ 181.52	$ -	$ 179.84	$ 15.00	$ 0.044	4.79	0.98	3
Green Motors Program Rewind: Motor size 20HP	Green Motors Program Rewind: Motor size 20HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	7	702.77	$ 242.89	$ -	$ 200.64	$ 20.00	$ 0.044	4.80	1.16	3
Green Motors Program Rewind: Motor size 25HP	Green Motors Program Rewind: Motor size 25HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	893.48	$ 342.23	$ -	$ 229.24	$ 25.00	$ 0.044	5.35	1.40	3
Green Motors Program Rewind: Motor size 30HP	Green Motors Program Rewind: Motor size 30HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	962.42	$ 368.64	$ -	$ 251.78	$ 30.00	$ 0.044	5.12	1.38	3
Green Motors Program Rewind: Motor size 40HP	Green Motors Program Rewind: Motor size 40HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	1,120.77	$ 429.29	$ -	$ 307.68	$ 40.00	$ 0.044	4.83	1.32	3
Green Motors Program Rewind: Motor size 50HP	Green Motors Program Rewind: Motor size 50HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	1,206.18	$ 462.01	$ -	$ 340.61	$ 50.00	$ 0.044	4.50	1.29	3
Green Motors Program Rewind: Motor size 60HP	Green Motors Program Rewind: Motor size 60HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	1,268.50	$ 485.88	$ -	$ 401.72	$ 60.00	$ 0.044	4.21	1.17	3
Green Motors Program Rewind: Motor size 75HP	Green Motors Program Rewind: Motor size 75HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	1,305.49	$ 500.04	$ -	$ 434.22	$ 75.00	$ 0.044	3.79	1.12	3
Green Motors Program Rewind: Motor size 100HP	Green Motors Program Rewind: Motor size 100HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	1,723.08	$ 660.00	$ -	$ 538.65	$ 100.00	$ 0.044	3.77	1.18	3
Green Motors Program Rewind: Motor size 125HP	Green Motors Program Rewind: Motor size 125HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	1,990.39	$ 762.38	$ -	$ 536.91	$ 125.00	$ 0.044	3.60	1.34	3

Year: 2024 **Program:** Custom Projects **Market Segment:** Industrial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/ Notes
Green Motors Program Rewind: Motor size 150HP	Green Motors Program Rewind: Motor size 150HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	2,366.02	$ 906.26	$ -	$ 598.05	$ 150.00	$ 0.044	3.58	1.42	3
Green Motors Program Rewind: Motor size 200HP	Green Motors Program Rewind: Motor size 200HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	3,138.34	$ 1,202.09	$ -	$ 719.97	$ 200.00	$ 0.044	3.57	1.54	3
Green Motors Program Rewind: Motor size 250HP	Green Motors Program Rewind: Motor size 250HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	3,798.53	$ 1,454.96	$ -	$ 925.36	$ 250.00	$ 0.044	3.50	1.47	3
Green Motors Program Rewind: Motor size 300HP	Green Motors Program Rewind: Motor size 300HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	4,534.67	$ 1,736.93	$ -	$ 935.35	$ 300.00	$ 0.044	3.49	1.69	3
Green Motors Program Rewind: Motor size 350HP	Green Motors Program Rewind: Motor size 350HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	5,286.56	$ 2,024.92	$ -	$ 980.35	$ 350.00	$ 0.044	3.49	1.84	3
Green Motors Program Rewind: Motor size 400HP	Green Motors Program Rewind: Motor size 400HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	5,994.15	$ 2,295.95	$ -	$ 1,094.96	$ 400.00	$ 0.044	3.47	1.86	3
Green Motors Program Rewind: Motor size 450HP	Green Motors Program Rewind: Motor size 450HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	6,732.12	$ 2,578.62	$ -	$ 1,196.88	$ 450.00	$ 0.044	3.47	1.90	3
Green Motors Program Rewind: Motor size 500HP	Green Motors Program Rewind: Motor size 500HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	7,490.56	$ 2,869.13	$ -	$ 1,293.03	$ 500.00	$ 0.044	3.47	1.95	3
Green Motors Program Rewind: Motor size 600HP	Green Motors Program Rewind: Motor size 600HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	10,137.37	$ 3,882.94	$ -	$ 1,945.90	$ 600.00	$ 0.044	3.73	1.79	3
Green Motors Program Rewind: Motor size 700HP	Green Motors Program Rewind: Motor size 700HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	11,776.73	$ 4,510.87	$ -	$ 2,122.97	$ 700.00	$ 0.044	3.72	1.88	3
Green Motors Program Rewind: Motor size 800HP	Green Motors Program Rewind: Motor size 800HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	13,430.58	$ 5,144.35	$ -	$ 2,355.50	$ 800.00	$ 0.044	3.71	1.92	3
Green Motors Program Rewind: Motor size 900HP	Green Motors Program Rewind: Motor size 900HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	15,077.39	$ 5,775.13	$ -	$ 2,596.83	$ 900.00	$ 0.044	3.71	1.95	3
Green Motors Program Rewind: Motor size 1000HP	Green Motors Program Rewind: Motor size 1000HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	8	16,681.86	$ 6,389.69	$ -	$ 2,798.58	$ 1,000.00	$ 0.044	2.55	1.63	3
Green Motors Program Rewind: Motor size 1250HP	Green Motors Program Rewind: Motor size 1250HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	17,811.87	$ 7,442.14	$ -	$ 3,343.10	$ 1,250.00	$ 0.044	2.53	1.63	3

Year: 2024 **Program:** Custom Projects **Market Segment:** Industrial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/ Notes
Green Motors Program Rewind: Motor size 1500HP	Green Motors Program Rewind: Motor size 1500HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	21,329.20	$ 8,911.75	$ -	$ 3,829.63	$ 1,500.00	$ 0.044	2.53	1.68	3
Green Motors Program Rewind: Motor size 1750HP	Green Motors Program Rewind: Motor size 1750HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	24,779.46	$ 10,353.33	$ -	$ 4,370.94	$ 1,750.00	$ 0.044	2.52	1.69	3
Green Motors Program Rewind: Motor size 2000HP	Green Motors Program Rewind: Motor size 2000HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	28,200.58	$ 11,782.74	$ -	$ 4,903.13	$ 2,000.00	$ 0.044	2.52	1.71	3
Green Motors Program Rewind: Motor size 2250HP	Green Motors Program Rewind: Motor size 2250HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	31,526.74	$ 13,172.47	$ -	$ 5,341.56	$ 2,250.00	$ 0.044	2.51	1.74	3
Green Motors Program Rewind: Motor size 2500HP	Green Motors Program Rewind: Motor size 2500HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	34,956.50	$ 14,605.49	$ -	$ 5,844.11	$ 2,500.00	$ 0.044	2.50	1.75	3
Green Motors Program Rewind: Motor size 3000HP	Green Motors Program Rewind: Motor size 3000HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	41,685.90	$ 17,417.16	$ -	$ 6,832.84	$ 3,000.00	$ 0.044	2.49	1.77	3
Green Motors Program Rewind: Motor size 3500HP	Green Motors Program Rewind: Motor size 3500HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	48,532.34	$ 20,277.74	$ -	$ 7,550.60	$ 3,500.00	$ 0.044	2.49	1.83	3
Green Motors Program Rewind: Motor size 4000HP	Green Motors Program Rewind: Motor size 4000HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	55,465.53	$ 23,174.55	$ -	$ 8,429.87	$ 4,000.00	$ 0.044	2.49	1.86	3
Green Motors Program Rewind: Motor size 4500HP	Green Motors Program Rewind: Motor size 4500HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	62,268.99	$ 26,017.17	$ -	$ 9,084.81	$ 4,500.00	$ 0.044	2.49	1.90	3
Green Motors Program Rewind: Motor size 5000HP	Green Motors Program Rewind: Motor size 5000HP	Standard rewind practice	Motor	I-All-Other-Shift2-All-All-S	9	69,044.08	$ 28,847.93	$ -	$ 9,697.61	$ 5,000.00	$ 0.044	2.48	1.95	3

(a) Average measure life.
(b) Estimated kWh savings measured at the customer's meter, excluding system losses.
(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the
(d) Incremental participant cost prior to customer incentives.
(e) Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2024 actuals.
(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)
(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))
(1) 2024 total cohort savings
(2) Offering cost-effective when admin costs are excluded.
(3)RTF. Ind_and_Ag_GreenMotorResind_v4_0.xlsm. 2022.

New Construction

Segment: Commercial

2024 Program Results

Cost Inputs		Ref
Program Administration	$ 607,002	
Program Incentives	3,308,109	I
Total UC	**$ 3,915,111**	P
Measure Equipment and Installation (Incremental Participant Cost)	$ 5,290,401	M

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
UC Test	$ 9,621,323	$ 3,915,111	2.46
TRC Test	13,658,003	5,897,403	2.32
RIM Test	9,621,323	13,721,459	0.70
PCT	16,189,005	5,290,401	3.06

Net Benefit Inputs			Ref
Resource Savings			
2024 Annual Gross Energy (kWh)	18,161,615		
NPV Cumulative Energy (kWh)	167,445,469	$ 9,621,323	S
10% Credit (Northwest Power Act)		962,132	
Total Electric Savings		**$ 10,583,455**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 9,806,348	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
Non-Energy Benefits		$ 3,074,548	NEB

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P + ((M-I)*NTG)
RIM Test	= S * NTG	= P + (B * NTG)
PCT	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	41%
Average Customer Segment Rate/kWh	$0.051
System Losses	6.00%

Notes:

Non-energy benefits/impacts on a $/kWh for each end-use. Based on 2019 impact evaluation.

