Idaho 2017 DSM Annual Conservation Report & Cost-Effectiveness Analysis

June 29, 2018

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Appendices:

1 Executive Summary

The 2017 Demand-Side Management (DSM) Annual Report summarizes Avista Utilities' (Avista) annual energy efficiency achievements for its Idaho electric and natural gas customers. These programs are intended to deliver all cost-effective conservation with the funding provided through Avista's Schedules 91 and 191, also known as the "Tariff Rider" which is a system benefit charge applied to all electric and natural gas retail sales.

Avista's 2017 target as reported in the 2017 Integrated Resource Plan (IRP) is 11,186 MWh. In 2017, Avista acquired 42,373 MWh (gross verified savings) in Idaho, or 379% of its target. Primary drivers for electric savings included the nonresidential Prescriptive Lighting and Site Specific projects. Residential HVAC, residential fuel efficiency, residential lighting efforts and small business projects also contributed a fair amount to the overall savings contribution. In 2017, Avista's Idaho natural gas efficiency portfolio delivered 305,508 therms in savings (gross verified savings), achieving 155% of the Company's 2017 natural gas target of 197,640 therms as noted in the 2017 IRP. Primary drivers for the natural gas savings include residential prescriptive HVAC and water heat measures, small business projects, and nonresidential prescriptive measures.

In 2017, over $1.4 million in rebates were provided directly to Idaho residential customers to offset the cost of implementing these energy efficiency measures. All programs within the residential portfolio contributed over 5,300 MWh and over 232,000 therms to the annual energy savings. In addition, more than 1,500 prescriptive and site specific nonresidential projects were incented. Additionally, the Small Business program installed over 23,000 individual measures. Avista's tariff riders funded more than $6.8 million for energy efficiency incentives in nonresidential and small business applications. Nonresidential programs realized over 36,500 MWh and over 71,000 therms in annual first-year energy savings. A summary of acquired savings in 2017 by sector is provided for both fuels in Tables ES-1 and ES-2 below.

Table ES-1: 2017 Idaho Electric Energy Savings (Gross Verified)

Segment	kWh
Residential	5,306,098
Low Income	380,170
Nonresidential	36,536,737
Subtotal	**42,223,004**
Distribution	150,000
Total	**42,373,004**

Table ES-2: 2017 Idaho Natural Gas Savings (Gross Verified)

Segment	Therms
Residential	232,899
Low Income	1,427
Nonresidential	71,182
Total	**305,508**

The above mentioned acquisition has been delivered through local energy efficiency programs managed by the utility or third-party contractors. Avista also funds a regional market transformation effort through the Northwest Energy Efficiency Alliance (NEEA), however, reported electric energy savings, cost-effectiveness and other related information is specific to local programs unless otherwise noted. The savings indicated above are gross verified savings based on the evaluation of the programs.

1.1 Cost-Effectiveness

Avista judges the effectiveness of the energy efficiency portfolio based upon a number of metrics. Two of the most commonly applied metrics are the UCT (utility cost test)[1] and the TRC (total resource cost). The UCT is a benefit-to-cost test from the utility perspective including incentives and excluding net costs and non-energy benefits of participants related to energy efficiency services. The TRC test is a benefit-to-cost test from the customer perspective including all measure costs and non-energy benefits and excluding incentives. Both tests provide insight as to the net value to all customers.

Benefit-to-cost ratios in excess of 1.00 indicate that the benefits exceed the costs. In 2017, electric and natural gas gross TRC was 2.69 and 0.62, respectively. Electric and natural gas UCT test benefit-cost ratios were 4.33 and 2.35, respectively. Tables ES-3 and ES-4 present the UCT cost-effectiveness results for the electric and gas portfolios.

[1] Also known as the PAC (program administrator cost) test.

