IDAHO POWER®
An IDACORP Company

Demand-Side Management

2012 ANNUAL REPORT

SUPPLEMENT 1:

Cost-Effectiveness

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SUPPLEMENT 1: COST-EFFECTIVENESS

Cost-Effectiveness

Idaho Power considers cost-effectiveness of primary importance in the design, implementation, and tracking of energy efficiency and demand response programs. The majority of Idaho Power's energy efficiency and demand response programs are identified through the Integrated Resource Plan (IRP) process. Because of Idaho Power's diversified portfolio of programs covering all customer classes, in the 2011 IRP, most of the new potential for energy efficiency is based on the addition of new measures, new technologies, or existing program growth rather than complete new programs. The IRP process remains the same for the determination of measures to be adopted for program inclusion. Specific cost-effective programs or energy-saving measures are screened by sector to determine if the levelized cost of these programs or measures is less than supply-side resource alternatives. If they are shown to be less costly than supply-side resources from a levelized cost perspective, the hourly shaped energy savings is subsequently included in the IRP as a resource.

Prior to the actual implementation of energy efficiency or demand response programs, Idaho Power performs a cost-effectiveness analysis to assess whether a specific potential program design will be cost-effective from the perspective of Idaho Power and its customers. Incorporated into these models are inputs from various sources to use the most current and reliable information available. When possible, Idaho Power leverages the experiences of other utilities in the region, or throughout the country, to identify specific program parameters. This is typically accomplished through discussions with other utilities' program managers and researchers. Idaho Power also uses electric industry research organizations, such as E Source, Edison Electrical Institute (EEI), Consortium for Energy Efficiency (CEE), American Council for an Energy Efficient Economy (ACEEE), Advanced Load Control Alliance (ALCA), Association of Energy Service Professionals (AESP), and others to identify similar programs and their results. Additionally, Idaho Power relies on the results of program impact evaluations and recommendations from consultants. In 2012, Idaho Power contracted with ADM Associates, Inc., Portland Energy Conservation, Inc. (PECI), University of Idaho, D&R International Ltd., EnerNOC Utility Solutions™ Consulting Group, and The Cadmus Group for program evaluations and research.

Idaho Power's goal is to have all programs reach benefit/cost (B/C) ratios of 1.0 or greater for the total resource cost (TRC) test, utility cost (UC) test, and participant cost test (PCT) at the program level and the measure level where appropriate. An exception to the measure level cost-effectiveness is when there is an interaction between measures. Idaho Power may launch a pilot or a program to evaluate estimates or assumptions in the cost-effectiveness analysis. Following implementation of a program, cost-effectiveness analyses are reviewed as new inputs from actual program activity become available, such as actual program expenses, savings, or participation levels. If measures or programs are determined to be not cost-effective after implementation, the program or measures are re-examined, including input provided from the company's Energy Efficiency Advisory Group (EEAG).

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;* and *National Action Plan on Demand Response*. Traditionally, Idaho Power

has primarily used the TRC test and the UC test to develop B/C ratios to determine the cost-effectiveness of demand-side management (DSM) programs. These tests are still used because, as defined in the TAG and *California Standard Practice Manual*, they are most similar to supply-side tests and provide a useful basis to compare demand-side and supply-side resources.

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 2012 dollars. The result of the one-year perspective is shown in *Supplement 1: Cost-Effectiveness.* Appendix 4 of the main *Demand-Side Management 2012 Annual Report* includes the program cost-effectiveness to-date by including the culmination of actual historic savings values and expenses as well as the ongoing energy savings benefit over the life of the measures included in a program.

The goal of demand response programs is to minimize or delay the need to build new supply-side resources. Unlike energy efficiency programs, demand response programs must acquire and retain participants each year to maintain a level of demand reduction capacity for the company. Demand response programs are expensive and generally have a higher initial investment than energy efficiency programs. As such, demand response programs are analyzed over the program life where historical program demand reduction and expenses are combined with forecasted program activity to better compare the program to a supply-side resource. While cost-effectiveness is determined over the program life, it is also calculated for each individual year.

Because the 2013 IRP process has indicated a lack of near-term capacity deficits, on December 21, 2012, Idaho Power filed a proposal with the Idaho Public Utilities Commission (IPUC) to temporarily suspend two of its demand response programs, A/C Cool Credit and Irrigation Peak Rewards, for 2013. A settlement workshop was held in February 2013 with Idaho Power and interested stakeholders to discuss plans for the 2013 cycling season. The stipulation was filed on February 14, 2013. FlexPeak Management was not included in the original filing due to the company's contractual obligation to EnerNOC Inc.; however, Idaho Power intends to meet with all stakeholders in workshops to further discuss future changes and identify the best, long-term solutions for 2014 and beyond. Due to the uncertainty of these programs and the fact that an order on Case No. IPC-E-12-29 is pending, Idaho Power used the assumptions from the information known prior to the filing.

Assumptions

Idaho Power relies on research conducted by third-party sources to obtain savings and cost assumption for various measures. These assumptions are routinely reviewed and updated as new information becomes available. For many of the measures within *Demand-Side Management 2012 Annual Report Supplement 1: Cost-Effectiveness*, savings, costs, and load shapes were derived from either the Regional Technical Forum (RTF) or the *Demand-Side Management Potential Study* conducted by Nexant, Inc., in 2009. An additional resource for cost-effectiveness data includes the *Idaho Power Energy Efficiency Potential Study* conducted by EnerNOC Utility Solutions Consulting Group in 2012. The RTF, which meets monthly, regularly reviews, evaluates, and recommends eligible energy efficiency measures and the estimated savings and costs associated with those measures. As the RTF updates these assumptions, Idaho Power, in turn, applies those assumptions to current program offerings and assesses the need to make any program changes. Idaho Power staff participates in the RTF by attending the monthly meetings and contributing to various sub-committees. Because cost data from the RTF information is in

2006 dollars, measures with costs from the RTF have been escalated by 15.77 percent in 2012. This percentage is provided by the RTF.

Idaho Power also relies on other sources, such as the Northwest Power and Conservation Council (NPCC), 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. On occasion, Idaho Power will also use internal engineering estimates and calculations for savings and costs based on information gathered from previous projects.

The remaining inputs used in the cost-effectiveness models are obtained from the IRP process. The Technical Appendix of Idaho Power's 2011 IRP is the source for the financial assumptions until the 2013 IRP is acknowledged, including the discount rate and escalation rate. As recommended by the NAPEE *Understanding Cost-Effectiveness of Energy Efficiency Programs*¸ Idaho Power's weighted average cost of capital (WACC) of 7 percent is used to discount future benefits and costs to today's dollars. However, determining the appropriate discount rate for participant cost and benefits is made difficult by the variety of potential discount rates that can be used by the different participants as described in the TAG manual. Since the participant benefit is based on the anticipated bill savings of the customer, Idaho Power believes the WACC is not an appropriate discount rate to use. Because the customer bill savings is based on Idaho Power's 2012 average customer segment rate and is not escalated, the participant bill savings is discounted using a real discount rate of 3.88 percent, which is based on the 2011 IRP's WACC of 7 percent and an escalation rate of 3 percent. The formula to calculate the real discount rate is as follows:

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

The IRP is also the source of the DSM alternative costs, which is the value of energy savings and demand reduction resulting from the DSM programs. These DSM alternative costs vary by season and time of day and are applied to an end-use load shape to obtain the value of that particular measure or program. The DSM alternative energy costs are based on both the projected fuel costs of a peaking unit 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. In the 2011 IRP, the annual avoided capacity cost is $94/kW. When multiplied by the Effective Load Carrying Capacity (ELCC) of 93.4 percent, the annual avoided capacity cost is $87.80/kW. The ELCC reduces the avoided capacity cost benefit.

Because demand response programs do not match the availability of generation resources, these programs should not claim the full avoided capacity cost benefit of that supply-side resource. In 2011, Idaho Power determined the ELCC for demand response programs by creating load duration curves using five years of actual total system load data and used the top 100 hours (adjusted for demand response activity) of each year. Of those top 500 hours, the number of hours that fell within the operating parameters of one or more demand response program between June 1 and August 31 was used to calculate the ELCC. Approximately 6.6 percent of the total hours were outside the programs' parameters. Therefore, an ELCC of 93.4 percent is now applied to the avoided capacity cost of a simple-cycle gas turbine in the cost-effectiveness calculation of demand response programs.

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: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers*, as a ratio that:

> 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.

For most programs and individual measures, the NTG ratios are derived from the *Demand-Side Management Potential Study* or the California Public Utilities Commission (CPUC) DEER. The NTG ratio adjustment is shown as part of *Supplement 1: Cost-Effectiveness* for each program and measure. However, for some programs, such as A/C Cool Credit, Energy Efficient Lighting, Irrigation Efficiency, and See ya later, refrigerator®, the unit incremental savings are net realized energy savings from third-party sources that take into account an NTG ratio adjustment. While each project within the Custom Efficiency program is analyzed independently, and Idaho Power believes there is considerable spillover from this program; a NTG ratio adjustment of 69 percent, the standard custom program NTG ratio from DEER[1], which includes a spillover adjustment, is used to calculate the cost-effectiveness of this program.

After reviewing the company's TRC test calculation, Idaho Power determined it should also apply the NTG ratio to the non-energy benefits. The company has adjusted its TRC formula for both the program and measure cost-effectiveness tables. The formula change has resulted in a slight decrease in cost-effectiveness for programs or measures that use a NTG ratio in the TRC calculation.

Results

Idaho Power determines cost-effectiveness on a measure basis, where relevant, and program basis. As part of the *Supplement 1: Cost-Effectiveness* and where applicable, Idaho Power publishes the cost-effectiveness by measure, calculating the PCT and ratepayer impact measure (RIM) test at the program level, listing the assumptions associated with cost-effectiveness, and citing 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 demand response programs, Weatherization Assistance for Qualified Customers (WAQC), Weatherization Solutions for Eligible Customers, See ya later, refrigerator®, and Energy House Calls. These programs have few or no customer costs. The Irrigation Peak Rewards program does have some direct costs for participants with small horsepower (hp) pumps, where a fee is charged to install program equipment at the enrolled service location. In addition to this fee, Idaho Power also calculated the additional labor expense an

[1] Source: CPUC DEER NTFR Update Process for 2006–2007 Programs, found at http://www.deeresources.com/deer2008exante/downloads/DEER%200607%20Measure%20Update%20Report.pdf

irrigator may incur for resetting each pump after an event as a cost for the participant. For energy efficiency programs, the cost-effectiveness models do not assume any ongoing participant costs.

The *Demand-Side Management 2012 Annual Report* contains program UC and TRC B/C ratios using actual cost information over the life of the program through 2012. *Supplement 1: Cost-Effectiveness* contains annual cost-effectiveness metrics for each program using actual information from 2012, includes results of the PCT, and includes application of a NTG factor where appropriate.
Current customer energy rates are used in the calculation of the B/C ratios from a PCT and RIM perspective. Rate increases are not forecast or escalated. Where applicable, the cost-effectiveness results of demand response programs include historical expenses. A summary of the cost-effectiveness by program can be found in Table 3.

In 2012, all but two of Idaho Power's energy efficiency programs were cost-effective from the UC, TRC, and PCT perspective. WAQC had a TRC of 0.71 and Weatherization Solutions for Eligible Customers had a TRC of 0.47, due to the lower estimated savings per home that resulted from the impact evaluation conducted by D&R International. Idaho Power has adopted the following commission staff's recommendations from Case No. GNR-E-12-01 for calculating the programs' cost-effectiveness:

- Applied a 100 percent NTG.
- Claimed 100 percent of energy savings for each project.
- Included indirect administrative overhead costs. The overhead costs of 2.71percent was calculated from the $1,335,509 of indirect program expenses divided by the total DSM expenses of $49,326,859 as shown in Appendix 3 of the *Demand-Side Management 2012 Annual Report*.
- Applied the 10 percent conservation preference adder.
- Claimed one dollar of non-energy benefits for each dollar of utility and federal funds invested in heath, safety, and repair measures.

All of the demand response programs were determined to be cost-effective from the long-term perspective. Since this report is focused on cost-effectiveness for 2012 and with no final order pending on IPC-E-12-29, Idaho Power did not change the forecast for future expenses and program performance of its demand response programs to reflect the filing. As a result, Idaho Power has used the program operation assumptions that were in place in fall 2012 at the time of budgeting for 2013. Under these assumptions, the B/C ratios for A/C Cool Credit and Irrigation Peak Rewards are calculated over a 20-year program life while the B/C ratios for FlexPeak Management are calculated over a 10-year life. This is done to be useful in the IRP planning process and to account for the fact that demand response programs' costs and benefits are inherently different from energy efficiency programs. For this report the cost-effectiveness models were updated to include 2012 expenses and program performance results and 2013 budgeted expenses and expected results.

Idaho Power also calculates cost-effectiveness for each demand response program on a year-to-year basis. The A/C Cool Credit program was determined to not be cost-effective for 2012 with a TRC of 0.68. However, under the original program assumptions with full participation in 2013 and a realized demand reduction of 1.09 kW per participant, the program has the potential to be cost-effective for 2013 despite the additional costs to change the paging switches to AMI compatible switches. For 2012,

FlexPeak Management and Irrigation Peak Rewards programs passed the B/C tests with TRCs of 1.21 and 2.40 respectively. The program life TRC ratios for A/C Cool Credit, Irrigation Peak Reward, and FlexPeak Management programs are 1.33, 1.72, and 1.22, respectively.

Fifty-two measures within programs were not cost-effective from the UC or TRC perspective. Of those 52 measures, 40 were measures were removed from the program offerings in 2012. Eleven measures will be reviewed and possibly modified in 2013. One measure will be removed in 2013.

Table 1. 2012 non-cost-effective measures

Program	Number of Measures	Notes
Easy Upgrades	4	These measures will be reviewed in 2013.
ENERGY STAR® Homes Northwest	4	Three measures were removed from the program in 2012. One measure will be reviewed in 2013.
Heating & Cooling Efficiency Program	2	These measures will be reviewed in 2013.
Home Improvement Program	34	The program was redesigned in 2012. Fifteen measures are for varying insulation levels for non-electrically heated homes that were paid in the program and no longer qualified after March 31, 2012. Nineteen measures are for varying insulation levels for electrically heated homes paid in the program and no longer qualified after March 31 under the redesigned program in which the existing insulation must be R20 or less.
Home Products Program	6	Three lighting measures were removed in 2012. One clothes washer measure will be removed in 2013. The two refrigerator measures were not cost-effective due to the higher administrative costs, which are calculated on a dollar-per-kWh-saved basis. This number was impacted by lower program savings attributed to the clothes washer measure saving adjustment. The measures will be monitored in 2013.
Irrigation Efficiency Rewards	2	One measure was revised in 2012 to remove the high-cost item that brought down cost-effectiveness. One measure will be reviewed in 2013.
Total	**52**	

Following the annual program cost-effectiveness results are tables that include measure level cost-effectiveness. Exceptions to the measure level tables are the demand response programs which do not provide incentives for installed end-use measures. Other programs not analyzed at the measure level include Custom Efficiency, the Custom Option of Irrigation Efficiency Rewards, and WAQC where projects include multiple interactive measures that are analyzed at the project level. Due to the application of a per-home annual energy savings number for Weatherization Solutions for Eligible Customers determined by the 2012 impact evaluation, measure-level realized energy saving data is not available. The measure level cost-effectiveness analysis is not included in this report, due to the lack of realized data at the measure level. This is a change in reporting from the 2011 *Supplement 1: Cost-Effectiveness* report.

The measure-level cost-effectiveness includes inputs of measure life, energy savings, incremental cost, NTG factors, incentives, program administration cost, and net benefit. Program administration costs include all non-incentive costs: labor, marketing, training, education, purchased services, and evaluation. This year on the measure-level cost-effectiveness tables, the column containing the demand reduction

from measures has been removed. This information is not readily available nor currently used in the measure-level cost-effectiveness analysis.

2012 DSM Detailed Expense by Program

Included in this supplement is a detailed breakout of program expenses as shown in Appendix 2 of the *Demand-Side Management 2012 Annual Report*. These expenses are broken out by major-expense type (incentives, labor/administration, materials, other expenses, and purchased services).

Table 2. 2012 DSM detailed expenses by program (dollars)

Sector/Program	Idaho Rider	Oregon Rider	Idaho Power	Total Program
Energy Efficiency/Demand Response				
Residential				
A/C Cool Credit [a]	**$ 4,804,566**	**$ 92,810**	**$ 830,618**	**$ 5,727,994**
Customer Incentives	(81,080)	10,006	830,618	**759,544**
Labor/Administrative Expense	109,611	5,762	0	**115,373**
Materials & Equipment	3,298,847	145	0	**3,298,992**
Other Expense	47,530	2,767	0	**12,711**
Purchased Services	1,429,657	74,130	0	**1,541,374**
Ductless Heat Pump Pilot	**153,017**	**6,850**	**0**	**159,867**
Customer Incentives	91,750	3,750	0	**95,500**
Labor/Administrative Expense	37,697	1,983	0	**39,680**
Other Expense	19,184	886	0	**20,070**
Purchased Services	4,386	231	0	**4,617**
Energy Efficient Lighting	**1,110,329**	**16,507**	**0**	**1,126,836**
Customer Incentives	755,838	9,907	0	**765,745**
Labor/Administrative Expense	55,009	2,900	0	**57,909**
Other Expense	3,903	194	0	**4,097**
Purchased Services	295,580	3,506	0	**299,086**
Energy House Calls	**272,666**	**3,217**	**0**	**275,884**
Labor/Administrative Expense	41,157	2,165	0	**43,322**
Materials & Equipment	326	11	0	**337**
Other Expense	4,330	151	0	**4,480**
Purchased Services	226,854	890	0	**227,744**
ENERGY STAR® Homes	**450,727**	**2,458**	**0**	**453,186**
Customer Incentives	404,000	0	0	**404,000**
Labor/Administrative Expense	32,214	1,694	0	**33,908**
Other Expense	14,514	764	0	**15,278**
Heating & Cooling Efficiency Program	**175,483**	**6,798**	**0**	**182,281**
Customer Incentives	56,650	1,550	0	**58,200**
Labor/Administrative Expense	54,478	2,867	0	**57,345**
Materials & Equipment	5,089	307	0	**5,397**
Other Expense	6,315	(404)	0	**5,910**
Purchased Services	52,951	2,479	0	**55,430**
Home Improvement Program	**385,091**	**0**	**0**	**385,091**
Customer Incentives	202,004	0	0	**202,004**
Labor/Administrative Expense	93,337	0	0	**93,337**
Other Expense	25,680	0	0	**25,680**
Purchased Services	64,070	0	0	**64,070**

Table 2. 2012 DSM Detailed Expenses by Program (Continued)

Sector/Program	Idaho Rider	Oregon Rider	Idaho Power	Total Program
Home Products Program	**$ 640,098**	**$ 18,829**	**$ 105**	**$ 659,032**
Customer Incentives	491,143	11,076	105	**502,324**
Labor/Administrative Expense	77,922	4,101	0	**82,023**
Materials & Equipment	421	22	0	**443**
Other Expense	7,327	346	0	**7,673**
Purchased Services	63,285	3,284	0	**66,569**
Oregon Residential Weatherization	**0**	**4,051**	**465**	**4,516**
Customer Incentives	0	1,722	0	**1,722**
Labor/Administrative Expense	0	2,328	465	**2,793**
Rebate Advantage	**34,926**	**2,316**	**0**	**37,241**
Customer Incentives	12,000	1,000	0	**13,000**
Labor/Administrative Expense	14,622	769	0	**15,391**
Other Expense	5,065	345	0	**5,410**
Purchased Services	3,238	201	0	**3,440**
See ya later, refrigerator®	**596,167**	**16,979**	**0**	**613,146**
Customer Incentives	98,910	1,830	0	**100,740**
Labor/Administrative Expense	46,924	2,456	0	**49,380**
Other Expense	81,377	4,262	0	**85,639**
Purchased Services	368,956	8,431	0	**377,388**
Weatherization Assistance for Qualified Customers	**0**	**0**	**1,370,141**	**1,370,141**
Labor/Administrative Expense	0	0	52,501	**52,501**
Other Expense	0	0	28,114	**28,114**
Purchased Services	0	0	1,289,525	**1,289,525**
Weatherization Solutions for Eligible Customers[a]	**1,048,461**	**0**	**22,094**	**1,070,556**
Labor/Administrative Expense	10,033	0	22,094	**32,127**
Other Expense	17,286	0	0	**17,286**
Purchased Services	1,021,142	0	0	**1,021,142**
Residential Total	**$ 9,671,531**	**$ 170,816**	**$ 2,223,423**	**$ 12,065,769**
Commercial/Industrial				
Building Efficiency	**1,579,121**	**13,451**	**0**	**1,592,572**
Customer Incentives	1,322,045	0	0	**1,322,045**
Labor/Administrative Expense	127,472	6,710	0	**134,182**
Other Expense	14,845	701	0	**15,546**
Purchased Services	114,759	6,040	0	**120,799**
Comprehensive Lighting	**64,094**	**0**	**0**	**64,094**
Customer Incentives	63,683	0	0	**63,683**
Labor/Administrative Expense	411	0	0	**411**
Easy Upgrades	**5,150,422**	**199,331**	**0**	**5,349,753**
Customer Incentives	4,267,443	152,862	0	**4,420,305**
Labor/Administrative Expense	365,083	19,212	0	**384,295**
Materials & Equipment	55	3	0	**58**
Other Expense	45,050	2,371	0	**47,421**
Purchased Services	472,790	24,884	0	**497,674**