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Air conditioning	Air Conditioners, Water Cooled Any Size	IECC 2018 Air Cooled AC Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	67.00	$ 36.73	$ -	$ 225.00	$ 40.00	$ 0.044	0.86	0.18	1
Air conditioning	Air-cooled chiller with condenser IPLV: 14.0 EER or higher	IECC 2018 Code Standard	Ton	C-All-HVAC-CAC-All-All-E	20	102.00	$ 61.96	$ -	$ 209.00	$ 80.00	$ 0.044	0.73	0.32	1,2,5
Air conditioning	Air-side Economizer	IECC 2018 Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	197.00	$ 108.00	$ -	$ 81.36	$ 75.00	$ 0.044	1.29	1.32	1, 2
Air conditioning	Direct evaporative cooler	IECC 2018 Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	315.00	$ 172.70	$ -	$ 364.00	$ 200.00	$ 0.044	0.81	0.50	1,5
Air conditioning	Evaporative Pre-Cooler on Air-Cooled Chillers	Air-cooled condenser coil	Ton	C-All-HVAC-CAC-All-All-E	15	63.00	$ 34.54	$ -	$ 173.00	$ 30.00	$ 0.044	1.05	0.22	1,5
Air conditioning	Indirect evaporative cooler	IECC 2018 Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	225.00	$ 123.35	$ -	$ 1,553.00	$ 130.00	$ 0.044	0.88	0.09	1
Air conditioning	Unitary Commercial Air Conditioners, Air Cooled (Cooling Mode). Split system & single package. Part A: Base to CEE Tier 1	IECC 2018 Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	47.00	$ 25.77	$ -	$ 79.00	$ 25.00	$ 0.044	0.95	0.35	1, 2, 3
Air conditioning	Unitary Commercial Air Conditioners, Air Cooled (Cooling Mode). Split system & single package. Part B: Base to CEE Tier 2	IECC 2018 Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	88.00	$ 48.25	$ -	$ 123.00	$ 50.00	$ 0.044	0.90	0.42	1
Air conditioning	Water-cooled chiller electronically operated, reciprocating and positive displacement	IECC 2018 Code Standard	Ton	C-All-HVAC-CAC-All-All-E	20	61.00	$ 37.06	$ -	$ 103.00	$ 40.00	$ 0.044	0.87	0.39	2,5
Air conditioning	Water-side Economizer	IECC 2018 Code Standard	Combined chiller tonnage	C-All-HVAC-CAC-All-All-E	10	153.00	$ 66.82	$ -	$ 725.82	$ 50.00	$ 0.044	1.18	0.10	1
Appliances with Electric dryer	Efficient Laundry Machines (electric dryer)	IECC 2018 Code Standard	Unit	Commercial-Misc. Com-Misc	9	814.50	$ 314.35	$ 3,411.460	$ 400.00	$ 200.00	$ 0.044	1.33	8.63	2, 4
Automatic High-Speed Door	Freezer to Dock	Code standards	Square foot	Commercial-Ref.warehouse-Misc	16	2,531.00	$ 1,367.28	$ -	$ 167.00	$ 320.00	$ 0.044	3.18	5.42	1
Automatic High-Speed Door	Freezer to Refrigerator	Code standards	Square foot	Commercial-Ref.warehouse-Misc	16	1,829.00	$ 988.05	$ -	$ 167.00	$ 160.00	$ 0.044	4.12	4.40	1
Automatic High-Speed Door	Refrigerator to Dock	Code standards	Square foot	Commercial-Ref.warehouse-Misc	16	360.00	$ 194.48	$ -	$ 167.00	$ 80.00	$ 0.044	2.03	1.17	1
Building Shell	Reflective roof treatment	IECC 2018 Code Standard	Square foot roof area	C-All-HVAC-CAC-All-All-E	15	0.12	$ 0.06	$ -	$ 0.05	$ 0.05	$ 0.044	1.16	1.27	2
Compressed Air	Air compressor VFD	Code standards	HP	Commercial-Misc. Com-Misc	13	949.00	$ 461.55	$ -	$ 223.00	$ 200.00	$ 0.044	1.91	1.92	1
Compressed Air	Efficient Compress Air Nozzle	Code standards	Unit	Commercial-Misc. Com-Misc	15	2,223.00	$ 1,158.46	$ -	$ 85.00	$ 80.00	$ 0.044	6.55	7.00	1
Compressed Air	Low Pressure Drop Filter	Code standards	HP	Commercial-Misc. Com-Misc	10	44.00	$ 18.31	$ -	$ 10.00	$ 10.00	$ 0.044	1.54	1.69	1

Year: 2024 **Program:** New Construction **Market Segment:** Commercial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Compressed Air	No-Loss Condensate Drain	Code standards	HP	Commercial-Misc. Com-Misc	10	1,970.00	$ 819.73	$ -	$ 194.00	$ 200.00	$ 0.044	2.87	3.22	1
Compressed Air	Refrigerated Compressed Air Dryer	Code standards	CFM	Commercial-Misc. Com-Misc	13	10.62	$ 5.17	$ -	$ 6.00	$ 3.00	$ 0.044	1.49	0.88	1, 5
Controls	Demand Controlled Kitchen Ventilation Exhaust Hood	No VFD	HP	C-All-Food-Cook-All-All-C	15	4,590.00	$ 2,461.65	$ -	$ 248.00	$ 250.00	$ 0.044	5.47	6.04	1
Controls	Energy Management System (EMS) controls: Part A: 1 strategy	IECC 2018 Code Standard	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	227.00	$ 215.93	$ 19.200	$ 162.00	$ 60.00	$ 0.044	2.21	1.19	1
Controls	EMS controls: Part B: 2 strategies	IECC 2018 Code Standard	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	409.00	$ 249.71	$ 19.200	$ 198.00	$ 80.00	$ 0.044	2.07	1.21	1
Controls	EMS controls: Part C: 3 strategies	IECC 2018 Code Standard	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	473.00	$ 299.34	$ 32.010	$ 233.00	$ 100.00	$ 0.044	2.07	1.35	1
Controls	EMS controls: Part D: 4 strategies	IECC 2018 Code Standard	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	567.00	$ 325.74	$ 67.220	$ 269.00	$ 120.00	$ 0.044	1.95	1.29	1
Controls	EMS controls: Part E: 5 strategies	IECC 2018 Code Standard	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	617.00	$ 119.84	$ 67.220	$ 304.00	$ 140.00	$ 0.044	1.71	0.88	1
Controls	Guest room energy management system	IECC 2018 Code Standard	Ton	C-Lod-fan-SGS-All-All-S	11	550.00	$ 237.89	$ -	$ 57.50	$ 50.00	$ 0.044	3.22	3.21	1
Controls	Part C: Variable speed drive on Potato/Onion Storage Shed Ventilation	No VFD	HP	C-All-HVAC-Vent-All-All-E	10	1,193.00	$ 502.70	$ -	$ 264.00	$ 250.00	$ 0.044	1.66	1.75	1
Controls	Variable speed drive on HVAC system applications	Code standards	HP	C-All-HVAC-Vent-All-All-E	15	582.00	$ 307.26	$ -	$ 153.91	$ 125.00	$ 0.044	2.04	1.89	1
Dairy VFD	VFD on milking transfer pump	Code standards	VFD	A-Da-Proc-MilkingSchedule-All-All-S	10	7,687.00	$ 3,229.36	$ -	$ 1,469.00	$ 1,500.00	$ 0.044	1.76	1.97	1
Dairy VFD	VFD on milking vacuum pump	Code standards	HP	A-Da-Proc-MilkingSchedule-All-All-S	10	548.00	$ 230.22	$ -	$ 273.00	$ 170.00	$ 0.044	1.19	0.85	1, 5
Energy Star Commercial Dishwasher	Energy Star Commercial Dishwasher	Non-ENERGY STAR Dishwasher	Unit	Commercial-Misc. Com-Misc	12	3,698.00	$ 1,731.44	$ -	$ 2,297.00	$ 500.00	$ 0.044	2.62	0.77	6
Engine block heater	Stationary pump-driven cirulating block heater	Circulating Block Heater on a Backup Generator <200 kW	Unit	C-All-HVAC-ER-All-All-E	15	1,106.00	$ 574.20	$ -	$ 239.00	$ 200.00	$ 0.044	2.31	2.20	1
Engine block heater	Stationary pump-driven cirulating block heater	Circulating Block Heater on a Backup Generator 201-500 kW	Unit	C-All-HVAC-ER-All-All-E	15	2,493.00	$ 1,294.28	$ -	$ 573.00	$ 350.00	$ 0.044	2.82	2.09	1
Engine block heater	Stationary pump-driven cirulating block heater	Circulating Block Heater on a Backup Generator 501-1000 kW	Unit	C-All-HVAC-ER-All-All-E	15	4,385.00	$ 2,276.54	$ -	$ 573.00	$ 500.00	$ 0.044	3.29	3.28	1
Engine block heater controls	Engine Mounted engine block heater	Code standards	Unit	C-All-HVAC-ER-All-All-E	15	2,352.00	$ 1,221.08	$ -	$ 120.00	$ 150.00	$ 0.044	4.83	6.04	1
Engine block heater controls	Wall mounted engine block heater	Code standards	Unit	C-All-HVAC-ER-All-All-E	15	2,738.00	$ 1,421.48	$ -	$ 70.00	$ 100.00	$ 0.044	6.48	8.26	1
Heat Pump	Heat Pumps, Air Cooled (Cooling Mode). Split system & single package. Part A: Base to CEE Tier 1	IECC 2018 Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	72.00	$ 39.47	$ -	$ 36.00	$ 50.00	$ 0.044	0.74	1.11	1, 2