Table ES-3: 2017 ID Electric Utility Cost Test (UCT) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$40,339,290	$397,077	$40,736,366
Natural Gas Avoided Costs	-$688,086	-$71,546	-$759,633
UCT Benefits	$39,651,203	$325,530	$39,976,734
Non-Incentive Utility Costs	$963,894	$64,871	$1,028,765
Incentive Costs	$7,665,243	$544,709	$8,209,952
UCT Costs	$8,629,137	$609,580	$9,238,716
UCT Ratio	4.60	0.53	4.33
Net UCT Benefits	$31,022,067	-$284,049	$30,738,017

Table ES-4: 2017 ID Natural Gas Utility Cost Test (UCT) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Natural Gas Avoided Costs	$2,094,132	$11,111	$2,105,243
Electric Avoided Costs	$0	$0	$0
UCT Benefits	$2,094,132	$11,111	$2,105,243
Non-Incentive Utility Costs	$130,451	$4,222	$134,673
Incentive Costs	$608,137	$154,920	$763,057
UCT Costs	$738,587	$159,142	$897,729
UCT Ratio	2.84	0.07	2.35
Net UCT Benefits	$1,355,545	-$148,031	$1,207,514

1.2 Tariff Rider Balances

Beginning in 2017, the Idaho electric tariff rider balances were underfunded by $ 5.9 million. During 2017, $7.3 million in tariff rider revenue was collected to fund electric energy efficiency while $11.0 million was expended to operate energy efficiency programs. The $3.6 million

under-collection of tariff rider funding resulted in a year-end underfunded balance of $9.6 million. The primary driver for the underfunded balance was the unanticipated high participation in the nonresidential lighting program in 2017. On September 29th, 2017, the Idaho Commission approved the Company's application to increase its Energy Efficiency Rider's funds to recover those costs over 36 months. That application was approved and made effective October 1, 2017[2].

The Idaho gas tariff rider balance was underfunded by $76,913 as of the start of 2017. During 2017, $1.4 million in tariff rider revenue was collected to fund natural gas energy efficiency while $1.1 million was expended to operate natural gas energy efficiency programs, resulting in an ending balance of $180,889 (overfunded).

1.3 Third-Party Evaluation

Nexant, Inc., in partnership with Research Into Action, (the evaluation team) was retained as the Company's external evaluator to independently measure and verify the portfolio energy savings for the 2016-2017 biennium period. The energy efficiency savings and associated cost-effectiveness results presented in this 2017 Annual Report are based on the evaluation findings and are presented as gross verified savings.

The impact and process evaluation reports can be found in the Appendix.

1.4 2017 Program Highlights, Challenges and Changes

Avista practices active management and continuous process improvement when delivering energy efficiency programs. Through the evaluation team's on-going evaluation activities and through internal active management, Avista recognizes program successes and challenges throughout the year and practices continuous process improvement to strive for the delivery of successful and cost-effective energy efficiency programs. Some of Avista's 2017 program highlights as well as some challenges are described below.

- Hard to Reach Markets: A highlight for 2017 is Avista's participation in the Small-Medium Business Program that started in mid-2015 with an initial contract period of 2 years with SBW Consulting. This program was well received by our hard to reach small business customers and the contract was extended to the end of 2017 which resulted in a successful year. As the program was coming to a close, Avista chose to leverage the industry knowledge and capabilities of its existing conservation vendor, SBW by hiring them to perform the Company's Multifamily Direct Install Pilot Program. This pilot

[2] Case No. AVU-E-17-06, Order No. 33897.

program is designed to target a hard-to-reach segment of rental customers living in complexes of 4 or more units. Traditionally, this demographic has been identified as underserved in Avista's region and the efforts of SBW help to serve these customers.