Table 2. 2012 DSM Detailed Expenses by Program (Continued)

Sector/Program	Idaho Rider	Oregon Rider	Idaho Power	Total Program
FlexPeak Management [a]	**$ 98,973**	**$ 150,489**	**$ 2,760,360**	**$ 3,009,822**
Customer Incentives	0	145,282	2,760,360	**2,905,642**
Labor/Administrative Expense	93,598	4,924	0	**98,521**
Other Expense	0	0	0	**0**
Purchased Services	5,375	283	0	**5,658**
Oregon Commercial Audits	0	12,470	0	**12,470**
Labor/Administrative Expense	0	6,777	0	**6,777**
Other Expense	0	1,193	0	**1,193**
Purchased Services	0	4,500	0	**4,500**
Custom Efficiency [b]	**923,050**	**115,866**	**6,053,665**	**7,092,581**
Customer Incentives	0	126,211	6,053,255	**6,179,466**
Labor/Administrative Expense	459,550	24,176	297	**484,024**
Other Expense	199,055	10,411	0	**209,466**
Purchased Services	264,445	(44,931)	113	**219,626**
Commercial Total	**$ 7,815,659**	**$ 491,607**	**$ 8,814,025**	**$ 17,121,292**
Irrigation				
Irrigation Efficiency Rewards	**1,978,729**	**360,689**	**33,782**	**2,373,201**
Customer Incentives	1,697,704	346,125	0	**2,043,829**
Labor/Administrative Expense	234,159	12,325	33,782	**280,266**
Materials & Equipment	1,088	57	0	**1,146**
Other Expense	19,167	1,009	0	**20,176**
Purchased Services	26,611	1,174	0	**27,784**
Irrigation Peak Rewards [a]	**1,309,107**	**95,863**	**11,018,394**	**12,423,364**
Customer Incentives	(13,500)	53,368	10,971,325	**11,011,193**
Labor/Administrative Expense	51,751	2,726	47,069	**101,546**
Materials & Equipment	1,002	53	0	**1,055**
Other Expense	4,111	216	0	**4,327**
Purchased Services	1,265,744	39,499	0	**1,305,244**
Irrigation Total	**$ 3,287,837**	**$ 456,552**	**$ 11,052,175**	**$ 14,796,565**
Energy Efficiency Total	**$ 20,775,027**	**$ 1,118,975**	**$ 22,089,624**	**$ 43,983,625**
Market Transformation				
NEEA [c]	**3,210,768**	**168,988**	**0**	**3,379,756**
Purchased Services	3,210,768	168,988	0	**3,379,756**
Market Transformation Total	**$ 3,210,768**	**$ 168,988**	**$ 0**	**$ 3,379,756**
Other Programs and Activities				
Residential				
Residential Energy Efficiency Education Initiative	**165,919**	**8,819**	**0**	**174,738**
Labor/Administrative Expense	118,597	6,242	0	**124,840**
Materials & Equipment	837	44	0	**881**
Other Expense	46,485	2,533	0	**49,018**
Residential Economizer [d]	**93,593**	**(101)**	**0**	**93,491**
Labor/Administrative Expense	38,141	0	0	**38,141**
Materials & Equipment	708	(101)	0	**607**
Other Expense	3,653	0	0	**3,653**
Purchased Services	51,091	0	0	**51,091**
Residential Total	**$ 259,511**	**$ 8,718**	**$ 0**	**$ 268,229**

Table 2. 2012 DSM Detailed Expenses by Program (Continued)

Sector/Program	Idaho Rider	Oregon Rider	Idaho Power	Total Program
Commercial				
Commercial Education Initiative	**$ 70,099**	**$ 3,689**	**$ 0**	**$ 73,788**
Labor/Administrative Expense	60,159	3,165	0	**63,324**
Other Expense	8,091	426	0	**8,517**
Purchased Services	1,850	97	0	**1,947**
Commercial Total	**$ 70,099**	**$ 3,689**	**$ 0**	**$ 73,788**
Other				
Energy Efficiency Direct Program Overhead	**271,622**	**14,329**	**0**	**285,951**
Labor/Administrative Expense	184,370	9,824	0	**194,194**
Other Expense	83,116	4,287	0	**87,404**
Purchased Services	4,136	218	0	**4,354**
Local Energy Efficiency Funds	**0**	**0**	**0**	**0**
Other Expense	0	0	0	0
Other Total	**$ 271,622**	**$ 14,329**	**$ 0**	**$ 285,951**
Other Programs and Activities Total	**$ 601,233**	**$ 26,736**	**$ 0**	**$ 627,968**
Indirect Program Expenses				
Residential Energy Efficiency Overhead	**172,819**	**9,051**	**0**	**181,869**
Labor/Administrative Expense	151,232	7,860	0	**159,092**
Other Expense	0	0	0	**0**
Purchased Services	21,586	1,190	0	**22,777**
Commercial/Industrial Energy Efficiency Overhead	**171,673**	**9,096**	**7,784**	**188,554**
Labor/Administrative Expense	153,435	8,084	20	**161,539**
Materials & Equipment	(258)	(15)	0	**(273)**
Purchased Services	18,495	1,028	7,765	**27,288**
Energy Efficiency Accounting and Analysis	**898,944**	**47,050**	**142,241**	**1,088,236**
Labor/Administrative Expense	415,646	21,879	136,291	**573,816**
Other Expense	0	0	5,950	**5,950**
Purchased Services	483,299	25,171	0	**508,469**
Energy Efficiency Advisory Group	**2,710**	**142**	**0**	**2,852**
Labor/Administrative Expense	2,507	132	0	**2,639**
Other Expense	203	11	0	**214**
Special Accounting Entries [e]	**(93,985)**	**2,291**	**(34,308)**	**(125,993)**
Indirect Program Expenses Total	**$ 1,152,161**	**$ 67,631**	**$ 115,718**	**$ 1,335,518**
Totals	**$ 25,739,197**	**$ 1,382,330**	**$ 22,205,341**	**$ 49,326,859**

[a] Per order 32426, the Idaho Public Utilities Commission (IPUC) determined Idaho Power may recover 100% of its Idaho demand response incentives through the Power Cost Adjustment (PCA) mechanism.

[b] Idaho Custom Efficiency incentives, Idaho Power balance of $6,053,665, was not included in base rates for 2012.

[c] NEEA funding addressed in IPUC per Order No. 31080, dated May 12, 2010. 2013 annual expense expected at $3.8 million (see footnote, Appendix 1 for additional information)

[d] Residential Economizer 2011 Oregon Rider balance of $101 was reclassified to Idaho Rider in 2012.

[e] Special Accounting Entries, Idaho Power accrual amount of ($34,146), was not included in base rates for 2012.

Table 3. Cost-effectiveness summary by program

Program	2012 Benefit/Cost Tests			
	Utility Cost (UC)	Total Resource Cost (TRC)	Ratepayer Impact Measure (RIM)	Participant Cost (PCT)
A/C Cool Credit	1.33	1.33	1.36	N/A
FlexPeak Management	1.22	1.22	1.22	N/A
Irrigation Peak Rewards	1.79	1.72	1.97	N/A
Ductless Heat Pump Pilot	3.76	1.14	1.09	1.06
Energy Efficient Lighting	5.60	2.62	0.89	3.30
Energy House Calls	4.08	4.08	0.90	N/A
ENERGY STAR® Homes Northwest	1.73	1.05	0.75	1.49
Heating & Cooling Efficiency Program	5.11	1.61	1.18	1.48
Home Improvement Program	2.39	1.27	0.92	1.55
Home Products Program	1.18	1.06	0.61	2.05
Rebate Advantage	6.13	3.51	1.00	5.26
See ya later, refrigerator®	1.60	1.60	0.67	N/A
Weatherization Assistance for Qualified Customers	0.84	0.71	0.53	N/A
Weatherization Solutions for Eligible Customers	0.43	0.47	0.33	N/A
Building Efficiency	9.08	2.10	1.53	1.40
Custom Efficiency	4.66	2.97	1.86	1.79
Easy Upgrades	5.43	3.47	1.38	2.94
Irrigation Efficiency	3.98	1.64	1.49	1.31

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COST-EFFECTIVENESS TABLES BY PROGRAM

A/C Cool Credit

Segment: Residential

20-Year Program Cost-Effectiveness Summary

Program Inception: 2003

Cost Inputs (net-present value [NPV])			Ref
Total Program Administration	$	24,889,755	
Total Program Incentives		9,632,508	I
Total Utility Cost	$	34,522,264	P
Total Shifted Energy Utility Cost	$	976,520	SE
Total Measure Equipment and Installation (Incremental Participant Cost)	$	—	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	47,065,293	$	35,498,784	1.33
Total Resource Cost Test		47,065,293		35,498,784	1.33
Ratepayer Impact Measure Test		47,065,293		34,522,264	1.36
Participant Cost Test		N/A		N/A	N/A

Net Benefit Inputs (NPV)				Ref
Resource Savings				
Cumulative Energy (kWh)	22,302,196	$	2,225,381	
2022 Reduction Capacity (MW)	49		44,839,913	
Total Electric Savings		$	47,065,293	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	—	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S	= P + SE
Total Resource Cost Test	= S + NUI + NEB	= P + M + SE
Ratepayer Impact Measure Test	= S	= P + B
Participant Cost Test	N/A	N/A

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Effective Load Carrying Capacity (ELCC)	93.40%
Summer Peak Line Loss (for Demand Response	13.00%
Line Losses	10.90%

Notes: No final order on Case No. IPC-E-12-29. Model includes program operation assumptions prior to November 30, 2012. Updated to include 2012 expenses and program performance results and 2013 budgeted expenses and expected results.

2022 Reduction capacity based on the assumption of 40,000 participants at an average realized load reduction of 1.09 kW (1.23 kW with Summer Peak Line Loss of 13%).

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FlexPeak Management

Segment: Commercial/Industrial

10-Year Program Cost-Effectiveness Summary

Program Inception: 2009

Cost Inputs (net-present value [NPV])			Ref
Total Program Administration	$	985,271	
Total Program Incentives		24,562,377	I
Total Utility Cost	$	25,547,648	P
Total Shifted Energy Utility Cost	$	62,997	SE
Total Measure Equipment and Installation (Incremental Participant Cost)	$	—	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	31,151,571	$	25,610,645	1.22
Total Resource Cost Test		31,151,571	$	25,610,645	1.22
Ratepayer Impact Measure Test		31,151,571	$	25,547,648	1.22
Participant Cost Test		N/A		N/A	N/A

Net Benefit Inputs (NPV)				Ref
Resource Savings				
Cumulative Energy (kWh)	17,007,679	$	1,539,680	
2018 Reduction Capacity (MW)	45		29,611,891	
Total Electric Savings		$	31,151,571	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	—	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S	= P + SE
Total Resource Cost Test	= S + NUI + NEB	= P + M + SE
Ratepayer Impact Measure Test	= S	= P + B
Participant Cost Test	N/A	N/A

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Effective Load Carrying Capacity (ELCC)	93.40%
Summer Peak Line Loss (for Demand Response	13.00%
Line Losses	10.90%

Notes: No final order on Case No. IPC-E-12-29. Model includes program operation assumptions prior to November 30, 2012. Updated to include 2012 expenses and program performance results and 2013 budgeted expenses and expected results.

2018 Reduction capacity based on expected target to achieve 40 MW (45 MW with Summer Peak Line Loss of 13%).

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Irrigation Peak Rewards

Segment: Irrigation

20-Year Program Cost-Effectiveness Summary

Program Inception: 2009

Cost Inputs (net-present value [NPV])		Ref
Total Program Administration	$ 17,475,325	
Total Program Incentives	178,328,069	I
Total Utility Cost	$ 195,803,394	P
Total Shifted Energy Utility Cost	$ 18,887,167	SE
Total Measure Equipment and Installation (Incremental Participant Cost)	$ 9,812,178	M

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
Utility Cost Test	$ 385,325,272	$ 214,690,560	1.79
Total Resource Cost Test	385,325,272	224,502,738	1.72
Ratepayer Impact Measure Test	385,325,272	195,803,394	1.97
Participant Cost Test	N/A	N/A	N/A

Net Benefit Inputs (NPV)			Ref
Resource Savings			
Cumulative Energy (kWh)	180,158,230	$ 22,308,607	
2028 Reduction Capacity (MW)	327	363,016,665	
Total Electric Savings		$ 385,325,272	S
Participant Bill Savings			
NPV Cumulative Participant Savings		$ —	B
Other Benefits			
Non-Utility Rebates/Incentives		$ —	NUI
Non-Energy Benefits		$ —	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S	= P + SE
Total Resource Cost Test	= S + NUI + NEB	= P + M + SE
Ratepayer Impact Measure Test	= S	= P + B
Participant Cost Test	N/A	N/A

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Effective Load Carrying Capacity (ELCC)	93.40%
Summer Peak Line Loss (for Demand Response	13.00%
Line Losses	10.90%

Notes: No final order on Case No. IPC-E-12-29. Model includes program operation assumptions prior to November 30, 2012. Updated to include 2012 expenses and program performance results and 2013 budgeted expenses and expected results.

Because of the fixed and variable incentive structure, the nature of summer peak loads, and the weather in 2012, the program was not dispatched in 2012.

2028 Reduction capacity based on the assumption that the available capacity will increase slightly in 2013 over 2012 and remain constant until 2028.

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Ductless Heat Pump Pilot

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration	$	64,367	
Program Incentives		95,500	I
Total Utility Cost	$	159,867	P
Measure Equipment and Installation (Incremental Participant Cost)	$	553,466	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	601,201	$	159,867	3.76
Total Resource Cost Test		601,201		526,239	1.14
Ratepayer Impact Measure Test		601,201		551,845	1.09
Participant Cost Test		585,473		553,466	1.06

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	444,500			
NPV Cumulative Energy (kWh)	5,779,575	$	751,502	
Total Electric Savings		$	751,502	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	489,973	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	80.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Year: 2012 **Program**: Ductless Heat Pump Pilot **Market Segment**: Residential **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	**Measure Description**	**Replacing**	**Measure Unit**	**End Use**	**Measure Life (yrs)[a]**	**NTG[b]**	**Annual Gross Energy Savings (kWh/yr)[c]**	**NPV Avoided Costs[d]**	**Non-Energy Benefit**	**Gross Incremental Participant Cost[e]**	**Incentive/ Unit**	**Admin Cost ($/kWh)[f]**	**UC Ratio[g]**	**TRC Ratio[h]**	**Source**
Ductless Heat Pump	High-efficiency ductless split heat pump system—existing single family w/ zonal electric heat	Zonal electric	Unit	Heating and cooling	20	80%	3,500.00	$5,541.01	$—	$4,358.00	$750.00	$0.145	3.53	1.07	1
Ductless Heat Pump	High-efficiency ductless split heat pump system—existing single family w/ electric FAC w/ or w/o CAC	Electric forced air furnace w/ or w/o central A/C	Unit	Heating and cooling	20	80%	3,500.00	$5,541.01	$—	$4,358.00	$750.00	$0.145	3.53	1.07	1

[a] Average measure life.
[b] Net-to-Gross (NTG) percentage. Idaho Power Demand-Side Management Potential Study by Nexant, Inc. 2009.
[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[e] Incremental participant cost prior to customer incentives. Based on 2012 average customer costs.
[f] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[g] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[h] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. ResHeatingCoolingDuctlessHeatPumpsSF_v1_3.xls. 2012.

Energy Efficient Lighting

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration	$	361,091	
Program Incentives		765,745	I
Total Utility Cost	$	1,126,836	P
Measure Equipment and Installation (Incremental Participant Cost)	$	2,046,264	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	6,315,418	$	1,126,836	5.60
Total Resource Cost Test		6,315,418		2,407,356	2.62
Ratepayer Impact Measure Test		6,315,418		7,116,312	0.89
Participant Cost Test		6,755,220		2,046,264	3.30

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	16,708,659			
NPV Cumulative Energy (kWh)	83,549,154	$	6,315,418	
Total Electric Savings		$	6,315,418	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	5,989,476	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	100.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Notes: No NTG. Deemed savings from the Regional Technical Forum (RTF) already accounts for realized energy savings.

Year: 2012 **Program**: Energy Efficient Lighting **Market Segment**: Residential **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	**Measure Description**	**Replacing**	**Measure Unit**	**End Use**	**Measure Life (yrs)[a]**	**NTG[b]**	**Annual Gross Energy Savings (kWh/yr)[c]**	**NPV Avoided Costs[d]**	**Non-Energy Benefit**	**Gross Incremental Participant Cost[e]**	**Incentive/ Unit**	**Admin Cost ($/kWh)[f]**	**UC Ratio[g]**	**TRC Ratio[h]**	**Source**
CFL Specialty Bulb—Retail	3-way CFL	Incandescent bulb	Bulb	Lighting	7	100%	20.00	$9.97	$—	$5.70	$2.00	$0.022	4.09	1.63	1
CFL Specialty Bulb—Retail	Dimmable	Incandescent bulb	Bulb	Lighting	7	100%	21.00	$10.47	$—	$7.87	$2.00	$0.022	4.25	1.26	1
CFL Specialty Bulb—Retail	Cold cathode candelabra primary	Incandescent bulb	Bulb	Lighting	12	100%	14.00	$11.72	$—	$5.67	$2.00	$0.022	5.08	1.96	1
CFL Specialty Bulb—Retail	CFL candelabra & Torpedo	Incandescent bulb	Bulb	Lighting	8	100%	14.00	$7.96	$—	$1.74	$2.00	$0.022	3.45	3.89	1
CFL Specialty Bulb—Retail	Dimmable reflector	Incandescent bulb	Bulb	Lighting	8	100%	24.00	$13.65	$—	$12.98	$2.00	$0.022	5.40	1.01	1
CFL Specialty Bulb—Retail	Globe	Incandescent bulb	Bulb	Lighting	6	100%	12.00	$5.13	$—	$1.96	$2.00	$0.022	2.27	2.31	1
CFL Specialty Bulb—Retail	Outdoor	Incandescent bulb	Bulb	Lighting	5	100%	32.00	$11.38	$—	$7.35	$2.00	$0.016	4.53	1.45	1
CFL Specialty Bulb—Retail	Reflector CFL	Incandescent bulb	Bulb	Lighting	8	100%	24.00	$13.65	$—	$0.66	$2.00	$0.022	5.40	11.49	1
CFL Specialty Bulb—Retail	Any specialty bulb	Incandescent bulb	Bulb	Lighting	7	100%	17.00	$8.48	$—	$1.49	$2.00	$0.022	3.57	4.54	1
CFL Spiral Bulb—Retailer	Spiral bulb	Incandescent bulb	Bulb	Lighting	6	100%	16.00	$6.84	$—	$3.18	$0.50	$0.022	8.03	1.94	2

[a] Average measure life.
[b] No Net-to-Gross (NTG) percentage. Deemed savings from the RTF includes realization rate.
[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[e] Incremental participant cost prior to customer incentives.
[f] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[g] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[h] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. ResSpecialtyCFL_v1_3.xlsm. Retail. Residential lighting. Any location. 2012.
[2] RTF. ResCFLLighting_v2_2,.xlsm. Retail. Any Interior or Exterior Application. 2012.