Year: 2024 **Program:** New Construction **Market Segment:** Commercial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Heat Pump	Heat Pumps, Air Cooled (Cooling Mode). <= 5 tons. Split system & single package. Part B: Base to CEE Tier 2	IECC 2018 Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	104.00	$ 57.02	$ -	$ 67.00	$ 70.00	$ 0.044	0.76	0.88	1, 2
High Efficiency Battery Chargers	High Efficiency Battery Chargers - Single or Three Phase	Code standards	Unit	Commercial-Fleet_EV_Charger	15	3,337.00	$ 1,780.51	$ -	$ 400.00	$ 200.00	$ 0.044	5.15	3.59	1
High Volume Low Speed Fan	High Volume Low Speed Fan	Code standards	Fan	I-All-Other-Shift2-All-All-S	15	16,732.50	$ 9,464.13	$ -	$ 3,185.00	$ 2,000.00	$ 0.044	3.47	2.66	1, 2
HP	Heat Pumps, Water Cooled Any Size	IECC 2018 Air Cooled AC Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	133.00	$ 72.92	$ -	$ 370.00	$ 100.00	$ 0.044	0.69	0.21	1
Ice Machines	ENERY STAR Ice Machine <200 lbs per day	Non-ENERGY STAR ice machine	Unit	C-All-Ref-Refrig-All-All-C	9	285.00	$ 118.51	$ -	$ 311.00	$ 100.00	$ 0.044	1.05	0.40	1, 5
Ice Machines	ENERY STAR Ice Machine >= 200 lbs per day	Non-ENERGY STAR ice machine	Unit	C-All-Ref-Refrig-All-All-C	9	2,608.00	$ 1,084.46	$ -	$ 311.00	$ 300.00	$ 0.044	2.62	2.81	1
Indoor Pool Cover	No pool cover	Code standards	Square foot	Residential-Spa Heater	10	23.50	$ 10.07	$ -	$ 4.99	$ 2.00	$ 0.044	3.33	1.84	2, 7
Lighting	Exterior Light Load Reduction: Minimum of 15% below code.	Code standards	kW	Commercial-Misc. Com-ExtLight	15	4,059.00	$ 3,146.18	$ -	$ 287.00	$ 200.00	$ 0.044	8.35	7.46	1, 2
Lighting	High Efficiency Exit Signs	Code standards	Sign	IPC_8760	16	28.00	$ 15.66	$ -	$ 10.83	$ 7.50	$ 0.044	1.80	1.43	1, 2
Lighting	Interior Light Load Reduction: Part A: 10-19.9% below code.	Code standards	Square foot	C-All-Lgt-LPD Int-All-All-E	14	0.43	$ 0.22	$ -	$ 0.13	$ 0.10	$ 0.044	1.86	1.63	1, 2
Lighting	Interior Light Load Reduction: Part B: 20-29.9% below code.	Code standards	Square foot	C-All-Lgt-LPD Int-All-All-E	14	0.86	$ 0.44	$ -	$ 0.25	$ 0.20	$ 0.044	1.86	1.69	1, 2
Lighting	Interior Light Load Reduction: Part C: Equal to or greater than 30% below code.	Code standards	Square foot	C-All-Lgt-LPD Int-All-All-E	14	1.95	$ 1.00	$ -	$ 0.58	$ 0.30	$ 0.044	2.60	1.66	1, 2
Lighting	Networked Lighting Controls - Exterior	Code standards	kWh	Commercial-Misc. Com-ExtLight	12	1.00	$ 0.69	$ -	$ 0.33	$ 0.20	$ 0.044	2.83	2.01	1
Lighting	Networked Lighting Controls - Interior	Code standards	kWh	C-All-Lgt-LPD Int-All-All-E	12	1.00	$ 0.48	$ -	$ 0.33	$ 0.26	$ 0.044	1.57	1.39	1
Lighting	Occupancy sensors	Code standards	Unit	C-All-Lgt-LPD Int-All-All-E	8	329.00	$ 118.53	$ -	$ 134.00	$ 25.00	$ 0.044	3.01	0.88	1
Refrigeration	Efficient Refrigeration Condenser	Code standards	Ton	C-Gro-Ref-All-All-All-E	15	114.00	$ 65.28	$ -	$ 192.00	$ 40.00	$ 0.044	1.45	0.36	1, 5
Refrigeration	Evaporative Pre-Cooler on Air-Cooled Refrigeration Systems	Air-cooled condenser coil	Ton	C-All-HVAC-CAC-All-All-E	15	110.00	$ 60.31	$ -	$ 173.00	$ 30.00	$ 0.044	1.73	0.37	1,5
VRF AC	Variable Refrigerant Flow Units. Air Conditioner. Part B: Base to CEE Tier 1	IECC 2018 Air Cooled AC Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	87.00	$ 47.70	$ -	$ 93.00	$ 35.00	$ 0.044	1.23	0.54	1
VRF AC	Variable Refrigerant Flow Units. <= 5 tons. Air Conditioner. Part C: Base to CEE Tier 2	IECC 2018 Air Cooled AC Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	119.00	$ 65.24	$ -	$ 108.00	$ 55.00	$ 0.044	1.08	0.63	1

Year: 2024 **Program:** New Construction **Market Segment:** Commercial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
VRF HP	Air-cooled Variable Refrigerant Flow Units. Heat Pump. Part B: Base to CEE Tier 1	IECC 2018 Air Cooled AC Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	97.00	$ 53.18	$ -	$ 71.00	$ 85.00	$ 0.044	0.98	1.45	1, 3
VRF HP	Air-cooled Variable Refrigerant Flow Units. <= 5 tons. Heat Pump. Part C: Base to CEE Tier 2	IECC 2018 Air Cooled AC Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	129.00	$ 70.72	$ -	$ 71.00	$ 85.00	$ 0.044	0.78	1.02	1
VRF HP	Variable Refrigerant Flow, Water Cooled Heat Pump. <= 64 Tons. Base to CEE Tier 1	IECC 2018 Air Cooled AC Code Standard	Ton	C-All-HVAC-CAC-All-All-E	15	128.00	$ 70.18	$ -	$ 145.00	$ 100.00	$ 0.044	0.66	0.51	1

(a) Average measure life.
(b) Estimated kWh savings measured at the customer's meter, excluding system losses.
(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the
(d) Incremental participant cost prior to customer incentives.
(e) Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2024 actuals.
(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)
(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))
(1) Idaho Power Technical Reference Manual (TRM) prepared by ADM Associates, Inc. 2021.
(2) Measure also available under Multifamily Energy Efficiency Program.
(3) Measure cost-effective when admin fees are excluded.
(4) Idaho Power TRM prepared by ADM Associates, Inc. 2021. NEBs from water savings from RTF. ComClothesWashers_v7_1.xlsm. Simple average. 2023.
(5) Idaho only measure.
(6) RTF. ComDishwasher_va_2.xlsm. 2024.
(7) Idaho Power Multifamily TRM prepared by ADM Associates, Inc. 2023.

Retrofits

Segment: Commercial

2024 Program Results

Cost Inputs		Ref
Program Administration	$ 731,729	
Program Incentives	2,557,777	I
Total UC	**$ 3,289,506**	P
Measure Equipment and Installation (Incremental Participant Cost)	$ 8,858,507	M

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
UC Test	$ 6,462,476	$ 3,289,506	1.96
TRC Test	9,202,463	9,590,236	0.96
RIM Test	6,462,476	9,274,014	0.70
PCT	10,636,024	8,858,507	1.20

Net Benefit Inputs			Ref
Resource Savings			
2024 Annual Gross Energy (kWh)	12,066,417		
NPV Cumulative Energy (kWh)	103,679,398	$ 6,462,476	S
10% Credit (Northwest Power Act)		646,248	
Total Electric Savings		**$ 7,108,724**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 5,984,508	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
Non-Energy Benefits		$ 2,093,739	NEB

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P + ((M-I)*NTG)
RIM Test	= S * NTG	= P + (B * NTG)
PCT	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	51%
Average Customer Segment Rate/kWh	$0.051
System Losses	6.00%

Notes:

Measure inputs from Evergreen Consulting Group or the TRM prepared by ADM Associates, Inc., unless otherwise noted

NEB/impacts on a $/kWh for each end-use. Based on the 2019 impact evaluation.

Year: 2024 **Program:** Retrofits **Market Segment:** Commercial **Program Type:** Energy Efficiency