- Lighting Programs: The Company's Residential and Non-Residential Lighting Programs experienced an unprecedented level of conservation achievement throughout the year. The Company's lighting offerings maintained a high level of cost effectiveness while providing customers with access to affordable LED lighting. As the market transforms, the Company adapts its offerings, incentives, and savings values. During 2017, the Company discontinued incentives for CFL product buy-downs to align with the current market conditions and transitioned its efforts to LED lamps and fixtures only.
- Residential Prescriptive: Fuel Conversions and Lighting programs accounted for the majority of rebate requests. Fuel conversions continue to drive the residential rebates program and Avista attributes some of the growth to partnering with our local HVAC contractors to better market the savings to the customer. This effort materialized through the integration of a preferred HVAC contractor list that would be provided on the website to customers that expressed an interest in fuel conversions or furnace efficiency upgrades.
- Home Energy Reports: The OPower/Oracle Home Energy Report program ended in 2017 with the last report sent in December of that year. Avista's Home Energy Report has been a successful avenue to achieve conservation for our customers. As the report program comes to an end, Avista looks to incorporate new behavior programs by leveraging new technologies such as Advanced Metering Infrastructure (AMI) and an alternative customer energy use comparison system.
- Low-Income Measures: The Company is pleased that, through work with our advisory group, it was successful in identifying and adding new measures for Washington and Idaho customers in 2017. By working with our advocates and advisors, the Company saw a substantial increase in the number of Approved Measures available for the 2017 program year. While it is understood that cost-effective energy efficiency programs are a main requirement, the ability to serve the low income customer cost effectively is a constant challenge. Avista has taken steps to pay for the value of the energy saved which in some cases becomes an amount that is not meaningful to the agency to install.

Continuing the integrated resource planning and conservation potential assessment processes, Avista reviews existing and potential programs as part of the DSM business planning process. In 2017, through adaptive management, programs were modified to reflect updated savings and cost information that affected incentive levels.

In 2017, the Company began implementation of iEnergy/DSM Central which is an enterprise DSM software intended to manage data across multiple internal software programs and allow

the DSM team to utilize the information in one place. This software will also be a benefit to external stakeholders including regulators, advisors, and trade allies. The Company is on pace to functionalize the software in 2018 with the bulk of its programs managed in the program by 2020.

Though the nature of this report is to look backwards on the performance of the previous year, successes and lessons from this process are applied during the forward-looking business planning process to inform and improve program design, including program modification and termination where necessary. Avista remains committed to continuing to deliver responsible and cost-effective energy efficiency programs to our customers.