Energy House Calls

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration		$ 275,884	
Program Incentives		—	I
Total Utility Cost		$ 275,884	P
Measure Equipment and Installation (Incremental Participant Cost)		$ —	M

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
Utility Cost Test	$ 1,125,669	$ 275,884	4.08
Total Resource Cost Test	1,125,669	275,884	4.08
Ratepayer Impact Measure Test	1,125,669	1,254,201	0.90
Participant Cost Test	N/A	N/A	N/A

Net Benefit Inputs			Ref
Resource Savings			
2012 Annual Gross Energy (kWh)	1,192,039		
NPV Cumulative Energy (kWh)	14,674,849	$ 1,407,087	
Total Electric Savings		$ 1,407,087	S
Participant Bill Savings			
NPV Cumulative Participant Savings		$ 1,222,897	B
Other Benefits			
Non-Utility Rebates/Incentives		$ —	NUI
Non-Energy Benefits		$ —	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	N/A	N/A

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	80.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Notes: Increased deemed savings from the RTF and lower administration costs increased program cost-effectiveness over 2011.
No participant cost.

Year: 2012 **Program**: Energy House Calls **Market Segment**: Residential **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
PTCS Duct Sealing	Single wide (< =1,000 ft^2) manufactured home duct tightness—PTCS duct sealing—heating zone 1 (electric FAF heating system w/CAC)	Pre-existing duct leakage	Home	Heating	18	80%	1,496.00	$1,653.43	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Single wide (<=1,000 ft^2) manufactured home duct tightness—heating zone 1 (electric FAF heating system w/o CAC)	Pre-existing duct leakage	Home	Heating	18	80%	1,433.00	$1,583.80	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Single wide (<=1,000 ft^2) manufactured home duct tightness—heating zone 1 (electric heat pump heating system)	Pre-existing duct leakage	Home	Heating	18	80%	887.00	$980.34	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Single wide (<=1,000 ft^2) manufactured home duct tightness—heating zone 2 (electric FAF heating system w/CAC)	Pre-existing duct leakage	Home	Heating	18	80%	2,361.00	$2,609.46	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Single wide (<=1,000 ft^2) manufactured home duct tightness—heating zone 2 (electric FAF heating system w/o CAC)	Pre-existing duct leakage	Home	Heating	18	80%	2,290.00	$2,530.99	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Single wide (<=1,000 ft^2) manufactured home duct tightness—heating zone 2 (electric heat pump heating system)	Pre-existing duct leakage	Home	Heating	18	80%	1,664.00	$1,839.11	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Single wide (<=1,000 ft^2) manufactured home duct tightness—heating zone 3 (electric FAF heating system w/CAC)	Pre-existing duct leakage	Home	Heating	18	80%	3,074.00	$3,397.49	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Single wide (<=1,000 ft^2) manufactured home duct tightness—heating zone 3 (electric FAF heating system w/o CAC)	Pre-existing duct leakage	Home	Heating	18	80%	3,023.00	$3,341.13	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Single wide (<=1,000 ft^2) manufactured home duct tightness—heating zone 3 (electric heat pump heating system)	Pre-existing duct leakage	Home	Heating	18	80%	2,324.00	$2,568.57	$—	$—	$—	$0.231	3.83	3.83	1

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
PTCS Duct Sealing	Single (>1,000 ft^2) manufactured home duct tightness—heating zone 3(electric FAF heating system w/CAC)	Pre-existing duct leakage	Home	Heating	18	80%	1,881.00	$2,078.95	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Other (>1,000 ft^2) manufactured home duct tightness—heating zone 1 (electric FAF heating system w/o CAC)	Pre-existing duct leakage	Home	Heating	18	80%	1,799.00	$1,988.32	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Other (>1,000 ft^2) manufactured home duct tightness—heating zone 1 (electric heat pump heating system)	Pre-existing duct leakage	Home	Heating	18	80%	1,093.00	$1,208.02	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Other (>1,000 ft^2) manufactured home duct tightness—heating zone 2 (electric FAF heating system w/CAC)	Pre-existing duct leakage	Home	Heating	18	80%	2,898.00	$3,202.97	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Other (>1,000 ft^2) manufactured home duct tightness—heating zone 2 (electric FAF heating system w/o CAC)	Pre-existing duct leakage	Home	Heating	18	80%	2,791.00	$3,084.71	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Other (>1,000 ft^2) manufactured home duct tightness—heating zone 2 (electric heat pump heating system)	Pre-existing duct leakage	Home	Heating	18	80%	2,022.00	$2,234.79	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Other (>1,000 ft^2) manufactured home duct tightness—heating zone 3 (electric FAF heating system w/CAC)	Pre-existing duct leakage	Home	Heating	18	80%	3,710.00	$4,100.42	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Other (>1,000 ft^2) manufactured home duct tightness—heating zone 3 (electric FAF heating system w/o CAC)	Pre-existing duct leakage	Home	Heating	18	80%	3,645.00	$4,028.58	$—	$—	$—	$0.231	3.83	3.83	1
PTCS Duct Sealing	Other (>1,000 ft^2) manufactured home duct tightness—heating zone 3 (electric heat pump heating system)	Pre-existing duct leakage	Home	Heating	18	80%	2,813.00	$3,109.03	$—	$—	$—	$0.231	3.83	3.83	1

[a] Average measure life.
[b] Net-to-Gross (NTG) percentage. Idaho Power Demand-Side Management Potential Study by Nexant, Inc. 2009.
[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.

[e] No participant cost.
[f] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[g] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[h] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. ResHeatingCoolingDuctSealingMH_v2_4.xlsm. 2012.

ENERGY STAR® Homes Northwest

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration	$	49,186	
Program Incentives		404,000	I
Total Utility Cost	$	453,186	P
Measure Equipment and Installation (Incremental Participant Cost)	$	822,124	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	784,903	$	453,186	1.73
Total Resource Cost Test		789,471		754,235	1.05
Ratepayer Impact Measure Test		784,903		1,042,352	0.75
Participant Cost Test		1,228,631		822,124	1.49

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	537,447			
NPV Cumulative Energy (kWh)	8,531,475	$	1,090,143	
Total Electric Savings		$	1,090,143	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	818,286	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	6,345	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	72.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Notes: 2009 International Energy Conservation Code (IECC) adopted in Idaho in 2011.
Non-energy benefits include the NPV of avoided gas for ENERGY STAR gas-heated homes. Based on RTF's assumptions of therms saved per year.

Year: 2012 **Program**: ENERGY STAR Homes Northwest **Market Segment**: Residential **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name[a]	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[b]	NTG[c]	Annual Gross Energy Savings (kWh/yr)[d]	NPV Avoided Costs[e]	Non-Energy Benefit[f]	Gross Incremental Participant Cost[g]	Incentive/ Unit	Admin Cost ($/kWh)[h]	UC Ratio[i]	TRC Ratio[j]	Source
ENERGY STAR home	Home in Idaho or Montana with gas FAF and w/CAC—heating zone 1, cooling zone 3	Single-family home built to International Energy Conservation Code (IECC) 2009 Code, adopted 2011.	Home	Residential	22	72%	696.00	$1,144.99	$649.10	$2,296.88	$400.00	$0.092	1.78	0.71	1, 2
ENERGY STAR home	Home in Idaho or Montana with gas FAF and w/CAC—heating zone 2, cooling zone 2	Single-family home built to IECC 2009 Code, adopted 2011.	Home	Residential	20	72%	639.00	$982.61	$825.36	$2,296.88	$400.00	$0.092	1.54	0.71	1, 2
ENERGY STAR home	Home in Idaho or Montana with gas FAF and w/CAC—heating zone 3, cooling zone 1	Single-family home built to IECC 2009 Code, adopted 2011.	Home	Residential	19	72%	622.00	$920.69	$976.01	$2,296.88	$400.00	$0.092	1.45	0.75	1, 2
ENERGY STAR home	Home in Idaho or Montana with heat pump—heating zone 1, cooling zone 3	Single-family home built to IECC 2009 Code, adopted 2011.	Home	Residential	37	72%	3,778.00	$8,368.00	$—	$3,940.71	$1,000.00	$0.092	4.47	1.74	1
ENERGY STAR home	Home in Idaho or Montana built to the DHP TCO—heating zone 1, cooling zone 3	Single-family home built to IECC 2009 Code, adopted 2011.	Home	Residential	37	72%	4,844.00	$10,729.12	$—	$5,660.63	$1,000.00	$0.092	5.34	1.61	3
ENERGY STAR home	Multifamily heat pump—heating zone 1, cooling zone 3	Single-family home built to IECC 2009 Code, adopted 2011.	Home	Residential	36	72%	1,294.00	$2,829.97	$—	$2,309.61	$1,000.00	$0.092	1.82	0.99	4, 5

[a] Only heating system type and climate zone combinations with paid incentives in 2012 are displayed.
[b] Average measure life.
[c] Net-to-Gross (NTG) percentage. Idaho Power Demand-Side Management Potential Study by Nexant, Inc. 2009.
[d] Estimated kWh savings measured at the customer's meter, excluding line losses.
[e] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[f] Sum of NPV of avoided cost of gas.
[g] Incremental participant cost prior to customer incentives.
[h] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[i] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[j] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. ResNewSFEStarWAIDMT_v2_2.xls. 2012.
[2] Measure not cost-effective. Removed from the program in 2012.
[3] RTF. EStarNWSFHomes_DHPtco_WAIDMT_v1_0.xls. 2011.
[4] RTF. ResMFEstarHomes2012_v1_1.xlsm. 2012.
[5] Measure not cost-effective. Will monitor in 2013.

Heating & Cooling Efficiency Program

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration	$	124,081	
Program Incentives		58,200	I
Total Utility Cost	$	182,281	P
Measure Equipment and Installation (Incremental Participant Cost)	$	552,449	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	931,700	$	182,281	5.11
Total Resource Cost Test		931,700		577,681	1.61
Ratepayer Impact Measure Test		931,700		789,742	1.18
Participant Cost Test		817,526		552,449	1.48

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	688,855			
NPV Cumulative Energy (kWh)	8,956,781	$	1,164,625	
Total Electric Savings		$	1,164,625	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	759,326	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	80.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Year: 2012 **Program**: Heating & Cooling Efficiency Program **Market Segment**: Residential **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
A/C/Heat Pump Units	Evaporative cooler single family	Central A/C	Unit	Cooling	12	80%	416.00	$667.47	$—	$—	$150.00	$0.180	2.37	2.37	1
A/C/Heat Pump Units	Evaporative cooler manufactured home	Central A/C	Unit	Cooling	12	80%	309.00	$495.79	$—	$—	$150.00	$0.180	1.93	1.93	1
A/C/Heat Pump Units	Evaporative cooler multi-family	Central A/C	Unit	Cooling	12	80%	296.00	$474.93	$—	$—	$150.00	$0.180	1.87	1.87	1
A/C/Heat Pump Units	Open-loop, water source heat pump—14.00 EER 3.5 COP	Electric resistance	Unit	Heating and cooling	20	80%	8,927.00	$14,132.74	$—	$10,792.00	$1,000.00	$0.180	4.34	1.08	2, 3
A/C/Heat Pump Units	Open-loop, water-source heat pump—3.5 COP	Oil/propane system	Unit	Heating and cooling	20	80%	8,927.00	$14,132.74	$—	$10,792.00	$1,000.00	$0.180	4.34	1.08	2, 3
A/C/Heat Pump Units	New construction open-loop water-source heat pump—4.00 EER 3.5 COP	Electric resistance	Unit	Heating and cooling	20	80%	8,927.00	$14,132.74	$—	$10,792.00	$1,000.00	$0.180	4.34	1.08	2, 3
A/C/Heat Pump Units	Open-loop water-source heat pump—14.00 EER 3.5 COP	Air-source heat pump	Unit	Heating and cooling	20	80%	2,648.00	$4,192.17	$—	$4,435.00	$500.00	$0.180	3.43	0.81	2, 4, 5
A/C/Heat Pump Units	Single-family home HVAC conversions to heat pump 8.20 HSPF, all climates	Forced-air furnace w/o central A/C	Unit	Heating and cooling	20	80%	5,138.00	$8,134.20	$—	$3,667.00	$300.00	$0.180	5.31	1.66	1, 3
A/C/Heat Pump Units	Single-family home HVAC conversions to heat pump 8.50 HSPF heating zone 1	Forced-air furnace w/central A/C	Unit	Heating and cooling	20	80%	5,306.00	$8,400.17	$—	$3,857.00	$400.00	$0.180	4.96	1.63	3, 6
A/C/Heat Pump Units	Single-family home HVAC conversions to heat pump 8.50 HSPF heating zone 2	Forced air furnace w/central A/C	Unit	Heating and cooling	20	80%	6,961.00	$11,020.28	$—	$3,857.00	$400.00	$0.180	5.33	2.00	3, 6
A/C/Heat Pump Units	Single-family home HVAC conversions to heat pump 8.50 HSPF heating zone 3	Forced-air furnace w/central A/C	Unit	Heating and cooling	20	80%	7,876.00	$12,468.86	$—	$3,857.00	$400.00	$0.180	5.49	2.18	3, 6
A/C/Heat Pump Units	Single-family home HVAC conversions to heat pump 8.50 HSPF heating zone 1, cooling zone 3	Forced air furnace w/o central a/c	Unit	Heating and cooling	20	80%	4,380.00	$6,934.18	$—	$6,090.00	$400.00	$0.180	4.67	0.97	3, 5, 6

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
A/C/Heat Pump Units	Single-family home HVAC conversions to heat pump 8.50 HSPF heating zone 2, cooling zone 1	Forced air furnace w/o central a/c	Unit	Heating and cooling	20	80%	6,719.00	$10,637.16	$—	$6,090.00	$400.00	$0.180	5.29	1.38	3, 6
A/C/Heat Pump Units	Single-family home HVAC conversions to heat pump 8.50 HSPF heating zone 2, cooling zone 2	Forced air furnace w/o central a/c	Unit	Heating and cooling	20	80%	6,451.00	$10,212.87	$—	$6,090.00	$400.00	$0.180	5.23	1.34	3, 6
A/C/Heat Pump Units	Single-family home HVAC conversions to heat pump 8.50 HSPF heating zone 2, cooling zone 3	Forced air furnace w/o central a/c	Unit	Heating and cooling	20	80%	6,035.00	$9,554.28	$—	$6,090.00	$400.00	$0.180	5.14	1.27	3, 6
A/C/Heat Pump Units	Single-family home HVAC conversions to heat pump 8.50 HSPF heating zone 3, cooling zone 1	Forced air furnace w/o central a/c	Unit	Heating and cooling	20	80%	7,634.00	$12,085.73	$—	$6,090.00	$400.00	$0.180	5.45	1.53	3, 6
A/C/Heat Pump Units	Existing single-family home heat pump—upgraded to 8.20 HSPF, all climates	Heat pump	Unit	Heating and cooling	20	80%	2,179.00	$3,449.67	$—	$424.00	$200.00	$0.180	4.66	3.58	1, 4
A/C/Heat Pump Units	Existing single-family home heat pump—upgraded to 8.50 HSPF All Climates	Heat pump	Unit	Heating and cooling	20	80%	2,597.00	$4,111.43	$—	$1,796.00	$250.00	$0.180	4.58	1.68	1, 4
A/C/Heat Pump Units	Existing single-family home heat pump—upgraded to 9.0 HSPF/14 SEER, heating zone 1	Heat pump	Unit	Heating and cooling	15	80%	128.00	$161.73	$—	$59.04	$—	$0.180	5.62	1.84	7, 8
A/C/Heat Pump Units	Existing single-family home heat pump—upgraded to 9.0 HSPF/14 SEER, heating zone 2	Heat pump	Unit	Heating and cooling	15	80%	116.00	$146.56	$—	$59.04	$—	$0.180	5.62	1.72	7, 8
A/C/Heat Pump Units	Existing single-family home heat pump—upgraded to 9.0 HSPF/14 SEER, heating zone 3	Heat pump	Unit	Heating and cooling	15	80%	115.00	$145.30	$—	$59.04	$—	$0.180	5.62	1.71	7, 8

[a] Average measure life.

[b] Net-to-Gross (NTG) percentage. Idaho Power Demand-Side Management Potential Study by Nexant, Inc. 2009.

[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[e] Incremental participant cost prior to customer incentives.
[f] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[g] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[h] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] Idaho Power Energy Efficiency Potential Study by EnerNOC Utility Solutions Consulting. IPC Residential LoadMAP.
[2] Savings from Ecotope, Inc heat pump sizing specifications and heat pump measure savings estimates. December 2009.
[3] Costs based on average 2012 local contractor costs.
[4] Costs based on incremental difference between technology and Regional Technical Forum (RTF) survey data
[5] Measure not cost-effective due to high incremental costs. Will monitor in 2013.
[6] Savings from RTF. Res_SFHPConversion_V2_6.xlsm.2012.
[7] RTF. ResHeatingCoolingHeatPumpUpgradeSF_v2_8.xlsm.
[8] Customer receive incentive for going to an efficiency of at least an 8.5 HSPF heat pump. Incremental savings claimed for projects with an efficiency greater than a 9.0 HSPF. No additional incentive paid.

Home Improvement Program

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration	$	183,087	
Program Incentives		202,004	I
Total Utility Cost	$	385,091	P
Measure Equipment and Installation (Incremental Participant Cost)	$	629,956	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	920,542	$	385,091	2.39
Total Resource Cost Test		920,542		727,452	1.27
Ratepayer Impact Measure Test		920,542		1,005,379	0.92
Participant Cost Test		977,365		629,956	1.55

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	457,353			
NPV Cumulative Energy (kWh)	7,637,182	$	1,150,677	
Total Electric Savings		$	1,150,677	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	775,361	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	80.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Notes: The program was redesigned in 2012. Non-electrically heated homes were removed from the program after March 31, 2012. Existing attic insulation must be R20 or less and the final depth of R38 or greater.