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
AC Units	<= 5 ton VRF. Base to CEE Tier 2	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	161.00	$ 88.27	$ -	$ 1,093.00	$ 100.00	$ 0.044	0.82	0.09	1, 2
AC Units	Air-conditioning Tune Up		ton	C-All-HVAC-CAC-All-All-E	10	99.50	$ 43.46	$ -	$ 35.00	$ 25.00	$ 0.044	1.48	1.22	1
AC Units	Base to CEE Tier 2	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	193.00	$ 105.81	$ -	$ 984.00	$ 110.00	$ 0.044	0.89	0.12	1, 3
AC Units	VRF. Base to CEE Tier 1	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	129.00	$ 70.72	$ -	$ 1,078.00	$ 75.00	$ 0.044	0.88	0.07	1, 2
AC Units	Water-cooled AC that meets CEE Tier 1	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	130.00	$ 71.27	$ -	$ 1,237.00	$ 75.00	$ 0.044	0.88	0.06	1, 2
AC Units	Base to CEE Tier 1	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	152.00	$ 83.33	$ -	$ 940.00	$ 85.00	$ 0.044	0.91	0.10	3
Automated Control Systems	EMS controls with 1 strategy	Proposed strategy not existing (new system)	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	227.00	$ 119.84	$ 19.200	$ 162.00	$ 60.00	$ 0.044	1.71	0.88	1, 2
Automated Control Systems	EMS controls with 2 strategies	Proposed strategy not existing (retrofit system)	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	622.00	$ 215.93	$ 19.200	$ 233.00	$ 150.00	$ 0.044	2.21	1.19	1
Automated Control Systems	EMS controls with 2 strategies	Proposed strategy not existing (new system)	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	409.00	$ 328.38	$ 19.200	$ 198.00	$ 80.00	$ 0.044	1.85	1.46	1
Automated Control Systems	EMS controls with 3 strategies	Proposed strategy not existing (retrofit system)	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	811.00	$ 249.71	$ 57.610	$ 269.00	$ 175.00	$ 0.044	2.07	1.21	1
Automated Control Systems	EMS controls with 3 strategies	Proposed strategy not existing (new system)	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	473.00	$ 428.16	$ 32.010	$ 233.00	$ 100.00	$ 0.044	2.04	1.74	1
Automated Control Systems	EMS controls with 4 strategies	Proposed strategy not existing (new system)	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	567.00	$ 299.34	$ 67.220	$ 269.00	$ 120.00	$ 0.044	2.07	1.35	1
Automated Control Systems	EMS controls with 4 strategies	Proposed strategy not existing (retrofit system)	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	1,728.00	$ 912.27	$ 307.280	$ 304.00	$ 200.00	$ 0.044	3.31	3.46	1
Automated Control Systems	EMS controls with 5 strategies	Proposed strategy not existing (new system)	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	617.00	$ 325.74	$ 67.220	$ 304.00	$ 140.00	$ 0.044	1.95	1.29	1
Automated Control Systems	EMS controls with 5 strategies	Proposed strategy not existing (retrofit system)	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	1,796.00	$ 948.17	$ 310.480	$ 340.00	$ 225.00	$ 0.044	3.13	3.24	1
Automated Control Systems	Energy Management System (EMS) controls with 1 strategy	Proposed strategy not existing (retrofit system)	Ton of cooling	C-All-HVAC-Vent-All-All-E	15	372.00	$ 196.39	$ 25.610	$ 198.00	$ 100.00	$ 0.044	1.69	1.13	1
Automated Control Systems	Lodging room occupancy controls	Manual controls	Unit	C-Lod-fan-SGS-All-All-S	11	643.00	$ 278.12	$ -	$ 150.61	$ 75.00	$ 0.044	2.70	1.71	1
Automatic high speed doors	Freezer to Dock	Manual or electric warehouse door	Square foot	Commercial-Ref.warehouse-Misc	16	2,812.00	$ 1,519.08	$ -	$ 188.00	$ 320.00	$ 0.044	3.43	5.38	1
Automatic high speed doors	Freezer to Refrigerator	Manual or electric warehouse door	Square foot	Commercial-Ref.warehouse-Misc	16	2,032.00	$ 1,097.72	$ -	$ 188.00	$ 160.00	$ 0.044	4.42	4.37	1
Automatic high speed doors	Refrigerator to Dock	Manual or electric warehouse door	Square foot	Commercial-Ref.warehouse-Misc	16	400.00	$ 216.09	$ -	$ 188.00	$ 80.00	$ 0.044	2.22	1.16	1

Year: 2024 **Program:** Retrofits **Market Segment:** Commercial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Ceiling Insulation	Increase to R38 min. insulation.	Insulation level, R11 or less	Square foot	C-All-HVAC-ER-All-All-C	25	0.38	$ 0.25	$ -	$ 1.45	$ 0.20	$ 0.044	1.16	0.19	1, 2
Chiller Units	Air-cooled chiller, IPLV 14.0 EER or higher	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	20	154.00	$ 93.55	$ -	$ 784.00	$ 110.00	$ 0.044	0.80	0.13	2, 3
Chiller Units	Water-cooled chiller electronically operated, reciprocating and positive displacement	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	20	91.00	$ 55.28	$ -	$ 596.00	$ 60.00	$ 0.044	0.86	0.10	2, 3
Commercial Kitchen Equipment	Efficient Hot Food Holding Cabinet (Double Size)	Standard hot food holding cabinet	Unit	C-All-Food-Cook-All-All-C	7	4,473.47	$ 1,464.55	$ -	$ 3,929.29	$ 800.00	$ 0.044	1.47	0.39	2, 4
Commercial Kitchen Equipment	Efficient Hot Food Holding Cabinet (Full Size)	Standard hot food holding cabinet	Unit	C-All-Food-Cook-All-All-C	7	2,602.55	$ 852.04	$ -	$ 3,487.85	$ 400.00	$ 0.044	1.66	0.26	2, 4
Commercial Kitchen Equipment	Efficient Hot Food Holding Cabinet (Half Size)	Standard hot food holding cabinet	Unit	C-All-Food-Cook-All-All-C	7	1,373.07	$ 449.52	$ -	$ 967.24	$ 200.00	$ 0.044	1.73	0.48	2, 4
Commercial Kitchen Equipment	ENERGY STAR listed electric combination oven (15-28 pans)	Standard electric oven	Unit	C-All-Food-Cook-All-All-C	10	5,640.26	$ 2,411.99	$ -	$ 1,125.70	$ 800.00	$ 0.044	2.31	1.93	5
Commercial Kitchen Equipment	ENERGY STAR listed electric combination oven (29-40 pans)	Standard electric oven	Unit	C-All-Food-Cook-All-All-C	10	11,633.69	$ 4,975.02	$ -	$ 1,125.70	$ 800.00	$ 0.044	3.81	3.35	5
Commercial Kitchen Equipment	ENERGY STAR listed electric combination oven (3-4 pans)	Standard electric oven	Unit	C-All-Food-Cook-All-All-C	10	1,306.90	$ 558.88	$ -	$ 1,125.70	$ 300.00	$ 0.044	1.57	0.52	2, 5
Commercial Kitchen Equipment	ENERGY STAR listed electric combination oven (5-14 pans)	Standard electric oven	Unit	C-All-Food-Cook-All-All-C	10	6,428.11	$ 2,748.91	$ -	$ 1,125.70	$ 800.00	$ 0.044	2.54	2.15	5
Commercial Kitchen Equipment	ENERGY STAR listed electric convection oven	Standard electric oven	Unit	C-All-Food-Cook-All-All-C	12	1,206.40	$ 580.53	$ -	$ 605.74	$ 180.00	$ 0.044	2.50	0.97	2, 6
Commercial Kitchen Equipment	ENERGY STAR listed electric fryer	Standard fryer	Unit	C-All-Food-Cook-All-All-C	9	953.15	$ 378.09	$ -	$ 1,576.52	$ 150.00	$ 0.044	1.97	0.26	2, 7
Commercial Kitchen Equipment	ENERGY STAR listed electric steamer -Any Size	Standard steamer	Unit	C-All-Food-Cook-All-All-C	8	1,689.45	$ 613.83	$ -	$ -	$ 30.00	$ 0.044	5.92	6.51	8
Commercial Kitchen Equipment	Steamer_Electric_3 to 4 pans	Standard steamer	Unit	C-All-Food-Cook-All-All-C	8	4,574.56	$ 1,662.09	$ -	$ -	$ 120.00	$ 0.044	5.20	5.72	8
Commercial Kitchen Equipment	Steamer_Electric_5 to 6 pans	Standard steamer	Unit	C-All-Food-Cook-All-All-C	8	9,273.74	$ 3,369.45	$ -	$ -	$ 180.00	$ 0.044	5.77	6.34	8
Commercial Kitchen Equipment	Steamer_Electric_7 to 12 pans	Standard steamer	Unit	C-All-Food-Cook-All-All-C	8	16,572.95	$ 6,021.50	$ -	$ -	$ 360.00	$ 0.044	5.56	6.12	8
Compressed Air	Efficient Compress Air Nozzle	Standard air nozzle	Unit	Commercial-Misc. Com-Misc	15	2,223.00	$ 1,158.46	$ -	$ 85.00	$ 80.00	$ 0.044	6.55	7.00	1
Compressed Air	Efficient Refrigerated Compressed Air Dryer	Standard air dryer	CFM	Commercial-Misc. Com-Misc	13	10.62	$ 5.17	$ -	$ 6.00	$ 3.00	$ 0.044	1.49	0.88	1, 2
Compressed Air	Low Pressure Filter	Standard filter	HP	Commercial-Misc. Com-Misc	10	44.00	$ 18.31	$ -	$ 10.00	$ 10.00	$ 0.044	1.54	1.69	1
Compressed Air	No-Loss Condensate Drain	Open tube with ball valve	Unit	Commercial-Misc. Com-Misc	10	1,970.00	$ 819.73	$ -	$ 244.00	$ 200.00	$ 0.044	2.87	2.73	1