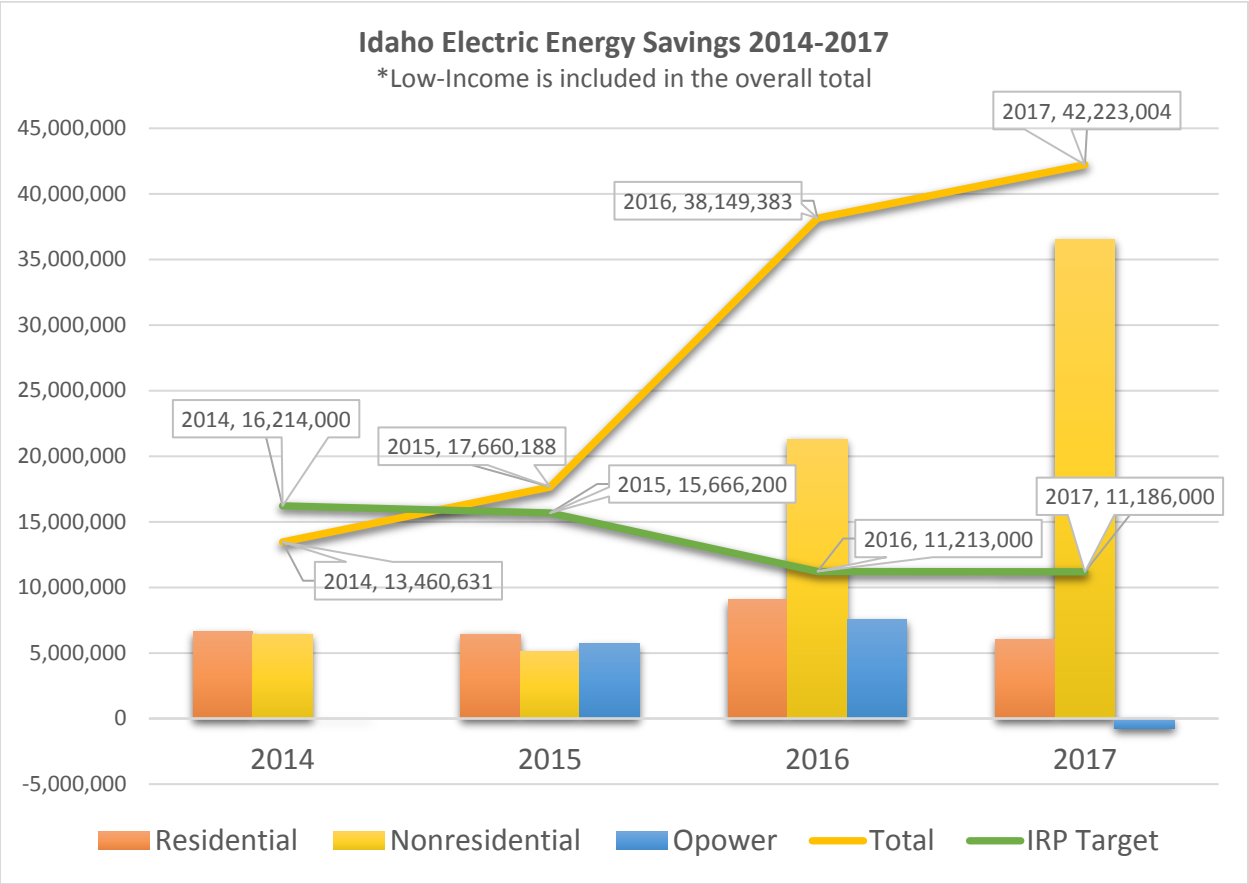
1.5 2017 Portfolio Trends

Avista experienced increased savings in 2017 compared to its previous years and much of the change is attributed to the increasing popularity of LED lighting, TLED lighting and Fuel Conversions. Avista's 42,223,004 kWh of energy savings from 2017 is slightly higher than its 2016 acquisition of 38,149,383 kWh[3]. Nonresidential programs increased their conservation acquisition from 21,305,147 kWh in 2016 to 36,536,737 kWh in 2017, a 71% increase. Savings acquired through the Company's residential program decreased from 9,071,745 kWh in 2016 to 6,045,191 kWh in 2017[4], a 33% decrease.

[3] Gross verified savings from the 2016-2017 Idaho Electric Impact Evaluation Report. All 2016 values contained within this report are verified gross savings and will not match the values in the 2016 Annual Report (which are adjusted reported gross) unless otherwise noted.

[4] Amounts exclude the Opower/Oracle Home Energy Reports. (5,306,098 kWh less -739,094 impact of Opower = 6,045,191 kWh)