Year: 2012 **Program**: Home Improvement Program **Market Segment**: Residential **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name[a]	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[b]	NTG[c]	Annual Gross Energy Savings (kWh/yr)[d]	NPV Avoided Costs[e]	Non-Energy Benefit	Gross Incremental Participant Cost[f]	Incentive/ Unit[g]	Admin Cost ($/kWh)[h]	UC Ratio[i]	TRC Ratio[j]	Source
Single-family attic insulation	R0 to R19. Average heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R0 to R19	ft^2	Heating & Cooling	45	80%	1.66	$4.11	$—	$0.50	$0.15	$0.195	6.93	4.36	1
Single-family attic insulation	R0 to R19. Heat pump. Heating zone 1, cooling zone 3	Attic insulation R0 to R19	ft^2	Heating & Cooling	45	80%	1.06	$2.62	$—	$0.50	$0.15	$0.195	5.88	3.29	1
Single-family attic insulation	R0 to R19. No electric heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R0 to R19	ft^2	Cooling	45	80%	0.11	$0.37	$—	$0.50	$0.15	$0.195	1.71	0.65	1, 2
Single-family attic insulation	R0 to R19. Zonal heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R0 to R19	ft^2	Heating	45	80%	1.59	$3.15	$—	$0.50	$0.15	$0.195	5.48	3.41	1
Single-family attic insulation	R0 to R38. Average electric heating system w/o CAC. Heating zone 1, cooling zone 3	Attic Insulation R0 to R38	ft^2	Heating	45	80%	2.06	$4.09	$—	$0.50	$0.15	$0.195	5.93	3.93	1
Single-family attic insulation	R0 to R38. Average electric heating system w/o CAC. Heating zone 2, cooling zone 2	Attic Insulation R0 to R38	ft^2	Heating	45	80%	2.87	$5.70	$—	$0.50	$0.15	$0.195	6.42	4.61	1
Single-family attic insulation	R0 to R38. Average electric heating system w/o CAC. Heating zone 3, cooling zone 1	Attic Insulation R0 to R38	ft^2	Heating	45	80%	3.49	$6.92	$—	$0.50	$0.15	$0.195	6.67	4.99	1
Single-family attic insulation	R0 to R38. Average heating system w/CAC. Heating zone 1, cooling zone 3	Attic Insulation R0 to R38	ft^2	Heating & Cooling	45	80%	2.28	$5.62	$—	$0.50	$0.15	$0.195	7.58	5.15	1
Single-family attic insulation	R0 to R38. Electric FAF Heating System w/ CAC. Heating zone 1, cooling zone 3	Attic Insulation R0 to R38	ft^2	Heating & Cooling	45	80%	2.65	$6.55	$—	$0.50	$0.15	$0.195	7.85	5.53	1
Single-family attic insulation	R0 to R38. Electric FAF heating system w/o CAC. Heating zone 2, cooling zone 2	Attic Insulation R0 to R38	ft^2	Heating	45	80%	3.29	$6.54	$—	$0.50	$0.15	$0.195	6.60	4.88	1
Single-family attic insulation	R0 to R38. Heat pump. Heating zone 1, cooling zone 3	Attic Insulation R0 to R38	ft^2	Heating & Cooling	45	80%	1.44	$3.57	$—	$0.50	$0.15	$0.195	6.61	4.01	1

							Benefit			Cost			Benefit/Cost Tests		
Measure Name[a]	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[b]	NTG[c]	Annual Gross Energy Savings (kWh/yr)[d]	NPV Avoided Costs[e]	Non-Energy Benefit	Gross Incremental Participant Cost[f]	Incentive/ Unit[g]	Admin Cost ($/kWh)[h]	UC Ratio[i]	TRC Ratio[j]	Source
Single-family attic insulation	R0 to R38. Heat pump. Heating zone 2, cooling zone 2	Attic insulation R0 to R38	ft^2	Heating and cooling	45	80%	2.23	$5.50	$—	$0.50	$0.15	$0.195	7.53	5.09	1
Single-family attic insulation	R0 to R38. Heat pump. Heating zone 2, cooling zone 3	Attic insulation R0 to R38	ft^2	Heating and cooling	45	80%	2.30	$5.68	$—	$0.50	$0.15	$0.195	7.60	5.18	1
Single-family attic insulation	R0 to R38. No electric heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R0 to R38	ft^2	Cooling	45	80%	0.22	$0.75	$—	$0.50	$0.15	$0.195	3.12	1.27	1
Single-family attic insulation	R0 to R38. No electric heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R0 to R38	ft^2	Cooling	45	80%	0.14	$0.49	$—	$0.50	$0.15	$0.195	2.22	0.86	1, 2
Single-family attic insulation	R0 to R38. Zonal heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R0 to R38	ft^2	Heating	45	80%	2.17	$4.32	$—	$0.50	$0.15	$0.195	6.02	4.04	1
Single-family attic insulation	R0 to R49. Average electric heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R0 to R49	ft^2	Heating	45	80%	2.19	$4.34	$—	$0.50	$0.15	$0.195	6.03	4.06	1
Single-family attic insulation	R0 to R49. Average electric heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R0 to R49	ft^2	Heating	45	80%	3.05	$6.06	$—	$0.50	$0.15	$0.195	6.51	4.73	1
Single-family attic insulation	R0 to R49. Electric FAF heating system w/ CAC. Heating zone 1, cooling zone 3	Attic insulation R0 to R49	ft^2	Heating and cooling	45	80%	2.82	$6.96	$—	$0.50	$0.15	$0.195	7.96	5.69	1
Single-family attic insulation	R0 to R49. Electric FAF heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R0 to R49	ft^2	Heating	45	80%	2.59	$5.14	$—	$0.50	$0.15	$0.195	6.28	4.40	1
Single-family attic insulation	R0 to R49. Electric FAF heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R0 to R49	ft^2	Heating	45	80%	3.50	$6.95	$—	$0.50	$0.15	$0.195	6.68	5.00	1
Single-family attic insulation	R0 to R49. Heat pump. Heating zone 1, cooling zone 3	Attic insulation R0 to R49	ft^2	Heating and cooling	45	80%	1.53	$3.78	$—	$0.50	$0.15	$0.195	6.75	4.15	1
Single-family attic insulation	R0 to R49. Heat pump. Heating zone 2, cooling zone 2	Attic insulation R0 to R49	ft^2	Heating and cooling	45	80%	2.36	$5.83	$—	$0.50	$0.15	$0.195	7.64	5.24	1
Single-family attic insulation	R0 to R49. Heat pump. Heating zone 2, cooling zone 3	Attic insulation R0 to R49	ft^2	Heating and cooling	45	80%	2.44	$6.03	$—	$0.50	$0.15	$0.195	7.71	5.32	1

							Benefit			Cost			Benefit/Cost Tests		
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Single-family attic insulation	R0 to R49. No electric heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R0 to R49	ft^2	Cooling	45	80%	0.23	$0.80	$—	$0.50	$0.15	$0.195	3.27	1.34	1
Single-family attic insulation	R0 to R49. No electric heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R0 to R49	ft^2	Cooling	45	80%	0.15	$0.52	$—	$0.50	$0.15	$0.195	2.33	0.91	1, 2
Single-family attic insulation	R0 to R49. Zonal heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R0 to R49	ft^2	Heating	45	80%	2.31	$4.59	$—	$0.50	$0.15	$0.195	6.11	4.17	1
Single-family attic insulation	R0 to R49. Zonal heating system w/o CAC. Heating zone 3, cooling zone 1	Attic insulation R0 to R49	ft^2	Heating	45	80%	3.69	$7.32	$—	$0.50	$0.15	$0.195	6.74	5.10	1
Single-family attic insulation	R19 to R30. Average heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R19 to R30	ft^2	Heating and cooling	45	80%	0.59	$1.45	$—	$0.50	$0.15	$0.195	4.39	2.13	1
Single-family attic insulation	R19 to R30. Electric FAF heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R30	ft^2	Heating and cooling	45	80%	0.52	$1.28	$—	$0.50	$0.15	$0.195	4.09	1.93	1
Single-family attic insulation	R19 to R30. Heat pump. Heating zone 1, cooling zone 3	Attic insulation R19 to R30	ft^2	Heating and cooling	45	80%	0.28	$0.68	$—	$0.50	$0.15	$0.195	2.68	1.13	1
Single-family attic insulation	R19 to R30. Heat pump. Heating zone 2, cooling zone 2	Attic insulation R19 to R30	ft^2	Heating and cooling	45	80%	0.42	$1.04	$—	$0.50	$0.15	$0.195	3.59	1.62	1
Single-family attic insulation	R19 to R30. No electric heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R30	ft^2	Cooling	45	80%	0.04	$0.15	$—	$0.50	$0.15	$0.195	0.74	0.27	1, 2
Single-family attic insulation	R19 to R30. No electric heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R19 to R30	ft^2	Cooling	45	80%	0.03	$0.09	$—	$0.50	$0.15	$0.195	0.48	0.17	1, 2
Single-family attic insulation	R19 to R38. Average Electric heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R19 to R38	ft^2	Heating	45	80%	0.78	$1.54	$—	$0.50	$0.15	$0.195	4.09	2.12	1
Single-family attic insulation	R19 to R38. Average Electric heating system w/o CAC. Heating zone 3, cooling zone 1	Attic insulation R19 to R38	ft^2	Heating	45	80%	0.94	$1.87	$—	$0.50	$0.15	$0.195	4.49	2.44	1

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Single-family attic insulation	R19 to R38. Average heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R38	ft^2	Heating and cooling	45	80%	0.61	$1.52	$—	$0.50	$0.15	$0.195	4.50	2.21	1
Single-family attic insulation	R19 to R38. Electric FAF heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R38	ft^2	Heating and cooling	45	80%	0.72	$1.77	$—	$0.50	$0.15	$0.195	4.89	2.49	1
Single-family attic insulation	R19 to R38. Electric FAF heating system w/o CAC. Heating zone 3, cooling zone 1	Attic insulation R19 to R38	ft^2	Heating	45	80%	1.07	$2.12	$—	$0.50	$0.15	$0.195	4.74	2.66	1
Single-family attic insulation	R19 to R38. Heat pump. Heating zone 1, cooling zone 3	Attic insulation R19 to R38	ft^2	Heating and cooling	45	80%	0.38	$0.94	$—	$0.50	$0.15	$0.195	3.36	1.49	1
Single-family attic insulation	R19 to R38. Heat pump. Heating zone 2, cooling zone 2	Attic insulation R19 to R38	ft^2	Heating and cooling	45	80%	0.58	$1.43	$—	$0.50	$0.15	$0.195	4.36	2.11	1
Single-family attic insulation	R19 to R38. Heat pump. Heating zone 2, cooling zone 3	Attic insulation R19 to R38	ft^2	Heating and cooling	45	80%	0.60	$1.48	$—	$0.50	$0.15	$0.195	4.45	2.17	1
Single-family attic insulation	R19 to R38. Heat pump. Heating zone 3, cooling zone 1	Attic insulation R19 to R38	ft^2	Heating and cooling	45	80%	0.76	$1.88	$—	$0.50	$0.15	$0.195	5.03	2.60	1
Single-family attic insulation	R19 to R38. No electric heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R38	ft^2	Cooling	45	80%	0.06	$0.20	$—	$0.50	$0.15	$0.195	0.99	0.36	1, 2
Single-family attic insulation	R19 to R38. No electric heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R19 to R38	ft^2	Cooling	45	80%	0.04	$0.13	$—	$0.50	$0.15	$0.195	0.65	0.23	1, 2
Single-family attic insulation	R19 to R38. Zonal heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R38	ft^2	Heating	45	80%	0.65	$1.29	$—	$0.50	$0.15	$0.195	3.72	1.85	1
Single-family attic insulation	R19 to R38. Zonal heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R38	ft^2	Heating	45	80%	0.59	$1.17	$—	$0.50	$0.15	$0.195	3.53	1.72	1
Single-family attic insulation	R19 to R38. Zonal heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R19 to R38	ft^2	Heating	45	80%	0.79	$1.58	$—	$0.50	$0.15	$0.195	4.14	2.16	1

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Single-family attic insulation	R19 to R49. Average electric heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R49	ft^2	Heating	45	80%	0.69	$1.36	$—	$0.50	$0.15	$0.195	3.84	1.93	1
Single-family attic insulation	R19 to R49. Average electric heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R19 to R49	ft^2	Heating	45	80%	0.96	$1.90	$—	$0.50	$0.15	$0.195	4.52	2.47	1
Single-family attic insulation	R19 to R49. Average electric heating system w/o CAC. Heating zone 3, cooling zone 1	Attic insulation R19 to R49	ft^2	Heating	45	80%	1.16	$2.31	$—	$0.50	$0.15	$0.195	4.90	2.81	1
Single-family attic insulation	R19 to R49. Average heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R49	ft^2	Heating and cooling	45	80%	0.76	$1.87	$—	$0.50	$0.15	$0.195	5.03	2.59	1
Single-family attic insulation	R19 to R49. Average heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R19 to R49	ft^2	Heating and cooling	45	80%	1.00	$2.48	$—	$0.50	$0.15	$0.195	5.73	3.17	1
Single-family attic insulation	R19 to R49. Electric FAF heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R49	ft^2	Heating and cooling	45	80%	0.89	$2.19	$—	$0.50	$0.15	$0.195	5.43	2.91	1
Single-family attic insulation	R19 to R49. Electric FAF heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R19 to R49	ft^2	Heating and cooling	45	80%	1.15	$2.85	$—	$0.50	$0.15	$0.195	6.08	3.48	1
Single-family attic insulation	R19 to R49. Electric FAF heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R49	ft^2	Heating	45	80%	0.81	$1.62	$—	$0.50	$0.15	$0.195	4.19	2.20	1
Single-family attic insulation	R19 to R49. Electric FAF heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R19 to R49	ft^2	Heating	45	80%	1.11	$2.20	$—	$0.50	$0.15	$0.195	4.81	2.72	1
Single-family attic insulation	R19 to R49. Electric FAF heating system w/o CAC. Heating zone 3, cooling zone 1	Attic insulation R19 to R49	ft^2	Heating	45	80%	1.32	$2.62	$—	$0.50	$0.15	$0.195	5.15	3.05	1
Single-family attic insulation	R19 to R49. Heat pump. Heating zone 1, cooling zone 3	Attic insulation R19 to R49	ft^2	Heating and cooling	45	80%	0.47	$1.16	$—	$0.50	$0.15	$0.195	3.84	1.78	1
Single-family attic insulation	R19 to R49. Heat pump. Heating zone 2, cooling zone 2	Attic insulation R19 to R49	ft^2	Heating and cooling	45	80%	0.71	$1.76	$—	$0.50	$0.15	$0.195	4.88	2.48	1

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Single-family attic insulation	R19 to R49. Heat pump. Heating zone 2, cooling zone 3	Attic insulation R19 to R49	ft^2	Heating and cooling	45	80%	0.74	$1.83	$—	$0.50	$0.15	$0.195	4.97	2.55	1
Single-family attic insulation	R19 to R49. Heat pump. Heating zone 3, cooling zone 1	Attic insulation R19 to R49	ft^2	Heating and cooling	45	80%	0.93	$2.31	$—	$0.50	$0.15	$0.195	5.56	3.01	1
Single-family attic insulation	R19 to R49. No electric heating system w/ CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R49	ft^2	Cooling	45	80%	0.07	$0.25	$—	$0.50	$0.15	$0.195	1.20	0.44	1, 2
Single-family attic insulation	R19 to R49. No electric heating system w/ CAC. Heating zone 2, cooling zone 2	Attic insulation R19 to R49	ft^2	Cooling	45	80%	0.05	$0.16	$—	$0.50	$0.15	$0.195	0.79	0.29	1, 2
Single-family attic insulation	R19 to R49. Zonal heating system w/ CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R49	ft^2	Heating and cooling	45	80%	0.80	$1.97	$—	$0.50	$0.15	$0.195	5.16	2.70	1
Single-family attic insulation	R19 to R49. Zonal heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R19 to R49	ft^2	Heating	45	80%	0.73	$1.44	$—	$0.50	$0.15	$0.195	3.96	2.02	1
Single-family attic insulation	R19 to R49. Zonal heating system w/o CAC. Heating zone 3, cooling zone 1	Attic insulation R19 to R49	ft^2	Heating	45	80%	1.16	$2.31	$—	$0.50	$0.15	$0.195	4.90	2.81	1
Single-family attic insulation	R30 to R38. Average electric heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R30 to R38	ft^2	Heating	45	80%	0.21	$0.43	$—	$0.50	$0.15	$0.195	1.78	0.72	1, 3
Single-family attic insulation	R30 to R38. Average electric heating system w/o CAC. Heating zone 3, cooling zone 1	Attic insulation R30 to R38	ft^2	Heating	45	80%	0.26	$0.52	$—	$0.50	$0.15	$0.195	2.06	0.86	1, 3
Single-family attic insulation	R30 to R38. Average heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R30 to R38	ft^2	Heating and cooling	45	80%	0.17	$0.42	$—	$0.50	$0.15	$0.195	1.83	0.72	1, 3
Single-family attic insulation	R30 to R38. Electric FAF heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R30 to R38	ft^2	Heating and cooling	45	80%	0.20	$0.49	$—	$0.50	$0.15	$0.195	2.08	0.84	1, 3
Single-family attic insulation	R30 to R38. Heat pump. Heating zone 1, cooling zone 3	Attic insulation R30 to R38	ft^2	Heating and cooling	45	80%	0.10	$0.26	$—	$0.50	$0.15	$0.195	1.22	0.46	1, 3

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Single-family attic insulation	R30 to R38. Heat pump. Heating zone 2, cooling zone 2	Attic insulation R30 to R38	ft^2	Heating and cooling	45	80%	0.16	$0.39	$—	$0.50	$0.15	$0.195	1.73	0.68	1, 3
Single-family attic insulation	R30 to R38. No electric heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R30 to R38	ft^2	Cooling	45	80%	0.02	$0.05	$—	$0.50	$0.15	$0.195	0.29	0.10	1, 2
Single-family attic insulation	R30 to R38. No electric heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R30 to R38	ft^2	Cooling	45	80%	0.01	$0.03	$—	$0.50	$0.15	$0.195	0.18	0.06	1, 2
Single-family attic insulation	R30 to R49. Average electric heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R30 to R49	ft^2	Heating	45	80%	0.28	$0.56	$—	$0.50	$0.15	$0.195	2.20	0.93	1, 3
Single-family attic insulation	R30 to R49. Average electric heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R30 to R49	ft^2	Heating	45	80%	0.40	$0.79	$—	$0.50	$0.15	$0.195	2.77	1.24	1
Single-family attic insulation	R30 to R49. Average heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R30 to R49	ft^2	Heating and cooling	45	80%	0.31	$0.77	$—	$0.50	$0.15	$0.195	2.93	1.26	1
Single-family attic insulation	R30 to R49. Average heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R30 to R49	ft^2	Heating and cooling	45	80%	0.41	$1.02	$—	$0.50	$0.15	$0.195	3.55	1.60	1
Single-family attic insulation	R30 to R49. Electric FAF heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R30 to R49	ft^2	Heating	45	80%	0.46	$0.91	$—	$0.50	$0.15	$0.195	3.04	1.40	1
Single-family attic insulation	R30 to R49. Heat pump. Heating zone 1, cooling zone 3	Attic insulation R30 to R49	ft^2	Heating and cooling	45	80%	0.19	$0.48	$—	$0.50	$0.15	$0.195	2.03	0.82	1, 3
Single-family attic insulation	R30 to R49. Heat pump. Heating zone 2, cooling zone 2	Attic insulation R30 to R49	ft^2	Heating and cooling	45	80%	0.29	$0.72	$—	$0.50	$0.15	$0.195	2.79	1.19	1
Single-family attic insulation	R30 to R49. Heat pump. Heating zone 2, cooling zone 3	Attic insulation R30 to R49	ft^2	Heating and cooling	45	80%	0.30	$0.75	$—	$0.50	$0.15	$0.195	2.86	1.22	1
Single-family attic insulation	R30 to R49. No electric heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R30 to R49	ft^2	Cooling	45	80%	0.03	$0.10	$—	$0.50	$0.15	$0.195	0.52	0.19	1, 2

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Single-family attic insulation	R30 to R49. No electric heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R30 to R49	ft^2	Cooling	45	80%	0.02	$0.06	$—	$0.50	$0.15	$0.195	0.33	0.12	1, 2
Single-family attic insulation	R30 to R49. Zonal heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R30 to R49	ft^2	Heating	45	80%	0.30	$0.60	$—	$0.50	$0.15	$0.195	2.29	0.98	1, 3
Single-family attic insulation	R30 to R49. Zonal heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R30 to R49	ft^2	Heating	45	80%	0.41	$0.81	$—	$0.50	$0.15	$0.195	2.81	1.27	1
Single-family attic insulation	R30 to R49. Zonal heating system w/o CAC. Heating zone 3, cooling zone 1	Attic insulation R30 to R49	ft^2	Heating	45	80%	0.48	$0.96	$—	$0.50	$0.15	$0.195	3.14	1.46	1
Single-family attic insulation	R38 to R49. Average electric heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R38 to R49	ft^2	Heating	45	80%	0.18	$0.36	$—	$0.50	$0.15	$0.195	1.56	0.62	1, 3
Single-family attic insulation	R38 to R49. Average electric heating system w/o CAC. Heating zone 3, cooling zone 1	Attic insulation R38 to R49	ft^2	Heating	45	80%	0.22	$0.44	$—	$0.50	$0.15	$0.195	1.82	0.74	1, 3
Single-family attic insulation	R38 to R49. Average heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R38 to R49	ft^2	Heating and cooling	45	80%	0.14	$0.35	$—	$0.50	$0.15	$0.195	1.59	0.62	1, 3
Single-family attic insulation	R38 to R49. Average heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R38 to R49	ft^2	Heating and cooling	45	80%	0.19	$0.47	$—	$0.50	$0.15	$0.195	2.01	0.80	1, 3
Single-family attic insulation	R38 to R49. Average heating system w/CAC. Heating zone 2, cooling zone 3	Attic insulation R38 to R49	ft^2	Heating and cooling	45	80%	0.19	$0.48	$—	$0.50	$0.15	$0.195	2.05	0.82	1, 3
Single-family attic insulation	R38 to R49. Average heating system w/CAC. Heating zone 3, cooling zone 1	Attic insulation R38 to R49	ft^2	Heating and cooling	45	80%	0.23	$0.56	$—	$0.50	$0.15	$0.195	2.30	0.94	1, 3
Single-family attic insulation	R38 to R49. Electric FAF heating system w/o CAC. Heating zone 1, cooling zone 3	Attic insulation R38 to R49	ft^2	Heating	45	80%	0.15	$0.31	$—	$0.50	$0.15	$0.195	1.36	0.53	1, 3
Single-family attic insulation	R38 to R49. Heat pump. Heating zone 1, cooling zone 3	Attic insulation R38 to R49	ft^2	Heating and cooling	45	80%	0.09	$0.22	$—	$0.50	$0.15	$0.195	1.04	0.39	1, 3