Year: 2024 **Program:** Retrofits **Market Segment:** Commercial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Compressed Air	VFD on air compressor	No existing VFD	HP	Commercial-Misc. Com-Misc	13	949.00	$ 461.55	$ -	$ 223.00	$ 200.00	$ 0.044	1.91	1.92	1
Compressor Head Fan Motor to ECM	Compressor Head Fan Motor to ECM	SP or PSC with motors less than or equal to existing motor size	Unit	C-Gro-Ref-All-All-All-E	15	345.61	$ 197.90	$ -	$ 228.08	$ 100.00	$ 0.044	1.72	0.90	1, 2
Connected Thermostat	No existing connected (web-enabled) thermostat	No existing connected (web-enabled) thermostat	Unit	C-All-HVAC-Vent-All-All-E	5	1,588.35	$ 380.64	$ -	$ 300.00	$ 150.00	$ 0.044	1.74	1.13	2, 9
Defrost Coil Control	Defrost Coil Control - Cooler or Freezer	No evaporative coil defrost control	Fan	C-Gro-Ref-All-All-All-E	10	195.50	$ 89.16	$ -	$ 500.00	$ 50.00	$ 0.044	1.52	0.19	1, 2
Demand Controlled Kitchen Ventilation Exhaust Hood	VFD installed on kitchen exhuast and/or makeup air fan	Kitchen hood with constant speed ventilation motor	HP	C-All-Food-Cook-All-All-C	15	4,590.00	$ 2,461.65	$ -	$ 469.00	$ 250.00	$ 0.044	5.47	4.05	1
Economizers	Air-side economizer control addition	No prior control	Ton of cooling	C-All-HVAC-CAC-All-All-E	15	279.00	$ 152.96	$ -	$ 155.01	$ 100.00	$ 0.044	1.36	1.01	1, 3
Economizers	Air-side economizer control repair	Non-functional economizer	Ton of cooling	C-All-HVAC-CAC-All-All-E	15	279.00	$ 152.96	$ -	$ 73.65	$ 50.00	$ 0.044	2.46	1.96	1, 3
Economizers	Water-side economizer control addition	No prior control	Combined chiller tonnage	C-All-HVAC-CAC-All-All-E	10	153.00	$ 66.82	$ -	$ 725.82	$ 50.00	$ 0.044	1.18	0.10	1, 2
Electronically Commutated Motor (ECM)	ECM/PMSM motor in HVAC applications.	Shaded pole or permanent split capacitor motor	HP	C-All-HVAC-Vent-All-All-E	15	8,815.25	$ 4,653.90	$ -	$ 239.50	$ 200.00	$ 0.044	7.96	8.21	1
Engine block heater	Engine-mounted engine block heater	standard engine block heater without controls	Unit	C-All-HVAC-ER-All-All-E	15	2,352.00	$ 1,221.08	$ -	$ 170.00	$ 150.00	$ 0.044	4.83	4.93	1
Engine block heater	Stationary pump-driven cirulating block heater	Circulating Block Heater on a Backup Generator <200 kW	Unit	C-All-HVAC-ER-All-All-E	15	1,106.00	$ 574.20	$ -	$ 1,268.00	$ 200.00	$ 0.044	2.31	0.48	1, 2
Engine block heater	Stationary pump-driven cirulating block heater	Circulating Block Heater on a Backup Generator 201-500 kW	Unit	C-All-HVAC-ER-All-All-E	15	2,493.00	$ 1,294.28	$ -	$ 2,152.00	$ 350.00	$ 0.044	2.82	0.63	1, 2
Engine block heater	Stationary pump-driven cirulating block heater	Circulating Block Heater on a Backup Generator 501-1000 kW	Unit	C-All-HVAC-ER-All-All-E	15	4,385.00	$ 2,276.54	$ -	$ 2,645.00	$ 500.00	$ 0.044	3.29	0.88	1, 2
Engine block heater	Wall mounted engine block heater	Standard engine block heater without controls	Unit	C-All-HVAC-ER-All-All-E	15	2,738.00	$ 1,421.48	$ -	$ 120.00	$ 100.00	$ 0.044	6.48	6.53	1
Evaporative Coolers	Direct evaporative cooler.	Replacing standard AC unit	Ton	C-All-HVAC-CAC-All-All-E	15	350.00	$ 191.89	$ -	$ 1,178.00	$ 200.00	$ 0.044	0.89	0.18	1, 2
Evaporative Coolers	Indirect evaporative cooler.	Replacing standard AC unit	Ton	C-All-HVAC-CAC-All-All-E	15	250.00	$ 137.06	$ -	$ 2,367.00	$ 130.00	$ 0.044	0.97	0.06	1, 2, 10
Evaporative Pre-Cooler on Air-Cooled Chillers	Evaporative Pre-Cooler on Air-Cooled Chillers	Existing air-cooled condenser coil	Ton	C-All-HVAC-CAC-All-All-E	15	63.00	$ 34.54	$ -	$ 173.00	$ 30.00	$ 0.044	1.05	0.22	1, 2
Evaporative Pre-Cooler on Air-Cooled Refrigeration Systems	Evaporative Pre-Cooler on Air-Cooled Refrigeration Systems	Existing air-cooled condenser coil	Ton	C-All-Ref-Refrig-All-All-C	15	110.00	$ 61.86	$ -	$ 173.00	$ 30.00	$ 0.044	1.78	0.38	1, 2
Floating Head/Suction Pressures	Head pressure controller	Standard head pressure control	HP	C-Gro-Ref-All-All-All-E	16	440.00	$ 259.08	$ -	$ 311.90	$ 160.00	$ 0.044	1.45	0.86	1, 2

Year: 2024 **Program:** Retrofits **Market Segment:** Commercial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Floating Head/Suction Pressures	Suction pressure controller	Standard suction pressure control	HP	C-Gro-Ref-All-All-All-E	16	104.00	$ 61.24	$ -	$ 86.91	$ 40.00	$ 0.044	1.38	0.74	1, 2
Heat Pump (HP) Units	Air Cooled HP. Base to CEE Tier 1	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	187.00	$ 102.52	$ -	$ 888.00	$ 110.00	$ 0.044	0.87	0.13	1, 2, 3
High Efficiency Battery Chargers	High Efficiency Battery Chargers	Standard battery charger	Unit	Commercial-Fleet_EV_Charger	15	3,337.00	$ 1,780.51	$ -	$ 400.00	$ 200.00	$ 0.044	5.15	3.59	1
High Volume Low Speed Fan	High Volume Low Speed Fan	Standard high speed fan	Fan	I-All-Other-Shift2-All-All-S	15	16,732.50	$ 9,464.13	$ -	$ 4,185.00	$ 2,000.00	$ 0.044	3.47	2.12	1, 3
HP Units	<= 5 ton Air-cooled VRF. Base to CEE Tier 2	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	175.00	$ 95.94	$ -	$ 1,034.00	$ 110.00	$ 0.044	0.82	0.10	1, 2
HP Units	<= 5 ton HP Unit. Base to CEE Tier 2	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	219.00	$ 120.07	$ -	$ 919.00	$ 130.00	$ 0.044	0.86	0.14	1, 2, 3
HP Units	Air-cooled VRF. Base to CEE Tier 1	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	143.00	$ 78.40	$ -	$ 999.00	$ 90.00	$ 0.044	0.81	0.09	1, 2
HP Units	Water-cooled HP that meets CEE Tier 1	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	129.00	$ 70.72	$ -	$ 971.00	$ 75.00	$ 0.044	0.88	0.08	1, 2
HP Units	Water-cooled VRF that meets CEE Tier 1	Working pre-existing system	Ton	C-All-HVAC-CAC-All-All-E	15	75.00	$ 41.12	$ -	$ 1,187.00	$ 45.00	$ 0.044	0.85	0.04	1, 2
HVAC Fan Motor Belts	Synchronous belt	Standard fan belt	HP	C-All-HVAC-Vent-All-All-E	4	213.00	$ 41.20	$ -	$ 67.00	$ 25.00	$ 0.044	1.20	0.59	1, 2
HVAC Fan Motor Belts	Type AX notched V-belt Type BX notched V-belt	Type A solid V-belt Type B solid V-belt	HP	C-All-HVAC-Vent-All-All-E	4	83.00	$ 16.06	$ -	$ 4.40	$ 5.00	$ 0.044	1.86	2.20	1
Ice Machines	Ice Machines (<200 lbs/day)	Code	Unit	C-All-Ref-Refrig-All-All-C	9	285.00	$ 118.51	$ -	$ 311.00	$ 100.00	$ 0.044	1.05	0.40	1, 2
Ice Machines	Ice Machines (>200 lbs/day)	Code	Unit	C-All-Ref-Refrig-All-All-C	9	2,608.00	$ 1,084.46	$ -	$ 311.00	$ 300.00	$ 0.044	2.62	2.81	1
Laundry Machines	High efficiency washer	Standard washer, electric dryer	Machine	Commercial-Misc. Com-Misc	9	1,370.00	$ 18.86	$ 4,209.78	$ 1,582.00	$ 200.00	$ 0.044	4.81	3.00	1, 3, 11
LED sign lighting retrofit kit	LED sign lighting retrofit kit	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	487.27	$ 528.74	$ -	$ 172.05	$ 97.45	$ 0.044	2.04	2.92	12
LED Exit Sign	LED Exit Sign	Fixture using higher wattage	Unit	IPC_8760	12	230.68	$ 325.78	$ -	$ 63.77	$ 40.00	$ 0.044	2.74	1.85	12
LED sign lighting retrofit kit	LED sign lighting retrofit kit	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	427.11	$ 112.29	$ -	$ 161.34	$ 85.42	$ 0.044	2.24	1.67	12
LEDs	HID LED screw-in replacement lamp	Existing HID lamp using > input watts	Fixture	Commercial-All Com-IntLight	12	662.71	$ 200.79	$ -	$ 104.82	$ 49.23	$ 0.044	1.93	1.23	12
LEDs	HID LED screw-in replacement lamp	Existing HID lamp using > input watts	Fixture	Commercial-All Com-ExtLight	12	743.75	$ 497.26	$ -	$ 110.38	$ 47.64	$ 0.044	6.21	3.83	12
LEDs	LED fixture or LED Level 2 retrofit kit	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	440.45	$ 311.55	$ -	$ 178.93	$ 96.90	$ 0.044	3.99	2.56	12
LEDs	LED fixture or LED Level 2 retrofit kit	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	912.48	$ 207.06	$ -	$ 279.77	$ 200.74	$ 0.044	1.78	1.15	12
LEDs	LED fixture or LED Level 2 retrofit kit with multiple control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	631.13	$ 610.07	$ -	$ 282.13	$ 170.40	$ 0.044	2.54	2.10	12
LEDs	LED fixture or LED Level 2 retrofit kit with multiple control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	753.43	$ 296.70	$ -	$ 248.13	$ 170.40	$ 0.044	1.50	1.05	12
LEDs	LED fixture or LED Level 2 retrofit kit with networked control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	1,636.51	$ 503.73	$ -	$ 524.84	$ 491.91	$ 0.044	2.48	1.97	12