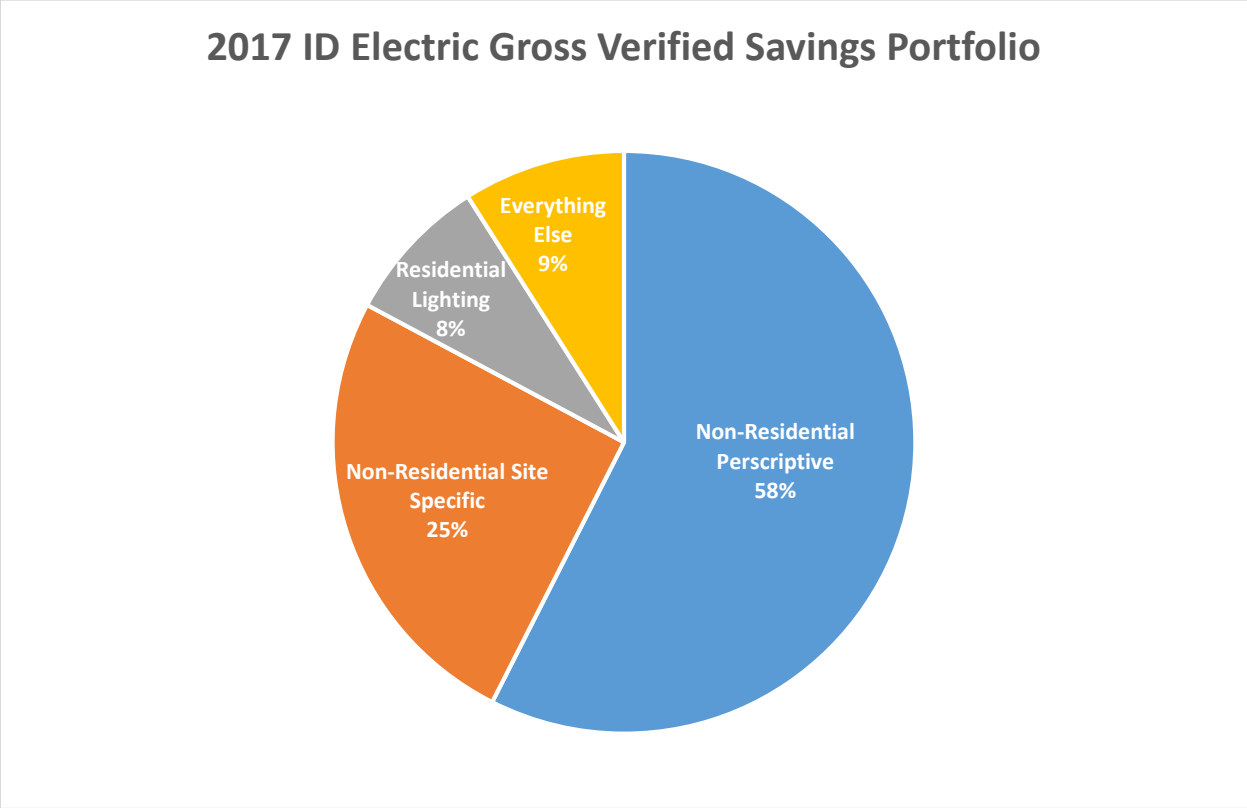
Figure ES-1: Idaho Electric Energy Savings 2014-2017[5]



Of Avista's overall Electric savings portfolio, Non-Residential Prescriptive programs produced 58% of the overall savings, while Non-Residential Site Specific programs accounted for 25% of the overall savings. Residential Lighting, which achieved slightly more savings than in 2016, accounted for 8% of the overall savings. See Figure ES-2 for an illustration of these metrics.

[5] Savings numbers for 2014 are unverified gross while 2015-2017 are verified gross savings.

Figure ES-2: 2017 Idaho Electric Savings Portfolio



2 Cost-Effectiveness

The 2017 Demand-Side Management (DSM) Annual Report summarizes the Company's annual energy efficiency achievements of its DSM programs.

Cost-effectiveness was reviewed using four of the five California Standard Practice Tests including the Utility Cost Test (UCT)[6], Total Resource Cost (TRC), Participant Cost Test (PCT), and Rate Impact Measure (RIM) tests. For this annual report, cost-effectiveness of DSM programs is based on unverified adjusted gross savings using methods consistent with those laid out in the California Standard Practice Manual for Economic Analysis of Demand-Side Programs and Projects as modified by the Council. Table 2-1 summarizes the allocation of cost-effectiveness components as a cost or benefit to each cost-effectiveness test.

Table 2-1: Cost-Effectiveness Component Inputs

Component	Utility Cost Test (UCT)	Total Resource Cost (TRC)	Participant Cost Test (PCT)	Rate Impact Measure (RIM)
Utility Energy & Capacity Avoided Costs	**Benefit**	**Benefit**		**Benefit**
Non-Utility Energy & Capacity Energy Costs		**Benefit**	**Benefit**	
Non-Energy Benefit Impacts		**Benefit**	**Benefit**	
Incremental Equipment and Installation Costs		Cost	Cost	
Program Non-incentive (admin) Costs	Cost	Cost		Cost
Incentive Payments	Cost		**Benefit**	Cost

The cost-effectiveness calculations only include non-energy benefits where the values are reasonably defensible and quantifiable for a limited number of measures, including water savings, equipment replacement and operation and maintenance benefits. The calculations also include health and human safety non-energy benefits (dollar for dollar) for the low-income programs. Non-energy benefits that are not included, because they are not easily quantifiable, include benefits for arrearage, health/safety/comfort, system reliability, and site specific air emissions to name a few.