							Benefit			Cost			Benefit/Cost Tests		
Measure Name[a]	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[b]	NTG[c]	Annual Gross Energy Savings (kWh/yr)[d]	NPV Avoided Costs[e]	Non-Energy Benefit	Gross Incremental Participant Cost[f]	Incentive/ Unit[g]	Admin Cost ($/kWh)[h]	UC Ratio[i]	TRC Ratio[j]	Source
Single-family attic insulation	R38 to R49. Heat pump. Heating zone 2, cooling zone 2	Attic insulation R38 to R49	ft^2	Heating and cooling	45	80%	0.13	$0.33	$—	$0.50	$0.15	$0.195	1.50	0.58	1, 3
Single-family attic insulation	R38 to R49. No electric heating system w/CAC. Heating zone 1, cooling zone 3	Attic insulation R38 to R49	ft^2	Cooling	45	80%	0.01	$0.05	$—	$0.50	$0.15	$0.195	0.24	0.09	1, 2
Single-family attic insulation	R38 to R49. No electric heating system w/CAC. Heating zone 2, cooling zone 2	Attic insulation R38 to R49	ft^2	Cooling	45	80%	0.01	$0.03	$—	$0.50	$0.15	$0.195	0.15	0.05	1, 3
Single-family attic insulation	R38 to R49. Zonal heating system w/o CAC. Heating zone 2, cooling zone 2	Attic insulation R38 to R49	ft^2	Heating	45	80%	0.19	$0.37	$—	$0.50	$0.15	$0.195	1.59	0.63	1, 3
Single-family floor insulation	R0 to R30. Electric FAF heating system w/CAC. Heating zone 1, cooling zone 3	Floor insulation R0 to R30	ft^2	Heating and cooling	45	80%	1.48	$3.66	$—	$1.00	$0.50	$0.195	3.71	2.47	1
Single-family floor insulation	R0 to R30. Electric FAF heating system w/CAC. Heating zone 3, cooling zone 1	Floor insulation R0 to R30	ft^2	Heating and cooling	45	80%	2.37	$5.85	$—	$1.00	$0.50	$0.195	4.87	3.44	1
Single-family floor insulation	R0 to R30. Electric FAF heating system w/o CAC. Heating zone 3	Floor insulation R0 to R30	ft^2	Heating	45	80%	2.42	$4.80	$—	$1.00	$0.50	$0.195	3.95	2.80	1
Single-family floor insulation	R0 to R30. Heat pump. Heating zone 1, cooling zone 3.	Floor insulation R0 to R30	ft^2	Heating and cooling	45	80%	0.61	$1.50	$—	$1.00	$0.50	$0.195	1.94	1.18	1
Single-family floor insulation	R0 to R30. Heat pump. Heating zone 2, cooling zone 2.	Floor insulation R0 to R30	ft^2	Heating and cooling	45	80%	0.97	$2.39	$—	$1.00	$0.50	$0.195	2.78	1.76	1
Single-family floor insulation	R0 to R30. Heat pump. Heating zone 2, cooling zone 3.	Floor insulation R0 to R30	ft^2	Heating and cooling	45	80%	0.97	$2.40	$—	$1.00	$0.50	$0.195	2.79	1.76	1
Single-family floor insulation	R0 to R30. Heat pump. Heating zone 3, cooling zone 1.	Floor insulation R0 to R30	ft^2	Heating and cooling	45	80%	1.33	$3.29	$—	$1.00	$0.50	$0.195	3.46	2.27	1
Single-family floor insulation	R0 to R30. Zonal heating system w/o CAC. Heating zone 1, cooling zone 3	Floor insulation R0 to R30	ft^2	Heating	45	80%	1.46	$2.90	$—	$1.00	$0.50	$0.195	2.95	1.96	1
Single-family floor insulation	R0 to R30. Zonal heating system w/o CAC. Heating zone 2, cooling zone 2	Floor insulation R0 to R30	ft^2	Heating	45	80%	1.91	$3.79	$—	$1.00	$0.50	$0.195	3.48	2.38	1

							Benefit			Cost			Benefit/Cost Tests		
Measure Name[a]	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[b]	NTG[c]	Annual Gross Energy Savings (kWh/yr)[d]	NPV Avoided Costs[e]	Non-Energy Benefit	Gross Incremental Participant Cost[f]	Incentive/ Unit[g]	Admin Cost ($/kWh)[h]	UC Ratio[i]	TRC Ratio[j]	Source
Single-family floor insulation	R0 to R30. Zonal heating system w/o CAC. Heating zone 3, cooling zone 1	Floor insulation R0 to R30	ft^2	Heating	45	80%	2.31	$4.58	$—	$1.00	$0.50	$0.195	3.86	2.71	1
Single-family wall insulation	R0 to R11. Electric FAF heating system w/o CAC. Heating zone 2, cooling zone 2	Wall insulation R0 to R11	ft^2	Heating	45	80%	2.43	$4.83	$—	$0.83	$0.50	$0.195	3.97	3.12	1
Single-family wall insulation	R0 to R11. Heat pump . Heating zone 1, cooling zone 3	Wall insulation R0 to R11	ft^2	Heating & Cooling	45	80%	0.95	$2.36	$—	$0.83	$0.50	$0.195	2.75	1.98	1
Single-family wall insulation	R0 to R11. Heat pump . Heating zone 2, cooling zone 2	Wall insulation R0 to R11	ft^2	Heating & Cooling	45	80%	1.53	$3.79	$—	$0.83	$0.50	$0.195	3.79	2.85	1
Single-family wall insulation	R0 to R11. Zonal heating system w/o CAC. Heating zone 1, cooling zone 3	Wall insulation R0 to R11	ft^2	Heating	45	80%	1.60	$3.17	$—	$0.83	$0.50	$0.195	3.12	2.36	1
Single-family wall insulation	R0 to R11. Zonal heating system w/o CAC. Heating zone 2, cooling zone 3	Wall insulation R0 to R11	ft^2	Heating	45	80%	2.13	$4.23	$—	$0.83	$0.50	$0.195	3.70	2.87	1

[a] Only heating system type and climate zone combinations with paid incentives in 2012 are displayed.
[b] Average measure life.
[c] Net-to-Gross (NTG) percentage. Idaho Power Demand-Side Management Potential Study by Nexant, Inc. 2009.
[d] Estimated kWh savings measured at the customer's meter, excluding line losses.
[e] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[f] Incremental participant cost prior to customer incentives. Based on 2012 median customer costs.
[g] Properly sealed ducts required for the program. If additional air and duct sealing was required, an additional incentive of $0.50/ln ft was paid. 2012 incentives still averaged $0.15/sq ft for attic and $0.50/sq ft for floor and wall insulation.
[h] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[i] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[j] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. ResSFWx_v2_5_IdahoPower_withCAC_ByCoolingZone.xlsm. 2011.
[2] Measure not cost-effective. Non-electrically heated homes removed from the program in April 2012.
[3] Measure not cost-effective. Measure no longer qualifies under current program design effective April 2012. Home must have existing insulation less than R20.

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Home Products Program

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration		$ 156,708	
Program Incentives		502,324	I
Total Utility Cost		$ 659,032	P
Measure Equipment and Installation (Incremental Participant Cost)		$ 640,752	M

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
Utility Cost Test	$ 777,732	$ 659,032	1.18
Total Resource Cost Test	819,082	769,774	1.06
Ratepayer Impact Measure Test	777,732	1,265,497	0.61
Participant Cost Test	1,312,093	640,752	2.05

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	887,222			
NPV Cumulative Energy (kWh)	9,503,226	$	972,165	
Total Electric Savings		$	972,165	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	758,081	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	51,688	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	80.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Notes: Non-energy benefits include the NPV of avoided gas for ENERGY STAR® clothes washers. Based on RTF's assumptions of therms saved per year.

Year: 2012 **Program**: Home Products Program **Market Segment**: Residential **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit[e]	Gross Incremental Participant Cost[f]	Incentive/ Unit	Admin Cost ($/kWh)[g]	UC Ratio[h]	TRC Ratio[i]	Source
Clothes Washer	ENERGY STAR® clothes washer, any MEF, any DHW, any dryer	Old clothes washers	Washer	Washer	14	80%	37.30	$39.34	$1.12	$74.64	$50.00	$0.342	0.50	0.39	1, 2
Refrigerator	ENERGY STAR refrigerator, bottom freezer w/ice through door	Old refrigerator	Refrigerator	First refrigerator	20	80%	45.00	$59.72	$-	$18.52	$30.00	$0.342	1.05	1.32	3
Refrigerator	ENERGY STAR refrigerator, bottom freezer w/o ice through door	Old refrigerator	Refrigerator	First refrigerator	20	80%	40.00	$53.09	$-	$10.65	$30.00	$0.342	0.97	1.51	3
Refrigerator	ENERGY STAR refrigerator, side-by-side w/ice through door	Old refrigerator	Refrigerator	First refrigerator	20	80%	44.00	$58.39	$-	$36.70	$30.00	$0.342	1.04	0.93	3, 4
Refrigerator	ENERGY STAR refrigerator, side-by-side w/o ice through door	Old refrigerator	Refrigerator	First refrigerator	20	80%	51.00	$67.68	$-	$43.66	$30.00	$0.342	1.14	0.93	3, 4
Refrigerator	ENERGY STAR refrigerator, top freezer w/ice through door	Old refrigerator	Refrigerator	First refrigerator	20	80%	40.00	$53.09	$-	$14.29	$30.00	$0.342	0.97	1.37	3
Refrigerator	ENERGY STAR refrigerator, top freezer w/o ice through door	Old refrigerator	Refrigerator	First refrigerator	20	80%	45.00	$59.72	$-	$16.30	$30.00	$0.342	1.05	1.39	3
Refrigerator	ENERGY STAR refrigerator	Old refrigerator	Refrigerator	First refrigerator	20	80%	44.00	$58.39	$-	$22.54	$30.00	$0.342	1.04	1.20	3
Freezer	ENERGY STAR freezer, no tiers, chest, any defrost	Old freezer	Freezer	Freezer	22	80%	29.00	$41.43	$-	$3.43	$20.00	$0.342	1.11	1.99	5
Freezer	ENERGY STAR freezer, no tiers, upright, automatic defrost	Old freezer	Freezer	Freezer	22	80%	56.00	$80.00	$-	$5.83	$20.00	$0.342	1.63	2.30	5
Freezer	ENERGY STAR freezer, no tiers, upright, manual defrost	Old freezer	Freezer	Freezer	22	80%	28.00	$40.00	$-	$2.92	$20.00	$0.342	1.08	2.01	5
Freezer	ENERGY STAR freezer, no tiers, any upright	Old freezer	Freezer	Freezer	22	80%	47.00	$67.14	$-	$4.97	$20.00	$0.342	1.49	2.23	5

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit[e]	Gross Incremental Participant Cost[f]	Incentive/ Unit	Admin Cost ($/kWh)[g]	UC Ratio[h]	TRC Ratio[i]	Source
Freezer	ENERGY STAR freezer, no tiers, any freezer	Old freezer	Freezer	Freezer	22	80%	40.00	$57.14	$-	$4.34	$20.00	$0.342	1.36	2.16	5
Lighting	ENERGY STAR LED light fixture	Incandescent light fixture	Fixture	Lighting	12	100%	35.00	$29.29	$-	$54.41	$15.00	$0.342	1.09	0.44	6, 7
Lighting	ENERGY STAR light fixture, weighted average all	Incandescent light fixture	Fixture	Lighting	15	100%	49.00	$50.20	$-	$22.74	$15.00	$0.342	1.58	1.27	8
Lighting	ENERGY STAR ceiling fan light kits	Incandescent ceiling fan light fixture	Fixture	Lighting	6	100%	32.00	$13.69	$-	$44.00	$15.00	$0.342	0.53	0.25	7, 9
Lighting	ENERGY STAR ceiling fan	Old ceiling fan	Fixture	Cooling	10	80%	59.00	$81.54	$-	$86.00	$20.00	$0.342	1.62	0.70	7, 10
Low-flow showerhead	Low-flow showerhead 2.0 gpm, any shower, any water heating, retail	Showerhead 2.2 gpm or higher	Showerhead	Water heating	10	80%	66.78	$47.46	$6.16	$27.78	$7.00	$0.004	5.22	1.80	11
Low-flow showerhead	Low-flow showerhead 1.75 gpm, any shower, any water heating, retail	Showerhead 2.2 gpm or higher	Showerhead	Water heating	10	80%	99.77	$70.91	$9.20	$27.78	$7.00	$0.004	7.67	2.67	11
Low-flow showerhead	Low-flow showerhead 1.5 gpm, any shower, any water heating, retail	Showerhead 2.2 gpm or higher	Showerhead	Water heating	10	80%	129.12	$91.77	$11.95	$27.78	$7.00	$0.004	9.77	3.44	11

[a] Average measure life.
[b] Net-to-Gross (NTG) percentage. Idaho Power Demand-Side Management Potential Study by Nexant, Inc. 2009.No NTG percentage for lighting measures from the RTF.
[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[e] Sum of NPV of avoided cost of gas.
[f] Incremental participant cost prior to customer incentives.
[g] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals. Admin for mail in rebate and retailer markdown calculated separately.
[h] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[i] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. ResClothesWasherSF_v3.xls. Any DHW, Any Dryer. 2012. Adjusted savings by changing Electric Water Heating saturation from 64% to 52% and Electric dryer saturation from 82% to 95% to match IPC mix.
[2] Measure not cost-effective. Measure removed from the program in 2013.
[3] Measure RTF. ResRefrigerator_v2_1.xls. 2011.
[4] Measure not cost-effective due to high admin costs ($/kWh). Will monitor in 2013.
[5] RTF. ResFreezer_v2_2.xlsm. 2012.
[6] RTF. ResSpecialtyLighting_v1_1.xlsml. Any Location. 2011.
[7] Measure not cost-effective. Removed from the program in 2012.
[8] RTF. ResCFLLighting_v2_2.xlsm. 2012. Measure moved to Energy Efficient Lighting in 2012.
[9] RTF. ResCFLLighting_v2_2.xlsm. 2012. Savings equivalent to 2 retail CFL bulbs at 16 kWh/year.
[10] ADM Associates, Inc. Impact Evaluation of 2010 Home Products Program. 2011.
[11] RTF. ResShowerheads_v2_1.xlsm. 2011. Adjusted savings by changing Electric Water Heating saturation from 64% to 52% to match Idaho Power mix.

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Rebate Advantage

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration		$ 24,241	
Program Incentives		13,000	I
Total Utility Cost		$ 37,241	P
Measure Equipment and Installation (Incremental Participant Cost)		$ 47,670	M

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	187,108			
NPV Cumulative Energy (kWh)	2,669,689	$	285,190	
Total Electric Savings		$	285,190	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	237,575	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	228,152	$	37,241	6.13
Total Resource Cost Test		228,152		62,977	3.51
Ratepayer Impact Measure Test		228,152		227,301	1.00
Participant Cost Test		250,575		47,670	5.26

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	80.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Year: 2012 **Program**: Rebate Advantage **Market Segment**: Residential **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
ENERGY STAR® manufactured home	New ENERGY STAR manufactured home w/electric FAF—heating zone 1	Manufactured home built to Housing and Urban Development (HUD) code.	Home	Heating	26	80%	5,420.00	$7,944.52	$—	$1,577.51	$500.00	$0.130	5.28	3.08	1
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/electric FAF—heating zone 2	Manufactured home built to HUD code.	Home	Heating	27	80%	6,847.00	$10,294.73	$—	$1,577.51	$500.00	$0.130	5.92	3.66	1
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/electric FAF—heating zone 3	Manufactured home built to HUD code.	Home	Heating	27	80%	8,057.00	$12,114.01	$—	$1,577.51	$500.00	$0.130	6.26	4.02	1
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/heat pump—heating zone 1, cooling zone 1	Manufactured home built to HUD code.	Home	Heating and cooling	23	80%	3,128.00	$5,458.83	$—	$1,577.51	$500.00	$0.130	4.82	2.47	1
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/heat pump—heating zone 1, cooling zone 2	Manufactured home built to HUD code.	Home	Heating and cooling	23	80%	3,172.00	$5,535.61	$—	$1,577.51	$500.00	$0.130	4.85	2.50	1
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/heat pump—heating zone 1, cooling zone 3	Manufactured home built to HUD code.	Home	Heating and cooling	23	80%	3,254.00	$5,678.72	$—	$1,577.51	$500.00	$0.130	4.92	2.55	1
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/heat pump—heating zone 2, cooling zone 1	Manufactured home built to HUD code.	Home	Heating and cooling	25	80%	4,346.00	$8,005.66	$—	$1,577.51	$500.00	$0.130	6.01	3.32	1
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/heat pump—heating zone 2, cooling zone 2	Manufactured home built to HUD code.	Home	Heating and cooling	25	80%	4,390.00	$8,086.71	$—	$1,577.51	$500.00	$0.130	6.04	3.35	1
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/heat pump—heating zone 2, cooling zone 3	Manufactured home built to HUD code.	Home	Heating and cooling	25	80%	4,472.00	$8,237.76	$—	$1,577.51	$500.00	$0.130	6.09	3.39	1

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/heat pump—heating zone 3, cooling zone 1	Manufactured home built to HUD code.	Home	Heating and cooling	26	80%	5,516.00	$10,410.57	$—	$1,577.51	$500.00	$0.130	6.84	4.01	1
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/heat pump—heating zone 3, cooling zone 2	Manufactured home built to HUD code.	Home	Heating and cooling	26	80%	5,560.00	$10,493.61	$—	$1,577.51	$500.00	$0.130	6.87	4.03	1
ENERGY STAR manufactured home	New ENERGY STAR manufactured home w/heat pump—heating zone 3, cooling zone 3	Manufactured home built to HUD code.	Home	Heating and cooling	26	80%	5,642.00	$10,648.37	$—	$1,577.51	$500.00	$0.130	6.91	4.07	1

[a] Average measure life.
[b] Net-to-Gross (NTG) percentage. Idaho Power Demand-Side Management Potential Study by Nexant, Inc. 2009.
[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[e] Incremental participant cost prior to customer incentives.
[f] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[g] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[h] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. NewMH_EStar_EcoRated_v1_2.xls. 2011.

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See ya later, refrigerator®

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration	$	512,406	
Program Incentives		100,740	I
Total Utility Cost	$	613,146	P
Measure Equipment and Installation (Incremental Participant Cost)	$	—	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	981,675	$	613,146	1.60
Total Resource Cost Test		981,675		613,146	1.60
Ratepayer Impact Measure Test		981,675		1,469,128	0.67
Participant Cost Test		N/A		N/A	N/A

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	1,576,426			
NPV Cumulative Energy (kWh)	11,509,388	$	981,675	
Total Electric Savings		$	981,675	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	855,982	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	N/A	N/A

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	100.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Notes: No NTG. Deemed savings from the Regional Technical Forum (RTF) already accounts for net realized energy savings. No participant costs.

Year: 2012 **Program**: See ya later, refrigerator® **Market Segment**: Residential **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	**Measure Description**	**Replacing**	**Measure Unit**	**End Use**	**Measure Life (yrs)[a]**	**NTG[b]**	**Annual Gross Energy Savings (kWh/yr)[c]**	**NPV Avoided Costs[d]**	**Non-Energy Benefit**	**Gross Incremental Participant Cost[e]**	**Incentive/ Unit**	**Admin Cost ($/kWh)[f]**	**UC Ratio[g]**	**TRC Ratio[h]**	**Source**
Freezer Recycling	Freezer removal and decommissioning	—	Freezer	Freezer	6	100%	555.00	$245.31	$—	$—	$30.00	$0.333	1.14	1.14	1
Refrigerator Recycling	Refrigerator removal and decommissioning	—	Refrigerator	Second refrigerator	9	100%	482.00	$315.61	$—	$—	$30.00	$0.333	1.66	1.66	1

[a] Average measure life.
[b] No Net-to-Gross (NTG) percentage. Deemed savings from the RTF includes realization rate.
[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[e] No participant cost.
[f] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[g] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[h] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. ResFridgeFreezeDecommissioning_v2.4.xlsm. 2012.