Year: 2024 **Program:** Retrofits **Market Segment:** Commercial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
LEDs	LED fixture or LED Level 2 retrofit kit with networked/luminaire level lighting control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	733.88	$ 1,094.14	$ -	$ 347.57	$ 223.34	$ 0.044	1.94	2.02	12
LEDs	LED fixture or LED Level 2 retrofit kit with single control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	518.33	$ 345.01	$ -	$ 203.25	$ 129.58	$ 0.044	1.35	1.00	12
LEDs	LED fixture or LED Level 2 retrofit kit with single control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	951.89	$ 243.68	$ -	$ 310.73	$ 237.97	$ 0.044	1.60	1.19	12
LEDs	LED Level 1 Retrofit Kit	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	309.75	$ 636.41	$ -	$ 75.17	$ 43.37	$ 0.044	2.28	1.99	12
LEDs	LED Level 1 Retrofit Kit	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	661.62	$ 145.62	$ -	$ 132.28	$ 92.63	$ 0.044	2.56	1.81	12
LEDs	LED Level 1 retrofit kit with multiple control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	410.70	$ 442.35	$ -	$ 140.40	$ 78.03	$ 0.044	3.64	3.02	12
LEDs	LED Level 1 retrofit kit with multiple control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	850.79	$ 193.08	$ -	$ 202.36	$ 161.55	$ 0.044	2.01	1.34	12
LEDs	LED Level 1 retrofit kit with networked/luminaire level lighting control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	455.35	$ 568.82	$ -	$ 142.98	$ 100.42	$ 0.044	2.86	2.61	12
LEDs	LED Level 1 retrofit kit with networked/luminaire level lighting control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	933.44	$ 214.07	$ -	$ 218.51	$ 205.68	$ 0.044	1.78	1.45	12
LEDs	LED Level 1 retrofit kit with single control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	289.43	$ 624.08	$ -	$ 127.38	$ 49.20	$ 0.044	2.53	2.65	12
LEDs	LED Level 1 retrofit kit with single control strategy	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	646.59	$ 136.07	$ -	$ 167.32	$ 109.92	$ 0.044	2.20	1.07	12
LEDs	LED Tubes (type A, B & DM)	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	203.00	$ 432.30	$ -	$ 41.20	$ 18.29	$ 0.044	3.13	2.43	12
LEDs	LED Tubes (type A, B & DM)	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	287.20	$ 192.02	$ -	$ 63.89	$ 18.12	$ 0.044	6.27	2.76	12
LEDs	LED Tubes (type C)	Fixture using higher wattage	Fixture	Commercial-All Com-IntLight	12	310.10	$ 95.43	$ -	$ 99.04	$ 31.01	$ 0.044	3.52	2.10	12
LEDs	LED Tubes (type C)	Fixture using higher wattage	Fixture	Commercial-All Com-ExtLight	12	297.93	$ 199.19	$ -	$ 113.66	$ 29.79	$ 0.044	4.66	1.73	12
LEDs	Pin-based LED	Pin-base lamp using higher wattage	Fixture	Commercial-All Com-IntLight	5	125.30	$ 145.78	$ -	$ 23.02	$ 4.30	$ 0.044	3.27	1.42	12
LEDs	Pin-based LED	Pin-base lamp using higher wattage	Fixture	Commercial-All Com-ExtLight	5	141.25	$ 49.13	$ -	$ 25.74	$ 4.18	$ 0.044	4.75	1.69	12
Lighting Controls	Lighting Controls	Manual controls	Controls	Commercial-All Com-ExtLight	10	366.19	$ 29.70	$ -	$ 109.09	$ 30.12	$ 0.044	3.04	1.15	12
Lighting Controls (Idaho)	Lighting Controls	Manual controls	Controls	Commercial-All Com-IntLight	10	163.59	$ 217.23	$ -	$ 71.73	$ 27.31	$ 0.044	4.71	1.91	2, 12
Lighting Controls (Idaho)	Lighting Controls	Manual controls	Controls	Commercial-All Com-ExtLight	10	366.19	$ 68.35	$ -	$ 109.09	$ 30.12	$ 0.044	1.98	0.95	2, 12

Year: 2024 **Program:** Retrofits **Market Segment:** Commercial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Lighting Controls (Oregon)	Lighting Controls	Manual controls	Controls	Commercial-All Com-IntLight	10	139.18	$ 217.23	$ -	$ 75.47	$ 25.00	$ 0.044	4.71	1.91	12
Lighting Controls (Oregon)	Lighting Controls	Manual controls	Controls	Commercial-All Com-ExtLight	10	366.19	$ 58.15	$ -	$ 109.09	$ 30.12	$ 0.044	1.87	0.78	12
New On-Demand Overwrapper	New On-Demand Overwrapper	Standard overwrapper	Unit	Commercial-Grocery-Process	10	1,270.77	$ 217.23	$ -	$ 322.36	$ 100.00	$ 0.044	4.71	1.91	13
Package Terminal Air Conditioner (PTAC)	PTAC. >=14.4 EER	Existing PTAC	Ton	C-All-HVAC-CAC-All-All-E	15	279.49	$ 597.10	$ -	$ 1,735.62	$ 75.00	$ 0.044	3.84	1.74	1, 2, 3
Package Terminal Air Conditioner (PTAC)	PTAC. 13.2-14.3 EER	Existing PTAC	Ton	C-All-HVAC-CAC-All-All-E	15	231.30	$ 153.23	$ -	$ 1,571.18	$ 50.00	$ 0.044	1.76	0.10	1, 2, 3
Package Terminal Heat Pump (PTHP)	PTHP. >=14.4 EER	Existing PTHP	Ton	C-All-HVAC-Vent-All-All-E	15	560.12	$ 126.81	$ -	$ 999.00	$ 75.00	$ 0.044	2.11	0.09	1, 2, 3
Package Terminal Heat Pump (PTHP)	PTHP. 13.2-14.3 EER	Existing PTHP	Ton	C-All-HVAC-Vent-All-All-E	15	436.45	$ 295.71	$ -	$ 918.00	$ 50.00	$ 0.044	2.97	0.32	1, 2, 3
Permanent Fixture Removal	Permanent Fixture Removal		Fixture	Commercial-All Com-IntLight	2	873.61	$ 230.42	$ -	$ 29.08	$ 22.69	$ 0.044	3.34	0.27	12
Permanent Fixture Removal	Permanent Fixture Removal		Fixture	Commercial-All Com-ExtLight	2	1,013.14	$ 85.37	$ -	$ 28.00	$ 22.69	$ 0.044	1.40	1.40	12
Pool Cover	Indoor/outdoor pool cover	No pool cover	Square foot	Residential-Spa Heater	10	44.00	$ 144.44	$ -	$ 4.99	$ 2.00	$ 0.044	2.16	2.20	3, 14
Premium Windows	Low U-value, U-factor of .30 or less	Standard window	Square foot window area	C-All-HVAC-ER-All-All-C	25	9.00	$ 5.92	$ -	$ 22.08	$ 2.50	$ 0.044	2.05	0.29	1, 2
Reflective roofing	Adding reflective roof treatment	Non-reflective low pitch roof	Square foot roof area	C-All-HVAC-CAC-All-All-E	15	0.12	$ 0.06	$ -	$ 7.84	$ 0.05	$ 0.044	1.16	0.01	1, 3
Refrigeration	Anti-sweat heat controls	Med.temp case without controls	Linear foot	C-Gro-Ref-All-All-All-E	8	220.00	$ 85.43	$ -	$ 77.26	$ 50.00	$ 0.044	1.43	1.08	1, 2
Refrigeration	Anti-sweat heat controls	Low temp case without controls	Linear foot	C-Gro-Ref-All-All-All-E	8	292.00	$ 113.38	$ -	$ 77.26	$ 50.00	$ 0.044	1.81	1.39	1, 2
Refrigeration	Install auto-closer - reach-in	Damaged auto-closer, low temp	Door	C-Gro-Ref-All-All-All-E	8	326.00	$ 94.36	$ -	$ 736.00	$ 75.00	$ 0.044	1.44	0.14	1, 2
Refrigeration	Install auto-closer - reach-in	Damaged auto-closer, med. Temp	Door	C-Gro-Ref-All-All-All-E	8	243.00	$ 126.59	$ -	$ 736.00	$ 55.00	$ 0.044	1.42	0.19	1, 2
Refrigeration	Install auto-closer - walk-in	No/damaged auto-closer, med. Temp	Door	C-Gro-Ref-All-All-All-E	8	562.00	$ 218.22	$ -	$ 736.00	$ 135.00	$ 0.044	1.37	0.32	1, 2
Refrigeration	Install auto-closer - walk-in	No/damaged auto-closer, low temp	Door	C-Gro-Ref-All-All-All-E	8	2,509.00	$ 974.24	$ -	$ 736.00	$ 400.00	$ 0.044	1.91	1.27	1
Refrigeration	No-heat glass door	Commercial glass door	Door	C-Gro-Ref-All-All-All-E	12	779.00	$ 400.02	$ -	$ 664.00	$ 200.00	$ 0.044	1.71	0.63	1, 2
Refrigeration	Refrigerated case doors - med temp	No existing case door or barrier	Linear foot	C-Gro-Ref-All-All-All-E	15	700.00	$ 400.84	$ -	$ 342.73	$ 130.00	$ 0.044	2.50	1.18	15
Refrigeration Case Lighting	Refrigeration Case Lighting	Fixture using higher wattage	Lamp	C-All-Lgt-LPD Int-All-All-E	7	365.73	$ 118.84	$ -	$ 107.23	$ 52.26	$ 0.044	1.74	1.06	1, 2
Strip Curtain	For walk-in refrigerators	No protective barrier	Square foot	C-Gro-Ref-All-All-All-E	4	78.00	$ 16.53	$ -	$ 9.00	$ 5.00	$ 0.044	1.97	1.47	1

Year: 2024 **Program:** Retrofits **Market Segment:** Commercial **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Strip Curtain	For walk-in freezers	No protective barrier	Square foot	C-Gro-Ref-All-All-All-E	4	210.00	$ 44.52	$ -	$ 9.00	$ 5.00	$ 0.044	3.14	2.70	1
Variable Speed Controls	Variable speed drive on HVAC system application	Single speed HVAC system fan/ump	HP	C-All-HVAC-Vent-All-All-E	15	622.00	$ 328.38	$ -	$ 184.55	$ 125.00	$ 0.044	2.16	1.71	1, 2
Variable Speed Controls	Variable speed drive on potato and onion storage shed ventilation	No existing VFD	HP	A-SpudOnionVFD	10	1,193.00	$ 470.54	$ -	$ 264.00	$ 250.00	$ 0.044	1.56	1.64	1, 2
Variable Speed Controls	VFD on milking transfer pump	No existing VFD	HP	A-Da-Proc-MilkingSchedule-All-All-S	10	11,777.00	$ 4,947.59	$ -	$ 2,052.00	$ 1,500.00	$ 0.044	2.46	2.12	1, 2
Variable Speed Controls	VFD on milking vacuum pump	No existing VFD	HP	A-Da-Proc-MilkingSchedule-All-All-S	10	3,084.00	$ 1,295.61	$ -	$ 356.00	$ 250.00	$ 0.044	3.37	2.91	1, 2
Wall Insulation	Increase to R11 min. insulation.	Insulation level, R2.5 or less	Square foot wall area	C-All-HVAC-ER-All-All-C	25	2.82	$ 1.85	$ -	$ 0.64	$ 0.40	$ 0.044	3.55	2.67	1, 15
Wall Insulation	Increase to R19 min. insulation.	Insulation level, R2.5 or less	Square foot wall area	C-All-HVAC-ER-All-All-C	25	3.16	$ 2.08	$ -	$ 0.85	$ 0.55	$ 0.044	3.02	2.31	1, 15

(a) Average measure life.
(b) Estimated kWh savings measured at the customer's meter, excluding system losses.
(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the Northwest Power Act.
(d) Incremental participant cost prior to customer incentives.
(e) Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2024 actuals.
(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)
(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))
(1) Idaho Power Technical Reference Manual (TRM) prepared by ADM Associates, Inc. 2021.
(2) Idaho only measure.
(3) Measure also available under Multifamily Energy Efficiency Program.
(4) RTF. ComCookingHotFoodCabinet_v5_1. 2023.
(5) RTF. ComCookingCombinationOven_v5_0. 2023
(6) RTF. ComCookingConventionOven_v5_1. 2023
(7) RTF. ComCookingFryer_v5_1. 2023
(8) RTF. ComCookingSteamer_v5_1. Calculated per pan savings. 2023.
(9) RTF. ComConnectedThermostat_2_1.xlsm. 2023. Savings shown based on average of 15 cooling Ton.
(10) Measure cost-effective when admin fees excluded.
(11) Idaho Power TRM prepared by ADM Associates, Inc. 2021. NEBs from water savings from RTF. ComClothesWashers_v7_1.xlsm. Simple average. 2023.
(12) Evergreen Consulting Group, LLC. Idaho Power Lighting Tool. 2024.
(13) RTF. ComOnDemandOverwrappers_v3_2. 2023.
(14) Idaho Power Multifamily TRM prepared by ADM Associates, Inc. 2023.
(15) Idaho Power engineering calculations.

Small Business Lighting

Segment: Commercial

2024 Program Results

Cost Inputs			Ref
Program Administration	$	36,513	
Program Incentives		9,187	I
Total UC	**$**	**45,700**	P
Measure Equipment and Installation (Incremental Participant Cost)	$	13,330	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
UC Test	$	11,641	$	45,700	0.25
TRC Test		17,636		49,843	0.35
RIM Test		11,641		56,855	0.20
PCT		25,173		13,330	1.89

Net Benefit Inputs				Ref
Resource Savings				
2024 Annual Gross Energy (kWh)	22,967			
NPV Cumulative Energy (kWh)	194,164	$	11,641	S
10% Credit (Northwest Power Act)			1,164	
Total Electric Savings		**$**	**12,805**	A
Participant Bill Savings				
NPV Cumulative Participant Bill Savings		$	11,155	B
Other Benefits				
Non-Utility Rebates/Incentives		$	-	NUI
Non-Energy Benefits		$	4,831	NEB

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P + ((M-I)*NTG)
RIM Test	= S * NTG	= P + (B * NTG)
PCT	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	393%
Average Customer Segment Rate/kWh	$0.051
System Losses	6.00%

Notes:

NEB/impacts on a $/kWh for each end-use. Based on the 2019 impact evaluation of other C&I programs.

Program Launched in September 2024.

Year: 2024 **Program:** Small Business Lighting **Market Segment:** Commercial **Program Type:** Energy Efficiency

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Interior Lighting			kWh	Commercial-All Com-IntLight	12	1.00	$ 0.47	$ -	$ 0.58	$ 0.40	$ 0.044	1.06	0.83	1
Exterior Lighting			kWh	Commercial-All Com-ExtLight	12	1.00	$ 0.67	$ -	$ 0.58	$ 0.40	$ 0.044	1.51	1.18	1

(a) Average measure life.
(b) Estimated kWh savings measured at the customer's meter, excluding system losses.
(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the
(d) Incremental participant cost prior to customer incentives.
(e) Average C&I program administration and overhead costs to achieve each kWh of savings. Used as placeholder until program-specific estimate can be calculated.
(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)
(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))
(1) RTF. NonResLightingMidstream_v6_2.xlsm. 2023.

Irrigation Efficiency Rewards

Segment: Irrigation

2024 Program Results

Cost Inputs		Ref
Program Administration	$ 451,851	
Program Incentives	1,201,613	I
Total UC	**$ 1,653,465**	P
Measure Equipment and Installation (Incremental Participant Cost)	$ 13,714,109	M

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
UC Test	$ 2,720,192	$ 1,653,465	1.65
TRC Test	54,743,018	14,165,961	3.86
RIM Test	2,720,192	4,093,852	0.66
PCT	55,392,808	13,714,109	4.04

Net Benefit Inputs			Ref
Resource Savings			
2024 Annual Gross Energy (kWh)	4,289,877		
NPV Cumulative Energy (kWh)	34,602,935	$ 2,720,192	S
10% Credit (Northwest Power Act)		272,019	
Total Electric Savings		**$ 2,992,212**	A
Participant Bill Savings			
NPV Cumulative Participant Bill Savings		$ 2,440,388	B
Other Benefits			
Non-Utility Rebates/Incentives		$ -	NUI
Non-Energy Benefits		$ 51,750,807	NEB

Benefits and Costs Included in Each Test		
UC Test	= S * NTG	= P
TRC Test	= (A + NUI + NEB) * NTG	= P + ((M-I)*NTG)
RIM Test	= S * NTG	= P + (B * NTG)
PCT	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (WACC)	7.12%
Real ((1 + WACC) / (1 + Escalation)) - 1	4.41%
Escalation Rate	2.60%
Net-to-Gross (NTG)	100%
Minimum NTG Sensitivity	61%
Average Customer Segment Rate/kWh	$0.060
System Losses	6.00%

Notes:

Energy savings are combined for projects under the Custom and Menu programs. Savings under each Custom project is unique and individually calculated and assessed.

For Custom option, NEBs include yield, labor, and other benefits reported by the customer. For Menu option, NEBs come from RTF.

Green Rewind initiative is available to agricultural, commercial, and industrial customers. Agricultural motor rewinds are paid under Irrigation Efficiency Rewards.

Year: 2024 **Program:** Irrigation Efficiency Rewards **Market Segment:** Irrigation **Program Type:** Energy Efficiency

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Drain Replacement	New drainshand lines, wheel lines or portable mainline	Worn drain	Unit	A-Irr-Irr-Irrigation-All-All-E	6	27.84	$ 11.90	$ 27.930	$ 5.29	$ 4.00	$ 0.105	1.72	4.99	1
Gasket Replacement	New gaskets for hand lines, wheel lines or portable mainline	Worn gasket	Unit	A-Irr-Irr-Irrigation-All-All-E	6	8.53	$ 3.64	$ 19.640	$ 2.48	$ 2.00	$ 0.105	1.26	7.00	1
Levelers	Rebuilt or new wheel line levelers	Worn wheel line leveler	Unit	A-Irr-Irr-Irrigation-All-All-E	7	10.20	$ 4.86	$ 6.080	$ 4.57	$ 1.50	$ 0.105	1.89	2.02	1
Nozzle Replacement	New flow-control-type nozzles replacing existing brass nozzles or worn out flow control nozzles of same flow rate or less.	Brass nozzles or worn out flow control nozzles of same flow rate or less	Unit	A-Irr-Irr-Irrigation-All-All-E	6	172.14	$ 73.57	$ -	$ 7.59	$ 5.00	$ 0.105	3.18	3.15	1
Nozzle Replacement	New nozzles replacing existing worn nozzles of same flow rate or less	Worn nozzle of same flow rate or less	Unit	A-Irr-Irr-Irrigation-All-All-E	6	349.86	$ 149.52	$ -	$ 1.29	$ 1.50	$ 0.105	3.90	4.31	1
Sprinklers	Center pivot/linear move: Install new sprinkler package on an existing system	Worn sprinkler system	Unit	A-Irr-Irr-Irrigation-All-All-E	6	2,552.38	$ 1,090.82	$ -	$ 28.48	$ 10.00	$ 0.105	3.91	4.04	1
Sprinklers	Rebuilt or new brass impact sprinklers	Worn sprinkler	Unit	A-Irr-Irr-Irrigation-All-All-E	6	17,577.94	$ 7,512.37	$ -	$ 14.10	$ 0.55	$ 0.105	4.06	4.43	1

(a) Average measure life.
(b) Estimated kWh savings measured at the customer's meter, excluding system losses.
(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the Northwest Power Act.
(d) Incremental participant cost prior to customer incentives.
(e) Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2024 actuals.
(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)
(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))
(1) RTF. AgIrrigationHardware_v6_1.xlsm. 2023. Weighted average of Western Idaho (21.72%), Eastern Washington & Oregon (1.21%), and Eastern & Southern Idaho (77.07%).