Weatherization Assistance for Qualified Customers

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration	$	276,074	
CAP Agency Payments		1,094,065	
Total Utility Cost	$	1,370,141	P
Idaho Power Indirect Overhead Expense Allocation—2.71%	$	37,131	OH
Additional State Funding	$	449,804	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	1,188,802	$	1,407,271	0.84
Total Resource Cost Test		1,326,144		1,857,076	0.71
Ratepayer Impact Measure Test		1,188,802		2,230,437	0.53
Participant Cost Test		N/A		N/A	N/A

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	648,304			
NPV Cumulative Energy (kWh)	9,260,173	$	1,080,729	
10% Credit (Northwest Power Act)			108,073	
Total Electric Savings		$	1,188,802	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	823,166	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Electric Benefits				
Health and Safety		$	119,061	
Repair			18,281	
Other			—	
Non-Energy Benefits Total		$	137,342	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P + OH
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + OH + M
Ratepayer Impact Measure Test	= S * NTG	= P + OH+ (B * NTG)
Participant Cost Test	N/A	N/A

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	100.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Notes: Savings based on average annual realized savings of 2,684 kWh per home. Realization rate of 29% applied to non-profit buildings' energy savings. Savings are derived from billing analysis of the 2011 projects.

Program cost-effectiveness incorporated Idaho Public Utilities Commission (IPUC) staff recommendations from Case No. GNR-E-12-01. Recommendations include:

Claimed 100 percent 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.

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Weatherization Solutions for Eligible Customers

Segment: Residential

2012 Program Results

Cost Inputs			Ref
Program Administration	$	149,200	
CAP Agency Payments		921,356	
Total Utility Cost	$	1,070,556	P
Idaho Power Indirect Overhead Expense Allocation—2.71%	$	29,012	OH
Additional State Funding	$	—	M

Summary of Cost-Effectiveness Results					
Test	**Benefit**		**Cost**		**Ratio**
Utility Cost Test	$	472,118	$	1,099,568	0.43
Total Resource Cost Test		515,238		1,099,568	0.47
Ratepayer Impact Measure Test		472,118		1,426,478	0.33
Participant Cost Test		N/A		N/A	N/A

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	257,466			
NPV Cumulative Energy (kWh)	3,677,564	$	429,198	
10% Credit (Northwest Power Act)			42,920	
Total Electric Savings		$	472,118	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	326,910	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Electric Benefits				
Health and Safety		$	35,320	
Repair			7,800	
Other			—	
Non-Energy Benefits Total		$	43,120	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P + OH
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + OH + M
Ratepayer Impact Measure Test	= S * NTG	= P + OH+ (B * NTG)
Participant Cost Test	N/A	N/A

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	100.00%
Average 2012 Customer Segment Rate/kWh	$0.079
Line Losses	10.90%

Notes: Savings based on average annual realized savings of 1,826 kWh per home. Savings are derived from billing analysis of the 2011 projects.

Program cost-effectiveness incorporated Idaho Public Utilities Commission (IPUC) staff recommendations from Case No. GNR-E-12-01. Recommendations include:

Claimed 100 percent 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.

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Building Efficiency

Segment: Commercial

2012 Program Results

Cost Inputs			Ref
Program Administration	$	270,527	
Program Incentives		1,322,045	I
Total Utility Cost	$	1,592,572	P
Measure Equipment and Installation (Incremental Participant Cost)	$	7,934,356	M

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	20,450,037			
NPV Cumulative Energy (kWh)	198,825,500	$	18,071,255	
Total Electric Savings		$	18,071,255	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	9,802,070	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	14,457,004	$	1,592,572	9.08
Total Resource Cost Test		14,457,004		6,822,421	2.10
Ratepayer Impact Measure Test		14,457,004		9,434,227	1.53
Participant Cost Test		11,124,114		7,934,356	1.40

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	80.00%
Average 2012 Customer Segment Rate/kWh	$0.050
Line Losses	10.90%

Year: 2012 **Program**: Building Efficiency **Market Segment**: Commercial **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
Lighting Controls	Interior light load reduction–10–19% below code	—	ft^2	Lighting	11	96%	0.38	$0.32	$—	$0.05	$0.05	$0.011	5.64	5.64	1
Lighting Controls	Interior light load reduction–20% or more below code	—	ft^2	Lighting	11	96%	1.09	$0.91	$—	$0.10	$0.15	$0.011	5.41	7.69	1
Lighting Controls	Exterior light load reduction–15% or more below code	—	kW	Outdoor lighting	11	96%	4,059.00	$2,453.88	$—	$205.00	$200.00	$0.011	9.63	9.44	2
Lighting Controls	Daylight photo controls	—	ft^2	Lighting	8	96%	0.61	$0.38	$—	$0.25	$0.25	$0.011	1.41	1.40	3
Lighting Controls	Occupancy sensors	—	Sensor	Lighting	8	96%	289.99	$180.31	$—	$77.00	$25.00	$0.011	6.14	2.22	3
Sign Lighting	High efficiency exit signs	—	Signs	Lighting	16	96%	333.00	$389.07	$—	$31.52	$7.50	$0.011	33.46	10.91	3
A/C/Heat Pump Units	Premium efficiency HVAC unit	—	Ton	HVAC	15	80%	386.72	$523.10	$—	$122.22	$50.00	$0.011	7.71	3.74	1
A/C/Heat Pump Units	Additional HVAC unit efficiency bonus	—	Ton	HVAC	15	80%	181.78	$245.89	$—	$81.50	$25.00	$0.011	7.29	2.72	1
A/C/Heat Pump Units	Efficient chillers	—	Ton	HVAC	15	80%	154.28	$208.69	$—	$75.00	$20.00	$0.011	7.69	2.54	2
Economizers	Air-side economizers	—	Ton	HVAC	15	80%	300.00	$405.80	$—	$170.00	$75.00	$0.011	4.15	2.10	3
Reflective Roofing	Reflective roof coating	—	ft^2	HVAC	15	80%	0.41	$0.55	$—	$0.35	$0.05	$0.011	8.14	1.51	3
Efficient Windows	High performance windows	—	ft^2	HVAC	30	80%	1.01	$2.19	$—	$0.74	$0.50	$0.011	3.42	2.49	3
Automated Control Systems	Energy management control systems	—	ft^2	HVAC	14	96%	1.24	$1.59	$—	$1.00	$0.30	$0.011	4.85	1.54	3
Automated Control Systems	Demand controlled ventilation	—	Cubic feet/ minute	HVAC	10	96%	1.31	$1.26	$—	$0.60	$0.50	$0.011	2.34	1.98	3
Variable Speed Controls	Variable speed drives	—	hp	HVAC	15	96%	985.02	$1,332.40	$—	$187.00	$60.00	$0.011	18.06	6.64	3

[a] Average measure life.
[b] Net-to-Gross (NTG) percentage. Idaho Power Demand-Side Management Potential Study by Nexant, Inc. 2009.
[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[e] Incremental participant cost prior to customer incentives.

[f] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.

[g] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).

[h] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))

[1] Savings calculated from Idaho Power engineering estimates and research. Participant costs calculated based on Idaho Power Demand-Side management Potential Study by Nexant, Inc.

[2] Savings and costs calculated from Idaho Power engineering estimates and research.

[3] Idaho Power Demand-Side Management Potential Study by Nexant, Inc. IPC DSM Potential - Commercial Model 081209.xlsm. 2009.

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Custom Efficiency

Segment: Industrial

2012 Program Results

Cost Inputs			Ref
Program Administration	$	913,115	
Program Incentives		6,179,466	I
Total Utility Cost	$	7,092,581	P
Measure Equipment and Installation (Incremental Participant Cost)	$	12,062,528	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	33,080,183	$	7,092,581	4.66
Total Resource Cost Test		33,080,183		11,151,894	2.97
Ratepayer Impact Measure Test		33,080,183		17,738,942	1.86
Participant Cost Test		21,608,974		12,062,528	1.79

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	54,253,106			
NPV Cumulative Energy (kWh)	527,475,863	$	47,942,294	
Total Electric Savings		$	47,942,294	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	15,429,508	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	69.00%
Average 2012 Customer Segment Rate/kWh	$0.030
Line Losses	10.90%

Notes: Energy savings are unique by project and are reviewed by Idaho Power engineering staff or third-party consultants. Each project must complete a certification inspection.
Green Rewind initiative is available to agricultural, commercial, and industrial customers for motors between 25 to 5,000 hp. Did not pay any incentives for motors greater than 600 hp in 2012.
Commercial and industrial motor rewinds are paid under Custom Efficiency.
NTG of 69 percent from CPUC DEER NTFR Update Process for 2006-2007 Programs.

Year: 2012 **Program**: Custom Efficiency—Green Motors **Market Segment**: Industrial **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
Green Motors Program Rewind: Motor size 15 hp	Green Motors Program Rewind: Motor size 15 hp	Standard rewind practice	Motor	MF_Motors	12	69%	274.00	$236.80	$—	$160.14	$30.00	$0.050	3.74	1.22	1
Green Motors Program Rewind: Motor size 20 hp	Green Motors Program Rewind: Motor size 20 hp	Standard rewind practice	Motor	MF_Motors	12	69%	363.00	$313.71	$—	$178.67	$40.00	$0.050	3.72	1.41	1
Green Motors Program Rewind: Motor size 25 hp	Green Motors Program Rewind: Motor size 25 hp	Standard rewind practice	Motor	MF_Motors	11	69%	535.00	$426.30	$—	$204.14	$50.00	$0.050	3.83	1.61	1
Green Motors Program Rewind: Motor size 30 hp	Green Motors Program Rewind: Motor size 30HP	Standard rewind practice	Motor	MF_Motors	11	69%	575.00	$458.17	$—	$224.21	$60.00	$0.050	3.56	1.56	1
Green Motors Program Rewind: Motor size 40 hp	Green Motors Program Rewind: Motor size 40HP	Standard rewind practice	Motor	MF_Motors	11	69%	672.00	$535.46	$—	$273.99	$80.00	$0.050	3.25	1.49	1
Green Motors Program Rewind: Motor size 50 hp	Green Motors Program Rewind: Motor size 50HP	Standard rewind practice	Motor	MF_Motors	11	69%	729.00	$580.88	$—	$303.32	$100.00	$0.050	2.94	1.45	1
Green Motors Program Rewind: Motor size 60 hp	Green Motors Program Rewind: Motor size 60HP	Standard rewind practice	Motor	MF_Motors	9	69%	971.00	$641.22	$—	$357.73	$120.00	$0.050	2.62	1.33	1
Green Motors Program Rewind: Motor size 70 hp	Green Motors Program Rewind: Motor size 70HP	Standard rewind practice	Motor	MF_Motors	9	69%	1,009.00	$666.31	$—	$386.67	$150.00	$0.050	2.29	1.26	1
Green Motors Program Rewind: Motor size 100 hp	Green Motors Program Rewind: Motor size 100HP	Standard rewind practice	Motor	MF_Motors	9	69%	1,558.00	$1,028.85	$—	$479.67	$200.00	$0.050	2.55	1.51	1
Green Motors Program Rewind: Motor size 125 hp	Green Motors Program Rewind: Motor size 125HP	Standard rewind practice	Motor	MF_Motors	10	69%	1,891.00	$1,379.95	$—	$538.71	$250.00	$0.050	2.76	1.75	1
Green Motors Program Rewind: Motor size 150 hp	Green Motors Program Rewind: Motor size 150HP	Standard rewind practice	Motor	MF_Motors	10	69%	2,254.00	$1,644.84	$—	$600.07	$300.00	$0.050	2.75	1.83	1

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
Green Motors Program Rewind: Motor size 200 hp	Green Motors Program Rewind: Motor size 200HP	Standard rewind practice	Motor	MF_Motors	10	69%	2,987.00	$2,179.75	$—	$722.40	$400.00	$0.050	2.74	1.95	1
Green Motors Program Rewind: Motor size 250 hp	Green Motors Program Rewind: Motor size 250HP	Standard rewind practice	Motor	MF_Motors	8	69%	4,397.00	$2,592.01	$—	$928.48	$500.00	$0.050	2.48	1.76	1
Green Motors Program Rewind: Motor size 300 hp	Green Motors Program Rewind: Motor size 300HP	Standard rewind practice	Motor	MF_Motors	8	69%	5,269.00	$3,106.05	$—	$938.51	$600.00	$0.050	2.48	1.95	1
Green Motors Program Rewind: Motor size 350 hp	Green Motors Program Rewind: Motor size 350HP	Standard rewind practice	Motor	MF_Motors	8	69%	6,147.00	$3,623.63	$—	$983.66	$700.00	$0.050	2.48	2.08	1
Green Motors Program Rewind: Motor size 400 hp	Green Motors Program Rewind: Motor size 400HP	Standard rewind practice	Motor	MF_Motors	8	69%	7,005.00	$4,129.42	$—	$1,098.66	$800.00	$0.050	2.48	2.10	1
Green Motors Program Rewind: Motor size 450 hp	Green Motors Program Rewind: Motor size 450HP	Standard rewind practice	Motor	MF_Motors	8	69%	7,859.00	$4,632.85	$—	$1,200.92	$900.00	$0.050	2.47	2.13	1
Green Motors Program Rewind: Motor size 500 hp	Green Motors Program Rewind: Motor size 500HP	Standard rewind practice	Motor	MF_Motors	8	69%	8,732.00	$5,147.48	$—	$1,297.40	$1,000.00	$0.050	2.47	2.16	1
Green Motors Program Rewind: Motor size 600 hp	Green Motors Program Rewind: Motor size 600HP	Standard rewind practice	Motor	MF_Motors	7	69%	12,279.00	$6,353.27	$—	$1,911.88	$1,200.00	$0.050	2.42	1.90	1

[a] Average measure life.
[b] Net-to-Gross (NTG) percentage. CPUC DEER NTFR Update Process for 2006-2007 Programs.
[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[e] Incremental participant cost prior to customer incentives. Based on 2012 average customer costs.
[f] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[g] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[h] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. IndGreenMotorsRewind_v1_3.xlsm. 2012.

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Easy Upgrades

Segment: Industrial

2012 Program Results

Cost Inputs			Ref
Program Administration	$	929,859	
Program Incentives		4,483,988	I
Total Utility Cost	$	5,413,847	P
Measure Equipment and Installation (Incremental Participant Cost)	$	8,315,849	M

Summary of Cost-Effectiveness Results					
Test		**Benefit**		**Cost**	**Ratio**
Utility Cost Test	$	29,386,668	$	5,413,847	5.43
Total Resource Cost Test		29,386,668		8,479,336	3.47
Ratepayer Impact Measure Test		29,386,668		21,353,535	1.38
Participant Cost Test		24,408,598		8,315,849	2.94

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh)	41,568,672			
NPV Cumulative Energy (kWh)	404,151,444	$	36,733,335	
Total Electric Savings		$	36,733,335	S
Participant Bill Savings				
NPV Cumulative Participant Savings		$	19,924,610	B
Other Benefits				
Non-Utility Rebates/Incentives		$	—	NUI
Non-Energy Benefits		$	—	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= S * NTG	= P
Total Resource Cost Test	= (S + NUI + NEB) * NTG	= P + ((M-I)*NTG)
Ratepayer Impact Measure Test	= S * NTG	= P + (B * NTG)
Participant Cost Test	= B + I + NUI + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)	80.00%
Average 2012 Customer Segment Rate/kWh	$0.050
Line Losses	10.90%

Notes: Includes Easy Upgrades and Comprehensive Lighting energy savings and costs.
Measure inputs from Evergreen Consulting Group or Idaho Power Demand-Side Management Potential Study by Nexant, Inc. unless otherwise noted.

Year: 2012 **Program**: Easy Upgrades **Market Segment**: Commercial **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
Standard T8s	2-foot or 3-foot T8s and electronic ballast (one or more lamps)	2-foot or 3-foot T12 (includes U-bend)	Fixture	Lighting	11	96%	106.40	$89.15	$—	$40.92	$8.00	$0.022	8.28	2.04	1
Standard T8s	1 lamp 4-foot T8 and electronic ballast	1 lamp 4-foot T12	Fixture	Lighting	11	96%	59.50	$49.85	$—	$28.40	$12.00	$0.022	3.60	1.65	1
Standard T8s	1 or 2 lamp 4-foot T8s and electronic ballasts	2 lamp 4-foot T12	Fixture	Lighting	11	96%	108.50	$90.91	$—	$37.60	$14.00	$0.022	5.33	2.23	1
Standard T8s	2 or 3 lamp 4-foot T8s and electronic ballast	3 lamp 4-foot T12	Fixture	Lighting	11	96%	176.75	$148.09	$—	$54.45	$18.00	$0.022	6.50	2.50	1
Standard T8s	2, 3, or 4 lamp 4-foot T8s and electronic ballasts	4 lamp 4-foot T12	Fixture	Lighting	11	96%	236.83	$198.43	$—	$59.83	$22.00	$0.022	7.00	3.00	1
Standard T8s	1 or 2 lamp 6-foot T8s and electronic ballast	1 or 2 lamp 6-foot T12	Fixture	Lighting	12	96%	121.33	$110.16	$—	$49.33	$14.00	$0.022	6.34	2.09	1
Standard T8s	1 or 2 lamp 6-foot T8s and electronic ballast (slimline and HO)	1 or 2 lamp 6-foot T12 HO/VHO	Fixture	Lighting	12	96%	377.03	$342.32	$—	$81.55	$14.00	$0.022	14.74	3.77	1
Standard T8s	1 or 2 lamp 8-foot T8s and electronic ballast	1 or 2 lamp 8-foot T12	Fixture	Lighting	12	96%	116.67	$105.92	$—	$58.47	$12.00	$0.022	6.98	1.72	1
Standard T8s	2, 3, or 4 lamp 8-foot T8s and electronic ballast	3 or 4 lamp 8-foot T12	Fixture	Lighting	12	96%	262.50	$238.33	$—	$101.66	$24.00	$0.022	7.68	2.19	1
Standard T8s	1 or 2 lamp 8-foot T8s and electronic ballast (slimline and HO)	1 or 2 lamp 8-foot T12 HO/VHO	Fixture	Lighting	12	96%	525.91	$477.48	$—	$67.57	$12.00	$0.022	19.45	5.96	1
Standard T8s	2, 3, or 4 lamp 8-foot T8s and electronic ballast (slimline and HO)	3 or 4 lamp 8-foot T12 HO/VHO	Fixture	Lighting	12	96%	1,195.59	$1,085.49	$—	$95.00	$24.00	$0.022	20.72	8.80	1
Standard T8s	2 or 4 lamp 4-foot T8s and electronic ballast (tandem/retrofit)	1 or 2 lamp 8-foot T12	Fixture	Lighting	11	96%	121.33	$101.66	$—	$53.07	$22.00	$0.022	3.96	1.79	1

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Standard T8s	2 or 4 lamp 4-foot T8s and electronic ballast (tandem/retrofit)	1 or 2 lamp 8-foot T12 HO/VHO	Fixture	Lighting	11	96%	540.87	$453.17	$—	$54.81	$30.00	$0.022	10.38	6.62	1
High Performance T8s	1 lamp 4-foot T8 and electronic ballast	1 lamp 4-foot T12	Fixture	Lighting	12	96%	80.50	$73.09	$—	$62.98	$22.00	$0.022	2.95	1.11	1
High Performance T8s	1 or 2 lamp 4-foot HP T8s and electronic ballast	2 lamp 4-foot T12	Fixture	Lighting	12	96%	129.86	$117.90	$—	$60.13	$24.00	$0.022	4.21	1.84	1
High Performance T8s	2 or 3 lamp 4-foot HP T8s and electronic ballast	3 lamp 4-foot T12	Fixture	Lighting	12	96%	203.97	$185.19	$—	$67.23	$32.00	$0.022	4.87	2.53	1
High Performance T8s	2, 3, or 4 lamp 4-foot HP T8s and electronic ballast	4 lamp 4-foot T12	Fixture	Lighting	12	96%	262.83	$238.63	$—	$67.32	$34.00	$0.022	5.76	3.19	1
High Performance T8s	2 or 4 lamp 4-foot HP T8s and electronic ballast (tandem/retrofit)	1 or 2 lamp 8-foot T12	Fixture	Lighting	12	96%	171.07	$155.32	$—	$68.86	$34.00	$0.022	3.95	2.09	1
High Performance T8s	2 or 4 lamp 4-foot HP T8s and electronic ballast (tandem/retrofit)	1 or 2 lamp 8-foot T12 HO/VHO	Fixture	Lighting	12	96%	567.38	$515.13	$—	$74.54	$45.00	$0.022	8.60	5.76	1
T5 (Non-HO)	1 or 2 lamp 4-foot T5s and electronic ballast	1 or 2 lamp 4-foot T12	Fixture	Lighting	11	96%	102.67	$86.02	$—	$50.30	$14.00	$0.022	5.08	1.62	1
T5 (Non-HO)	2, 3, or 4 lamp 4-foot T5's and electronic ballast	3 or 4 lamp 4-foot T12	Fixture	Lighting	11	96%	185.50	$155.42	$—	$90.34	$24.00	$0.022	5.31	1.63	1
T5/T8 High Bay (New Fixture)	4 lamp 4-foot T8s and electronic ballast	Fixture (lamp & ballast) using ≥ 200 W	Fixture	Lighting	12	96%	574.58	$521.67	$—	$153.91	$75.00	$0.022	5.71	3.06	1
T5/T8 High Bay (New Fixture)	6 lamp 4-foot T8s and electronic ballast or 2, 3, or 4 lamp 4-foot T5 HO's and electronic ballast	Fixture (lamp and ballast) using 200 to 399 W	Fixture	Lighting	12	96%	400.47	$363.59	$—	$184.82	$75.00	$0.022	4.16	1.84	1
T5/T8 High Bay (New Fixture)	6 or 8 lamp 4-foot T8s and electronic ballast or 4 or 6 lamp 4-foot T5 HO's and electronic ballast	Fixture (lamp and ballast) using ≥ 400 W	Fixture	Lighting	12	96%	966.27	$877.29	$—	$210.34	$110.00	$0.022	6.42	3.70	1