Year: 2024 **Program:** Irrigation Efficiency Rewards - Green Motors **Market Segment:** Irrigation **Program Type:** Energy Efficiency

						Benefits			Costs			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Green Motors Program Rewind: Motor size 15HP	Green Motors Program Rewind: Motor size 15HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	18	222.19	$ 182.92	$ -	$ 165.38	$ 15.00	$ 0.105	4.76	1.07	1
Green Motors Program Rewind: Motor size 20HP	Green Motors Program Rewind: Motor size 20HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	18	297.32	$ 244.77	$ -	$ 184.51	$ 20.00	$ 0.105	4.77	1.25	1
Green Motors Program Rewind: Motor size 25HP	Green Motors Program Rewind: Motor size 25HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	17	447.57	$ 361.31	$ -	$ 210.81	$ 25.00	$ 0.105	5.01	1.54	1
Green Motors Program Rewind: Motor size 30HP	Green Motors Program Rewind: Motor size 30HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	17	482.11	$ 389.20	$ -	$ 231.54	$ 30.00	$ 0.105	4.82	1.52	1
Green Motors Program Rewind: Motor size 40HP	Green Motors Program Rewind: Motor size 40HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	17	561.43	$ 453.23	$ -	$ 282.94	$ 40.00	$ 0.105	4.57	1.46	1
Green Motors Program Rewind: Motor size 50HP	Green Motors Program Rewind: Motor size 50HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	17	604.21	$ 487.76	$ -	$ 313.22	$ 50.00	$ 0.105	4.29	1.42	1
Green Motors Program Rewind: Motor size 60HP	Green Motors Program Rewind: Motor size 60HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	21	553.16	$ 482.38	$ -	$ 369.41	$ 60.00	$ 0.105	4.08	1.24	1
Green Motors Program Rewind: Motor size 75HP	Green Motors Program Rewind: Motor size 75HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	21	569.29	$ 496.45	$ -	$ 399.30	$ 75.00	$ 0.105	3.68	1.19	1
Green Motors Program Rewind: Motor size 100HP	Green Motors Program Rewind: Motor size 100HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	21	751.39	$ 655.25	$ -	$ 495.34	$ 100.00	$ 0.105	3.66	1.25	1
Green Motors Program Rewind: Motor size 125HP	Green Motors Program Rewind: Motor size 125HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	23	555.70	$ 500.75	$ -	$ 358.62	$ 125.00	$ 0.105	2.73	1.32	1
Green Motors Program Rewind: Motor size 150HP	Green Motors Program Rewind: Motor size 150HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	23	660.58	$ 595.26	$ -	$ 399.46	$ 150.00	$ 0.105	2.70	1.52	1
Green Motors Program Rewind: Motor size 200HP	Green Motors Program Rewind: Motor size 200HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	23	876.20	$ 789.55	$ -	$ 480.90	$ 200.00	$ 0.105	2.70	1.52	1
Green Motors Program Rewind: Motor size 250HP	Green Motors Program Rewind: Motor size 250HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	19	1,357.04	$ 1,139.08	$ -	$ 618.08	$ 250.00	$ 0.105	2.90	1.65	1
Green Motors Program Rewind: Motor size 300HP	Green Motors Program Rewind: Motor size 300HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	19	1,620.02	$ 1,359.82	$ -	$ 624.76	$ 300.00	$ 0.105	2.89	1.88	1
Green Motors Program Rewind: Motor size 350HP	Green Motors Program Rewind: Motor size 350HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	19	1,888.64	$ 1,585.30	$ -	$ 654.82	$ 350.00	$ 0.105	2.89	2.04	1

Year: 2024 **Program:** Irrigation Efficiency Rewards - Green Motors **Market Segment:** Irrigation **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Green Motors Program Rewind: Motor size 400HP	Green Motors Program Rewind: Motor size 400HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	19	2,141.43	$ 1,797.49	$ -	$ 731.37	$ 400.00	$ 0.105	2.87	2.07	1
Green Motors Program Rewind: Motor size 450HP	Green Motors Program Rewind: Motor size 450HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	19	2,405.07	$ 2,018.78	$ -	$ 799.45	$ 450.00	$ 0.105	2.87	2.11	1
Green Motors Program Rewind: Motor size 500HP	Green Motors Program Rewind: Motor size 500HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	19	2,676.03	$ 2,246.22	$ -	$ 863.67	$ 500.00	$ 0.105	2.87	2.16	1
Green Motors Program Rewind: Motor size 600HP	Green Motors Program Rewind: Motor size 600HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	4,113.93	$ 3,762.21	$ -	$ 1,705.94	$ 600.00	$ 0.105	3.64	1.93	1
Green Motors Program Rewind: Motor size 700HP	Green Motors Program Rewind: Motor size 700HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	4,779.22	$ 4,370.62	$ -	$ 1,861.17	$ 700.00	$ 0.105	3.63	2.03	1
Green Motors Program Rewind: Motor size 800HP	Green Motors Program Rewind: Motor size 800HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	5,450.38	$ 4,984.40	$ -	$ 2,065.02	$ 800.00	$ 0.105	3.63	2.08	1
Green Motors Program Rewind: Motor size 900HP	Green Motors Program Rewind: Motor size 900HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	6,118.68	$ 5,595.57	$ -	$ 2,276.59	$ 900.00	$ 0.105	3.62	2.11	1
Green Motors Program Rewind: Motor size 1000HP	Green Motors Program Rewind: Motor size 1000HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	6,769.80	$ 6,191.02	$ -	$ 2,453.47	$ 1,000.00	$ 0.105	2.89	1.89	1
Green Motors Program Rewind: Motor size 1250HP	Green Motors Program Rewind: Motor size 1250HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	7,034.35	$ 6,432.95	$ -	$ 2,930.85	$ 1,250.00	$ 0.105	2.58	1.70	1
Green Motors Program Rewind: Motor size 1500HP	Green Motors Program Rewind: Motor size 1500HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	8,423.43	$ 7,703.28	$ -	$ 3,357.35	$ 1,500.00	$ 0.105	2.58	1.75	1
Green Motors Program Rewind: Motor size 1750HP	Green Motors Program Rewind: Motor size 1750HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	9,786.03	$ 8,949.38	$ -	$ 3,831.92	$ 1,750.00	$ 0.105	2.57	1.77	1
Green Motors Program Rewind: Motor size 2000HP	Green Motors Program Rewind: Motor size 2000HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	11,137.11	$ 10,184.95	$ -	$ 4,298.48	$ 2,000.00	$ 0.105	2.57	1.79	1
Green Motors Program Rewind: Motor size 2250HP	Green Motors Program Rewind: Motor size 2250HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	12,450.70	$ 11,386.24	$ -	$ 4,682.85	$ 2,250.00	$ 0.105	2.56	1.82	1
Green Motors Program Rewind: Motor size 2500HP	Green Motors Program Rewind: Motor size 2500HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	13,805.20	$ 12,624.94	$ -	$ 5,123.41	$ 2,500.00	$ 0.105	2.55	1.84	1
Green Motors Program Rewind: Motor size 3000HP	Green Motors Program Rewind: Motor size 3000HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	16,462.80	$ 15,055.33	$ -	$ 5,990.22	$ 3,000.00	$ 0.105	2.54	1.86	1
Green Motors Program Rewind: Motor size 3500HP	Green Motors Program Rewind: Motor size 3500HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	19,166.63	$ 17,528.00	$ -	$ 6,619.46	$ 3,500.00	$ 0.105	2.54	1.92	1
Green Motors Program Rewind: Motor size 4000HP	Green Motors Program Rewind: Motor size 4000HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	21,904.72	$ 20,031.99	$ -	$ 7,390.32	$ 4,000.00	$ 0.105	2.54	1.95	1
Green Motors Program Rewind: Motor size 4500HP	Green Motors Program Rewind: Motor size 4500HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	24,591.58	$ 22,489.14	$ -	$ 7,964.48	$ 4,500.00	$ 0.105	2.54	2.01	1

Year: 2024 **Program:** Irrigation Efficiency Rewards - Green Motors **Market Segment:** Irrigation **Program Type:** Energy Efficiency

Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (Yrs) [a]	Gross Energy Savings (kWh/yr) [b]	NPV Avoided Costs [c]	NEB	Incremental Participant Cost [d]	Incentive / Unit	Admin Cost ($/kWh) [e]	UCT Ratio [f]	TRC Ratio [g]	Source/Notes
Green Motors Program Rewind: Motor size 5000HP	Green Motors Program Rewind: Motor size 5000HP	Standard rewind practice	Motor	A-Irr-Irr-Irrigation-All-All-E	24	27,267.23	$ 24,936.04	$ -	$ 8,501.72	$ 5,000.00	$ 0.105	2.53	2.06	1

(a) Average measure life.

(b) Estimated kWh savings measured at the customer's meter, excluding system losses.

(c) NPV of DSM avoided costs. Based on the end-use load shape, measure life, savings including system losses, and avoided costs by pricing period as acknowledged in the 2021 IRP, TRC Test Benefit calculation includes 10% conservation adder from the

(d) Incremental participant cost prior to customer incentives.

(e) Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2024 actuals.

(f) UCT Ratio = (NPV DSM Avoided Costs) / ((Admin Cost/kWh * kWh Savings) + Incentives)

(g) TRC Ratio = ((NPV DSM Avoided Costs * 110%) + NEB / ((Admin Cost/kWh * kWh Savings) + Incentives + (Incremental Participant Costs - Incentives))

(1)RTF. Ind_and_Ag_GreenMotorResind_v4_0.xlsm. 2022.