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T5/T8 High Bay (New Fixture)	10 or 12 lamp 4-foot T8's and electronic ballast or 8 or 10 lamp 4-foot T5HO's and electronic ballast	Fixture (lamp and ballast) 751 to 1100 W	Fixture	Lighting	12	96%	2,366.70	$2,148.76	$—	$386.65	$180.00	$0.022	8.89	4.79	1
Compact Fluorescents (CFLs)	Screw-in compact fluorescent ≤ 32 W	Fixture using ≥ 60 input W	Fixture	Lighting	6	96%	98.00	$46.03	$—	$23.00	$2.00	$0.022	10.63	1.82	1
CFLs	Screw-in compact fluorescent 33 to 59 W	Fixture using ≥ 100 input W	Fixture	Lighting	6	96%	143.50	$67.41	$—	$31.00	$4.00	$0.022	9.04	1.96	1
CFLs	Screw-in compact fluorescent ≥ 60 W	Fixture using ≥ 150 input W	Fixture	Lighting	6	96%	175.00	$82.20	$—	$29.00	$20.00	$0.022	3.31	2.43	1
CFLs	Screw-in cold-cathode ≤ 32 W	Fixture using ≥ 60 input W	Fixture	Lighting	6	96%	175.88	$82.62	$—	$35.38	$4.00	$0.022	10.08	2.09	1
CFLs	Hard-wired compact fluorescent ≤ 49 W and electronic ballasts	Fixture using ≥ 90 input W	Fixture	Lighting	6	96%	262.78	$123.44	$—	$85.00	$30.00	$0.022	3.31	1.34	1
CFLs	Hard-wired compact fluorescent 50 to 99 W and electronic ballasts	Fixture using ≥ 150 input W	Fixture	Lighting	6	96%	471.10	$221.29	$—	$104.50	$40.00	$0.022	4.22	1.89	1
Light Emitting Diodes (LEDs)	Screw-in or pin-based LED ≤ 10 W	Fixture using ≥ 40 input W	Fixture	Lighting	12	96%	105.00	$95.33	$—	$45.00	$10.00	$0.022	7.43	1.99	1
Ceramic/Pulse Start Metal Halide	150 to 250 input W metal halide	Fixture (lamp & ballast) using ≥ 295 input W	Fixture	Lighting	12	96%	570.50	$517.97	$—	$185.00	$30.00	$0.022	11.69	2.60	1
Ceramic/Pulse Start Metal Halide	251 to 360 input W metal halide	Fixture (lamp & ballast) using ≥ 450 input W	Fixture	Lighting	12	96%	499.63	$453.62	$—	$217.50	$55.00	$0.022	6.60	1.96	1
Ceramic/Pulse Start Metal Halide	361+ input W metal halide	Fixture (lamp & ballast) using ≥ 600 input W	Fixture	Lighting	12	96%	2,033.50	$1,846.25	$—	$245.00	$105.00	$0.022	11.84	6.24	1
LED Exits	LED exit sign or equivalent (5 W or less)	Exit sign using ≥ 18 W	Fixture	Lighting	16	96%	88.67	$103.59	$—	$68.69	$25.00	$0.022	3.69	1.44	1
Lighting Controls	Wall switch occupancy sensor	Manual or no prior control	Fixture	Lighting	10	96%	149.30	$114.66	$—	$90.00	$35.00	$0.022	2.88	1.21	1

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Lighting Controls	Wall or ceiling mount occupancy sensor	Manual or no prior control	Fixture	Lighting	10	96%	472.17	$362.63	$—	$130.00	$50.00	$0.022	5.76	2.54	1
Lighting Controls	Fixture mount occupancy sensor	Manual or no prior control	Fixture	Lighting	10	96%	252.22	$193.71	$—	$100.00	$50.00	$0.022	3.35	1.80	1
Lighting Controls	Interior photocell control (dimming, step-dimming or switching)	Manual or no prior control	Fixture	Lighting	10	96%	379.42	$291.40	$—	$130.00	$40.00	$0.022	5.79	2.08	1
Lighting Controls	Auto-off time switch or time clock control (minimum of 100 watts connected to load)	Manual or no prior control	Fixture	Lighting	10	96%	272.74	$209.46	$—	$125.00	$40.00	$0.022	4.37	1.58	1
A/C/Heat Pump Units	PTAC/PTHP unit, min 12 EER	Standard PTAC/PTHP unit	Unit	HVAC	12	80%	562.50	$631.17	$—	$255.00	$50.00	$0.022	8.10	2.23	2
A/C/Heat Pump Units	5 ton or less 1-phase AC unit, min 14 SEER	Standard 1-5 ton AC unit	Ton	HVAC	15	80%	239.04	$323.34	$—	$50.00	$25.00	$0.022	8.55	5.15	3
A/C/Heat Pump Units	5 ton or less 1-phase AC unit, min 15 SEER	Standard 5 ton or less AC unit	Ton	HVAC	15	80%	278.88	$377.23	$—	$100.00	$50.00	$0.022	5.38	3.14	3
A/C/Heat Pump Units	5 ton or less 1-phase AC unit, min 16 SEER	Standard 5 ton or less AC unit	Ton	HVAC	15	80%	313.74	$424.39	$—	$150.00	$75.00	$0.022	4.15	2.39	3
A/C/Heat Pump Units	5 ton or less 3-phase AC unit, min 13 SEER	Standard 1-5 ton AC unit	Ton	HVAC	15	80%	415.50	$562.03	$—	$75.00	$50.00	$0.022	7.60	5.68	2
A/C/Heat Pump Units	5 ton or less 3-phase AC unit, min 14 SEER	Standard 5 ton or less AC unit	Ton	HVAC	15	80%	239.04	$323.34	$—	$75.00	$75.00	$0.022	3.22	3.22	3
A/C/Heat Pump Units	5 ton or less 3-phase AC unit, min 15 SEER	Standard 5 ton or less AC unit	Ton	HVAC	15	80%	278.88	$377.23	$—	$150.00	$100.00	$0.022	2.84	2.07	3
A/C/Heat Pump Units	6-10 ton AC unit, min 11 EER	Standard 6-10 ton AC unit	Ton	HVAC	15	80%	120.09	$162.44	$—	$100.00	$50.00	$0.022	2.47	1.40	3
A/C/Heat Pump Units	11-19 ton AC unit, min 10.8 EER	Standard 11-19 ton AC unit	Ton	HVAC	15	80%	124.95	$169.01	$—	$100.00	$50.00	$0.022	2.56	1.46	3
A/C/Heat Pump Units	20 ton or more AC unit, min 10 EER	Standard 20 ton+ AC unit	Ton	HVAC	15	80%	92.96	$125.74	$—	$75.00	$50.00	$0.022	1.93	1.40	3
Economizers	Air-side economizer control addition	No prior control	Ton	HVAC	15	80%	300.00	$405.80	$—	$170.00	$75.00	$0.022	3.98	2.06	3, 4

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Economizers	Water-side economizer control addition	No prior control	Ton	HVAC	10	80%	1,199.10	$1,147.31	$—	$463.00	$75.00	$0.022	9.05	2.23	3, 4
Economizers	Air-side economizer system repair	Non-functional Economizer	Unit	HVAC	15	80%	4,499.29	$6,086.04	$—	$630.00	$250.00	$0.022	13.95	7.46	3, 4
Evaporative Coolers/ Pre-Coolers	Pre-cooler added to condenser	Standard air cooled AC unit	Ton	HVAC	10	80%	832.30	$796.35	$—	$200.00	$100.00	$0.022	5.38	3.21	3
Evaporative Coolers/ Pre-Coolers	Retrofit to direct evaporative cooler	Replacing standard AC unit	Ton	HVAC	15	80%	902.52	$1,220.81	$—	$400.00	$200.00	$0.022	4.44	2.57	3
Evaporative Coolers/ Pre-Coolers	Retrofit to indirect evaporative cooler	Replacing standard AC unit	Ton	HVAC	15	80%	676.89	$915.61	$—	$550.00	$300.00	$0.022	2.33	1.42	3
Variable Speed Fans/Pumps	Variable speed drive, fan	Single speed HVAC system fan	HP	HVAC	15	96%	1,078.29	$1,458.57	$—	$187.00	$60.00	$0.022	16.72	6.81	3, 4
Variable Speed Fans/Pumps	Variable speed drive, pump	Single speed HVAC system pump	HP	HVAC	15	96%	891.74	$1,206.23	$—	$187.00	$60.00	$0.022	14.54	5.75	3, 4
Programmable Thermostats	7-day, two-stage setback thermostat	Manual thermostat	Unit	HVAC	11	80%	4,209.94	$4,377.82	$—	$174.76	$40.00	$0.022	26.41	14.57	3, 4
Automated Control Systems	Energy management control systems	Manual controls	Square Feet	HVAC	14	80%	1.20	$1.53	$—	$0.95	$0.30	$0.022	3.76	1.45	3, 4
Automated Control Systems	Control system reprogramming/optimization	Automated control system	Square Feet	HVAC	4	80%	0.75	$0.30	$—	$0.15	$0.10	$0.022	2.06	1.53	2, 4
Automated Control Systems	Lodging room occupancy control system	Manual controls	Room	HVAC	12	80%	900.00	$1,009.87	$—	$75.00	$50.00	$0.022	11.57	9.00	2, 4
NEMA Premium Efficiency ™ Motors	1 hp Motor, min 85.5% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	57.25	$70.04	$—	$50.00	$20.00	$0.022	3.16	1.34	3, 5
NEMA Premium Efficiency Motors	1.5 hp Motor, min 86.5% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	71.38	$87.34	$—	$73.00	$25.00	$0.022	3.16	1.15	3, 5
NEMA Premium Efficiency Motors	2 hp Motor, min 86.5% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	94.86	$116.06	$—	$65.00	$30.00	$0.022	3.47	1.70	3, 5

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NEMA Premium Efficiency Motors	3 hp Motor, min 89.5% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	145.98	$178.61	$—	$73.00	$35.00	$0.022	4.49	2.30	3, 5
NEMA Premium Efficiency Motors	5 hp Motor, min 89.5% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	182.82	$223.67	$—	$99.00	$40.00	$0.022	4.88	2.13	3, 5
NEMA Premium Efficiency Motors	7.5 hp Motor, min 91.7% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	443.33	$542.41	$—	$71.00	$55.00	$0.022	8.04	6.50	3, 5
NEMA Premium Efficiency Motors	10 hp Motor, min 91.7% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	544.74	$666.48	$—	$90.00	$70.00	$0.022	7.80	6.32	3, 5
NEMA Premium Efficiency Motors	15 hp Motor, min 93.0% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	720.26	$881.23	$—	$168.00	$90.00	$0.022	7.99	4.68	3, 5
NEMA Premium Efficiency Motors	20 hp Motor, min 93.0% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	996.47	$1,219.17	$—	$165.00	$110.00	$0.022	8.87	6.34	3, 5
NEMA Premium Efficiency Motors	25 hp Motor, min 93.6% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	1,604.32	$1,962.86	$—	$329.00	$130.00	$0.022	11.40	5.29	3, 5
NEMA Premium Efficiency Motors	30 hp Motor, min 94.1% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	1,819.00	$2,225.52	$—	$331.00	$150.00	$0.022	11.24	5.87	3, 5
NEMA Premium Efficiency Motors	40 hp Motor, min 94.1% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	2,048.95	$2,506.86	$—	$398.00	$180.00	$0.022	10.69	5.54	3, 5
NEMA Premium Efficiency Motors	50 hp Motor, min 94.5% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	2,120.15	$2,593.98	$—	$384.00	$220.00	$0.022	9.34	5.87	3, 5
NEMA Premium Efficiency Motors	60 hp Motor, min 95.0% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	2,931.36	$3,586.48	$—	$332.00	$280.00	$0.022	9.99	8.73	3, 5

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NEMA Premium Efficiency Motors	75 hp Motor, min 95.4% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	3,007.97	$3,680.21	$—	$366.00	$350.00	$0.022	8.49	8.19	3, 5
NEMA Premium Efficiency Motors	100 hp Motor, min 95.4% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	4,460.07	$5,456.83	$—	$555.00	$420.00	$0.022	10.11	8.09	3, 5
NEMA Premium Efficiency Motors	125 hp Motor, min 95.4% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	6,428.45	$7,865.12	$—	$961.00	$550.00	$0.022	10.92	6.95	3, 5
NEMA Premium Efficiency Motors	150 hp Motor, min 95.8% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	7,233.63	$8,850.25	$—	$609.00	$650.00	$0.022	10.50	11.04	3, 5
NEMA Premium Efficiency Motors	200 hp Motor, min 96.2% efficiency	Same or larger hp standard motor	Motor	Motor	15	96%	10,077.27	$12,329.40	$—	$964.00	$750.00	$0.022	12.18	10.06	3, 5
Downsizing Bonus	Downsizing motors during retrofit	10-200 hp existing motor	HP	Motor	15	96%	12.60	$15.42	$—	$-	$3.00	$0.022	4.52	4.52	3, 5
ECM Motors	ECM Motor	Standard induction motor	Motor	Motor	15	96%	421.80	$516.07	$—	$110.00	$30.00	$0.022	12.61	4.27	3
Variable Speed Controls	Variable speed drives	Standard motor, 5-200 hp	HP	Motor	10	96%	3,542.00	$3,039.38	$—	$187.00	$60.00	$0.022	21.16	11.23	3
Premium Windows	SHGC of .30 or less and U-Factor .30 or less.	Standard window	Square Feet	HVAC	30	80%	1.38	$2.98	$—	$1.50	$1.50	$0.022	1.56	1.56	3
Efficient Windows	SHGC of .40 or less and U-Factor .42 or less.	Standard window	Square Feet	HVAC	30	80%	0.92	$1.99	$—	$0.68	$1.00	$0.022	1.56	2.08	3
Window Shading	Adding window shade screen	No screen or other shading	Square Feet	HVAC	10	80%	2.10	$2.01	$—	$1.00	$0.50	$0.022	2.94	1.70	3
Reflective Roofing	Adding reflective roof treatment	Non-reflective low pitch roof	Square Feet	HVAC	15	80%	0.40	$0.54	$—	$0.32	$0.05	$0.022	7.36	1.58	3
Roof/Ceiling Insulation	Increasing to R24 min insulation	Insulation level, R11 or less	Square Feet	HVAC	40	80%	0.92	$2.28	$—	$0.83	$0.10	$0.022	15.18	2.59	3
Roof/Ceiling Insulation	Increasing to R38 min insulation	Insulation level, R11 or less	Square Feet	HVAC	40	80%	1.46	$3.61	$—	$0.95	$0.20	$0.022	12.46	3.46	3

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
Wall Insulation	Increase to R11 min insulation	Insulation level, R5 or less	Square Feet	HVAC	40	80%	1.04	$2.59	$—	$0.62	$0.05	$0.022	28.38	3.95	3
Wall Insulation	Increase to R19 min insulation	Insulation level, R5 or less	Square Feet	HVAC	40	80%	2.44	$6.04	$—	$0.74	$0.10	$0.022	31.46	7.25	3
Refrigeration Cases	Efficient, medium-temp open case	Standard medium-temp open case	Linear Foot	Refrigeration	16	96%	148.18	$163.65	$—	$100.00	$20.00	$0.022	6.75	1.57	3
Refrigeration Cases	Efficient, medium-temp reach-in	Standard medium-temp open case	Linear Foot	Refrigeration	16	96%	564.94	$623.91	$—	$100.00	$100.00	$0.022	5.33	5.33	3
Refrigeration Cases	Efficient, low-temp reach-in (reach-in)	Standard low-temp reach-in	Linear Foot	Refrigeration	16	96%	478.36	$528.30	$—	$100.00	$150.00	$0.022	3.16	4.51	3
Refrigeration Cases	Efficient, low-temp reach-in (open case)	Standard low-temp open case	Linear Foot	Refrigeration	16	96%	1,208.00	$1,334.11	$—	$100.00	$150.00	$0.022	7.25	9.96	3
Refrigeration Cases	Efficient, low-temp reach-in (coffin case)	Standard low-temp coffin case	Linear Foot	Refrigeration	16	96%	703.42	$776.85	$—	$100.00	$55.00	$0.022	10.58	6.56	3
Refrigeration Cases	Vertical night covers	No covers present	Linear Foot	Refrigeration	5	96%	148.00	$54.05	$—	$9.00	$9.00	$0.022	4.23	4.23	3
Refrigeration Cases	Horizontal night covers	No covers present	Linear Foot	Refrigeration	5	96%	59.00	$21.55	$—	$9.00	$5.00	$0.022	3.28	2.04	3
Refrigeration Cases	Refrigeration line insulation	No insulation present	Linear Foot	Refrigeration	11	96%	17.00	$13.40	$—	$2.00	$1.00	$0.022	9.36	5.51	3
Refrigeration Cases	Door gasket--walk-in	No or damaged door gasket	Linear Foot	Refrigeration	4	96%	137.50	$39.88	$—	$4.00	$2.00	$0.022	7.62	5.51	3
Refrigeration Cases	Door gasket--reach-in	Damaged door gasket	Linear Foot	Refrigeration	4	96%	92.50	$26.83	$—	$4.00	$1.00	$0.022	8.49	4.35	3
Refrigeration Cases	Auto-closer--walk-in	No or damaged auto closer, low-temp	Unit	Refrigeration	8	96%	2,470.00	$1,439.63	$—	$433.00	$50.00	$0.022	13.25	2.93	3
Refrigeration Cases	Auto-closer--reach-in	Damaged auto closer, low-temp	Unit	Refrigeration	8	96%	1,297.00	$755.95	$—	$300.00	$50.00	$0.022	9.24	2.28	3
Refrigeration Cases	Auto-closer--walk-in	No or damaged auto closer, med-temp	Unit	Refrigeration	8	96%	1,067.00	$621.90	$—	$433.00	$40.00	$0.022	9.41	1.35	3
Refrigeration Cases	Auto-closer--reach-in	Damaged auto closer, med-temp	Unit	Refrigeration	8	96%	243.00	$141.63	$—	$125.00	$40.00	$0.022	3.00	1.07	3

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
Refrigeration Cases	No-heat glass doors	Standard low-temp reach-in	Unit	Refrigeration	12	96%	749.00	$640.64	$—	$200.00	$50.00	$0.022	9.25	2.92	3
Refrigeration Cases	Anti-sweat heat (ASH) controls	Low or med-temp case w/out controls	Linear Foot	Refrigeration	8	96%	379.00	$220.90	$—	$46.31	$40.00	$0.022	4.39	3.90	6
Vending Machines	ENERGY STAR vending machine	Standard vending machine	Unit	Miscellaneous	14	96%	1,472.00	$1,518.62	$—	$350.00	$75.00	$0.022	13.58	3.93	3
Vending Machines	Beverage machine control	Vending machine with no sensor	Unit	Miscellaneous	14	96%	546.50	$563.81	$—	$170.00	$75.00	$0.022	6.22	3.04	3
Vending Machines	Other cold product control	Vending machine with no sensor	Unit	Miscellaneous	14	96%	546.50	$563.81	$—	$170.00	$50.00	$0.022	8.73	3.05	3
Vending Machines	Non-cooled snack control	Vending machine with no sensor	Unit	Miscellaneous	14	96%	382.55	$394.67	$—	$170.00	$25.00	$0.022	11.34	2.19	3
Commercial Kitchen Equipment	ENERGY STAR dishwasher	Standard dishwasher	Unit	Miscellaneous	11	96%	231.00	$191.51	$—	$55.00	$15.00	$0.022	9.15	3.14	3
Commercial Kitchen Equipment	Low-temperature dish machine	Dish machine w/electric booster	kW	Office	13	96%	657.86	$625.61	$—	$127.00	$75.00	$0.022	6.71	4.31	3
Commercial Kitchen Equipment	ENERGY STAR refrigerator	Standard refrigerator	Refrigerator	Miscellaneous	13	96%	85.71	$82.79	$—	$34.05	$30.00	$0.022	2.49	2.22	3
Commercial Kitchen Equipment	ENERGY STAR 2.0 solid or glass door refrigerator - Less than 30 ft^3	Solid or glass door refrigerator—Less than 30 ft^3.	Refrigerator	Refrigeration	12	96%	4.25	$3.64	$—	$74.09	$75.00	$0.022	0.05	0.05	7, 8
Commercial Kitchen Equipment	ENERGY STAR 2.0 solid or glass door refrigerator —-30 to 49.9 ft^3	Solid or glass door refrigerator—30 to 49.9 ft^3	Refrigerator	Refrigeration	12	96%	5.50	$4.70	$—	$91.46	$90.00	$0.022	0.05	0.05	7, 8
Commercial Kitchen Equipment	ENERGY STAR 2.0 solid or glass door freezer—15 to 29.9 ft^3	Solid or glass door freezer—15 to 29.9 ft^3	Freezer	Refrigeration	12	96%	27.50	$23.52	$—	$162.66	$150.00	$0.022	0.15	0.14	8, 9
Commercial Kitchen Equipment	ENERGY STAR 2.0 solid or glass door freezer—30 to 49.9 ft^3	Solid or glass door freezer—30 to 49.9 ft^3	Freezer	Refrigeration	12	96%	75.00	$64.15	$—	$162.66	$175.00	$0.022	0.35	0.37	8, 9
Commercial Kitchen Equipment	Ice maker, up to 200 lbs/day	Standard ice maker of the same size	Unit	Miscellaneous	10	96%	161.20	$122.48	$—	$-	$100.00	$0.022	1.14	1.14	10

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
Commercial Kitchen Equipment	Ice maker, more than 200 lbs/day	Standard ice maker of the same size	Unit	Miscellaneous	10	96%	596.33	$453.10	$—	$-	$200.00	$0.022	2.04	2.04	11
Evaporator Fans	Evaporator fan controls	Med-temp walk-in with no controls	Unit	Refrigeration	5	96%	361.00	$131.83	$—	$85.00	$25.00	$0.022	3.84	1.40	3
Evaporator Fans	Efficient evaporator fan motors	Med- or low-temp walk-in	Motor	Refrigeration	10	96%	478.30	$345.28	$—	$161.00	$100.00	$0.022	3.00	1.96	3
Evaporator Fans	ECM case fan motors	Standard, shaded-pole fan motors	Motor	Refrigeration	15	96%	477.00	$498.55	$—	$97.25	$60.00	$0.022	6.79	4.50	12
Compressors/ Condensers	Efficient, low-temp compressor	Standard low-temp compressor	Ton	Refrigeration	15	96%	1,051.00	$1,098.48	$—	$132.00	$45.00	$0.022	15.48	6.95	3
Compressors/ Condensers	Efficient, air-cooled condenser	Standard air cooled condenser	Ton	Refrigeration	15	96%	410.01	$428.54	$—	$140.30	$100.00	$0.022	3.77	2.79	3
Compressors/ Condensers	Efficient, water-cooled condenser	Standard air cooled condenser	Ton	Refrigeration	15	96%	559.03	$584.28	$—	$209.00	$100.00	$0.022	4.99	2.59	3
Compressors/ Condensers	Efficient, evaporative, condenser	Standard air cooled condenser	Ton	Refrigeration	15	96%	678.74	$709.40	$—	$278.00	$200.00	$0.022	3.17	2.35	3
Head/Suction Pressure	Floating head pressure controller	Standard head pressure control	HP	Refrigeration	15	96%	692.50	$723.78	$—	$267.58	$60.00	$0.022	9.24	2.53	13
Head/Suction Pressure	Floating suction pressure	Standard suction pressure control	HP	Refrigeration	16	96%	272.91	$301.40	$—	$52.48	$10.00	$0.022	18.08	5.10	3
Case/Walk-in Lighting	T8 fluorescent lighting	T12 or T10 fluorescent lighting	Lamp	Refrigeration	6	96%	309.31	$135.78	$—	$44.70	$15.00	$0.022	5.98	2.59	3
Case/Walk-in Lighting	LED display case lighting	T12 or T10 fluorescent lighting	Linear Foot	Refrigeration	8	96%	111.25	$64.84	$—	$43.00	$15.00	$0.022	3.57	1.40	14
Case/Walk-in Lighting	Fluorescent walk-in light fixture	Incandescent walk-in light fixture	Fixture	Refrigeration	6	96%	627.99	$275.68	$—	$47.49	$25.00	$0.022	6.82	4.38	3
Office Equipment	80 Plus® PC-desktop	Standard personal computer	Unit	Office	4	96%	542.32	$163.79	$—	$15.00	$5.00	$0.022	9.29	5.93	3

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
Office Equipment	80 Plus PC-server	Standard personal computer, server	Unit	Office	4	96%	542.32	$163.79	$—	$15.00	$10.00	$0.022	7.17	5.88	3
Office Equipment	ENERGY STAR PC	Standard personal computer	Unit	Office	4	96%	457.32	$138.12	$—	$10.00	$10.00	$0.022	6.61	6.61	3
Office Equipment	ENERGY STAR Copier	Standard copier w/o idle/off	Unit	Office	6	96%	205.40	$93.68	$—	$40.00	$25.00	$0.022	3.05	2.05	3
Office Equipment	PC network power management	No central control	Unit	Office	4	96%	99.00	$29.90	$—	$13.89	$10.00	$0.022	2.36	1.80	15
Laundry Machines	High-efficiency washer	Standard washer, electric hot water	Washer	Miscellaneous	14	96%	287.00	$296.09	$—	$195.00	$25.00	$0.022	9.16	1.46	3
Laundry Machines	High-efficiency, coin-op washer	Coin-op washer, electric hot water	Washer	Miscellaneous	8	96%	828.00	$509.13	$—	$428.35	$200.00	$0.022	2.24	1.12	3

[a] Average measure life.
[b] Net-to-Gross (NTG) percentage. Idaho Power Demand-Side Management Potential Study by Nexant, Inc. 2009.
[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[e] Incremental participant cost prior to customer incentives.
[f] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[g] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[h] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] Evergreen Consulting Group, LLC. Idaho Power Lighting Tool. 2012.
[2] Savings and participant costs calculated from Idaho Power engineering estimates and research. Participant costs include total install cost of the measure.
[3] Idaho Power Demand-Side Management Potential Study by Nexant, Inc. IPC DSM Potential - Commercial Model 081209.xlsm. 2009.
[4] Saving values identified by ADM Associates as needing further review. Will be updated in 2013.
[5] Removed from the program in 2012.
[6] RTF. ComGroceryAntiSweatHeaters_v1_0.xlsm. 2012.
[7] RTF. ComRefrigerator_v3.xlsm. Average solid and glass door. 2012.
[8] Measure not cost-effective. Will review in 2013.
[9] RTF. ComFreezer_v3.xlsm. Averaged solid and glass door. 2012.
[10] RTF. ComIceMaker_v1_1.xlsx. Average of all Energy Star ® air-cooled models producing less than 200 lbs/day.
[11] RTF. ComIceMaker_v1_1.xlsx. Average of all Energy Star ® air cooled models producing between 200-1000 lbs/day.
[12] RTF. ComGroceryDisplayECMs_v2_2.xlsm. 2012.
[13] RTF. ComGroceryFHPCSingleCompressor_v1_1.xls. 2012. Averaged the measures for condensing unit and remote condenser low and medium temperature.
[14] RTF. ComGroceryDisplayCaseLEDs_v2_2 and GroceryOpenDisplayCaseLEDs_v1.xls. Averaged the measures for less than 4 W/ln ft and 4-8.5 W/ln ft.
[15] RTF. NonResNetCompPwrMgt_v3_0.xlsm. 2011.

Irrigation Efficiency

Segment: Irrigation

2012 Program Results

Cost Inputs				Ref
Program Administration			$ 329,372	
	Menu	$ 828,508		
Program Incentives	Custom	1,215,321	2,043,829	I
Total Utility Cost			$ 2,373,201	P
Measure Equipment and Installation		Menu	$ 1,751,486	
(Incremental Participant Cost)		Custom	9,517,328	
			$ 11,268,814	M

Summary of Cost-Effectiveness Results			
Test	**Benefit**	**Cost**	**Ratio**
Utility Cost Test	$ 9,449,350	$ 2,373,201	3.98
Total Resource Cost Test	15,660,158	9,522,684	1.64
Ratepayer Impact Measure Test	9,449,350	6,324,272	1.49
Participant Cost Test	14,766,360	11,268,814	1.31

Net Benefit Inputs				Ref
Resource Savings				
2012 Annual Gross Energy (kWh) (Menu)	7,044,889			
NPV Cumulative Energy (kWh)	51,571,167	$	5,930,957	
2012 Annual Gross Energy (kWh) (Custom)	5,572,275			
NPV Cumulative Energy (kWh)	40,791,093		4,691,191	
Total Electric Savings		$	10,622,148	S
Participant Bill Savings				
NPV Cumulative Participant Savings	Menu	$	2,479,920	
	Custom		1,961,535	
Total Participant Bill Savings			4,441,455	B
Other Benefits				
Non-Energy Benefits	Menu	$	2,018,283	
	Custom		6,262,793	
Total Non-Energy Benefits			8,281,077	NEB

Benefits and Costs Included in Each Test		
Utility Cost Test	= Menu S + (Custom S * NTG)	= P
Total Resource Cost Test	= Menu S + (Custom S * NTG) + (NEB * NTG)	= P + (Menu M - I) + ((Custom M - I) * NTG)
Ratepayer Impact Measure Test	= Menu S + (Custom S * NTG)	= P + Menu B + (Custom B * NTG)
Participant Cost Test	= B + I + NEB	= M

Assumptions for Levelized Calculations	
Discount Rate	
Nominal (Weighted Average Cost of Capital [WACC]	7.00%
Real ((1 + WACC) / (1 + Escalation)) - 1	3.88%
Escalation Rate	3.00%
Net-to-Gross (NTG)—Custom option only and NEB	75.00%
Average 2012 Customer Segment Rate/kWh	$0.051
Line Losses	10.90%

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

Green Rewind initiative is available to agricultural, commercial, and industrial customers for motors between 25 to 5,000 hp. Agricultural motor rewinds are paid under Irrigation Efficiency. Did not pay any incentives for motors greater than 600 hp in 2012.

No NTG. Deemed savings from the Regional Technical Forum (RTF) already accounts for net realized energy savings.

Non-energy benefits based on Idaho Power engineering estimates of annual yield benefit and labor, maintenance, and water savings for Custom and Menu projects.

Year: 2012 **Program**: Irrigation Efficiency Rewards **Market Segment**: Irrigation **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name[a]	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[b]	NTG[c]	Annual Gross Energy Savings (kWh/yr)[d]	NPV Avoided Costs[e]	Non-Energy Benefit	Gross Incremental Participant Cost[f]	Incentive/ Unit	Admin Cost ($/kWh)[g]	UC Ratio[h]	TRC Ratio[i]	Source
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	Irrigation	4	100%	30.00	$12.10	$—	$6.56	$1.50	$0.026	5.31	1.65	1
Nozzle Replacement	New nozzles replacing existing worn nozzles of same flow rate or less	Worn nozzle of same flow rate or less	Unit	Irrigation	4.5	100%	39.00	$15.73	$—	$1.85	$0.25	$0.026	12.44	5.50	1
Sprinklers	Rebuilt or new brass impact sprinklers		Unit	Irrigation	5	100%	30.00	$15.13	$—	$14.27	$2.75	$0.026	4.29	1.00	1
Levelers	Rebuilt or new wheel line levelers		Unit	Irrigation	5	100%	2.00	$1.01	$—	$3.76	$0.75	$0.026	1.26	0.26	1, 2
Levelers	Rebuilt wheel line levelers		Unit	Irrigation	5	100%	2.00	$1.01	$—	$0.93	$0.75	$0.026	1.26	1.03	1, 3
Sprinklers	New rotating-type sprinklers or low-pressure pivot sprinkler heads with the same flow rate or less	Worn sprinkler with the same flow rate or less	Unit	Irrigation	5	100%	28.00	$14.12	$—	$13.75	$2.75	$0.026	4.06	0.98	1, 4
Regulator Replacement	New low pressure regulators		Unit	Irrigation	5	100%	38.00	$19.16	$—	$7.10	$5.00	$0.026	3.20	2.37	1
Gasket Replacement	New drains, risercaps, and gaskets for hand lines, wheel lines or portable mainline		Unit	Irrigation	5	100%	24.00	$12.10	$—	$10.18	$1.00	$0.026	7.45	1.12	1
Hub Replacement	New wheel line hubs		Unit	Irrigation	10	100%	69.00	$66.72	$—	$57.89	$12.00	$0.026	4.84	1.12	1
New Goose Necks	New goose neck with drop tube or boomback		Outlet	Irrigation	10	100%	14.00	$13.54	$—	$12.35	$1.00	$0.026	9.92	1.06	1
Pipe Repair	Cut and pipe press or weld repair of leaking hand lines, wheel lines, and portable mainline		Joint	Irrigation	8	100%	48.00	$37.93	$—	$20.84	$8.00	$0.026	4.10	1.72	1
Gasket Replacement	New center pivot base boot gasket		Unit	Irrigation	8	100%	1,282.00	$1,013.02	$—	$289.43	$125.00	$0.026	6.40	3.14	1

[a] Available measures in the Irrigation Efficiency Menu Incentive Option. For the Custom Incentive Option, projects are thoroughly reviewed by Idaho Power staff.

[b] Average measure life.

[c] No Net-to-Gross (NTG) percentage. Deemed savings from the RTF includes realization rate.
[d] Estimated kWh savings measured at the customer's meter, excluding line losses.
[e] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[f] Incremental participant cost prior to customer incentives.
[g] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[h] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[i] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. IrrgAgSprinklerNozzleFY10v2_1.xls. Western Idaho. 2010.
[2] Measure not cost-effective. Measure updated in 2012 to remove new wheel line levelers.
[3] Average costs from customer applications.
[4] Measure not cost-effective. Will be reviewed in 2013.

Year: 2012 **Program**: Irrigation Efficiency Rewards **Market Segment**: Irrigation **Program Type**: Energy Efficiency

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
Green Motors Program Rewind: Motor size 25 hp	Green Motors Program Rewind: Motor size 25 hp	Standard rewind practice	Motor	Irrigation	20	80%	237.00	$401.77	$—	$204.14	$50.00	$0.050	5.20	1.74	1
Green Motors Program Rewind: Motor size 30 hp	Green Motors Program Rewind: Motor size 30 hp	Standard rewind practice	Motor	Irrigation	20	80%	254.00	$430.59	$—	$224.21	$60.00	$0.050	4.74	1.69	1
Green Motors Program Rewind: Motor size 40 hp	Green Motors Program Rewind: Motor size 40 hp	Standard rewind practice	Motor	Irrigation	20	80%	297.00	$503.48	$—	$273.99	$80.00	$0.050	4.25	1.61	1
Green Motors Program Rewind: Motor size 50 hp	Green Motors Program Rewind: Motor size 50 hp	Standard rewind practice	Motor	Irrigation	20	80%	322.00	$545.86	$—	$303.32	$100.00	$0.050	3.76	1.57	1
Green Motors Program Rewind: Motor size 60 hp	Green Motors Program Rewind: Motor size 60 hp	Standard rewind practice	Motor	Irrigation	20	80%	328.00	$556.04	$—	$357.73	$120.00	$0.050	3.26	1.36	1
Green Motors Program Rewind: Motor size 70 hp	Green Motors Program Rewind: Motor size 70 hp	Standard rewind practice	Motor	Irrigation	20	80%	341.00	$578.07	$—	$386.67	$150.00	$0.050	2.77	1.30	1
Green Motors Program Rewind: Motor size 100 hp	Green Motors Program Rewind: Motor size 100 hp	Standard rewind practice	Motor	Irrigation	20	80%	585.00	$991.71	$—	$479.67	$200.00	$0.050	3.46	1.75	1
Green Motors Program Rewind: Motor size 125 hp	Green Motors Program Rewind: Motor size 125 hp	Standard rewind practice	Motor	Irrigation	20	80%	727.00	$1,232.43	$—	$538.71	$250.00	$0.050	3.44	1.91	1
Green Motors Program Rewind: Motor size 150 hp	Green Motors Program Rewind: Motor size 150 hp	Standard rewind practice	Motor	Irrigation	20	80%	867.00	$1,469.76	$—	$600.07	$300.00	$0.050	3.42	2.02	1
Green Motors Program Rewind: Motor size 200 hp	Green Motors Program Rewind: Motor size 200 hp	Standard rewind practice	Motor	Irrigation	20	80%	1,149.00	$1,947.82	$—	$722.40	$400.00	$0.050	3.41	2.18	1
Green Motors Program Rewind: Motor size 250 hp	Green Motors Program Rewind: Motor size 250 hp	Standard rewind practice	Motor	Irrigation	20	80%	1,434.00	$2,430.96	$—	$928.48	$500.00	$0.050	3.40	2.13	1
Green Motors Program Rewind: Motor size 300 hp	Green Motors Program Rewind: Motor size 300 hp	Standard rewind practice	Motor	Irrigation	20	80%	1,718.00	$2,912.41	$—	$938.51	$600.00	$0.050	3.40	2.44	1
Green Motors Program Rewind: Motor size 350 hp	Green Motors Program Rewind: Motor size 350 hp	Standard rewind practice	Motor	Irrigation	20	80%	2,005.00	$3,398.94	$—	$983.66	$700.00	$0.050	3.40	2.65	1
Green Motors Program Rewind: Motor size 400 hp	Green Motors Program Rewind: Motor size 400 hp	Standard rewind practice	Motor	Irrigation	20	80%	2,285.00	$3,873.60	$—	$1,098.66	$800.00	$0.050	3.39	2.69	1

							Benefit			Cost			Benefit/Cost Tests		
Measure Name	Measure Description	Replacing	Measure Unit	End Use	Measure Life (yrs)[a]	NTG[b]	Annual Gross Energy Savings (kWh/yr)[c]	NPV Avoided Costs[d]	Non-Energy Benefit	Gross Incremental Participant Cost[e]	Incentive/ Unit	Admin Cost ($/kWh)[f]	UC Ratio[g]	TRC Ratio[h]	Source
Green Motors Program Rewind: Motor size 450 hp	Green Motors Program Rewind: Motor size 450 hp	Standard rewind practice	Motor	Irrigation	20	80%	2,563.00	$4,344.87	$—	$1,200.92	$900.00	$0.050	3.38	2.74	1
Green Motors Program Rewind: Motor size 500 hp	Green Motors Program Rewind: Motor size 500 hp	Standard rewind practice	Motor	Irrigation	20	80%	2,848.00	$4,828.02	$—	$1,297.40	$1,000.00	$0.050	3.38	2.80	1
Green Motors Program Rewind: Motor size 600 hp	Green Motors Program Rewind: Motor size 600 hp	Standard rewind practice	Motor	Irrigation	20	80%	3,418.00	$5,794.30	$—	$1,911.88	$1,200.00	$0.050	3.38	2.39	1

[a] Average measure life.
[b] Net-to-Gross (NTG) percentage. Idaho Power Demand-Side Management Potential Study by Nexant, Inc. 2009.
[c] Estimated kWh savings measured at the customer's meter, excluding line losses.
[d] Sum of net present value (NPV) of avoided costs. Based on end-use load shape; measure life; and savings, including line losses and alternative costs by pricing period as provided in the 2011 IRP.
[e] Incremental participant cost prior to customer incentives.
[f] Average program administration and overhead costs to achieve each kWh of savings. Calculated from 2012 actuals.
[g] Utility Cost Ratio = (NPV Avoided Costs * NTG)/((Admin Cost/kWh * kWh Savings) + Incentives).
[h] Total Resource Cost Ratio = ((NPV Avoided Costs + NEB) * NTG) / ((Admin Cost/kWh * kWh Savings) + Incentives + ((Incremental Participant Cost - Incentives) * NTG))
[1] RTF. AgMotorsRewind_v1_3.xlsm. 2012.

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