[6] Also known as the PAC (program administrator cost) test.

Low-Income conservation items have been separately identified from the Regular Income portfolio in the following tables. For those items, the costs associated with low-income also Includes amounts funded to the Community Action Partnership (CAP) agencies.

Cost effectiveness results within this report are based on adjusted reported savings. Energy savings reported by Avista's implementation team (both external and internal to Avista) were reviewed by the Company's external evaluator and adjusted for any major discrepancies in reporting. The savings estimates, and therefore the cost effectiveness results, represent gross energy acquisition.

The "Residual TRC" is used to denote the difference between TRC benefits and costs. The term "Residual" is used in lieu of the term "Net" as not to be confused with TRC benefits and costs where Net to Gross adjustments have been applied.

Avoided costs used for the cost-effectiveness valuation of the 2017 electric and natural gas programs are the avoided costs from the most recently filed electric and natural gas IRPs.

In summary, electric and natural gas UCT benefit-cost ratios are 4.33 and 2.35, respectively. Electric and natural gas gross TRC is 2.69 and 0.62, respectively. Table 2-2 through Table 2-13 illustrate electric, natural gas, and combined fuel cost-effectiveness, respectively. Regular income includes all programs offered in the residential and nonresidential sectors (not including NEEA) and low-income includes all programs offered in the low-income sector.

2.1 Electric Cost Effectiveness Results

Table 2-2: 2017 ID Electric Utility Cost Test (UCT) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$40,339,290	$397,077	$40,736,366
Natural Gas Avoided Costs	-$688,086	-$71,546	-$759,633
UCT Benefits	$39,651,203	$325,530	$39,976,734
Non-Incentive Utility Costs	$963,894	$64,871	$1,028,765
Incentive Costs	$7,665,243	$544,709	$8,209,952
UCT Costs	$8,629,137	$609,580	$9,238,716
UCT Ratio	4.60	0.53	4.33
Net UCT Benefits	$31,022,067	-$284,049	$30,738,017

Table 2-3: 2017 ID Electric Total Resource Cost (TRC) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$40,339,290	$397,077	$40,736,366
Natural Gas Avoided Costs	-$688,086	-$71,546	-$759,633
Non-Energy Benefits	$9,896	$134,596	$144,492
TRC Benefits	$39,661,100	$460,126	$40,121,226
Non-Incentive Utility Costs	$963,894	$64,871	$1,028,765
Customer Costs	$13,384,660	$491,969	$13,876,629
TRC Costs	$14,348,554	$556,840	$14,905,393
TRC Ratio	2.76	0.83	2.69
Residual TRC Benefits	$25,312,546	-$96,714	$25,215,832

Table 2-4: 2017 ID Electric Participant Cost (PCT) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Bill Reduction	$51,112,158	$503,361	$51,615,518
Gas Bill Reduction	-$48,418	-$4,027	-$52,444
Non-Energy Benefits	$9,896	$134,596	$144,492
Participant Benefits	$51,073,637	$633,929	$51,707,566
Customer Costs	$13,384,660	$491,969	$13,876,629
Incentive Received	-$7,665,243	-$544,709	-$8,209,952
Participant Costs	$5,719,417	-$52,740	$5,666,677
Participant Ratio	8.93	N/A	9.12
Net Participant Benefits	$45,354,220	$686,669	$46,040,889

Table 2-5: 2017 ID Electric Rate Impact Measure (RIM) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Cost Savings	$40,339,290	$397,077	$40,736,366
Non-Participant Benefits	$40,339,290	$397,077	$40,736,366
Electric Revenue Loss	$51,112,158	$503,361	$51,615,518
Non-Incentive Utility Costs	$963,894	$64,871	$1,028,765
Customer Incentives	$7,665,243	$544,709	$8,209,952
Non-Participant Costs	$59,741,294	$1,112,940	$60,854,235
RIM Ratio	0.68	0.36	0.67
Net RIM Benefits	-$19,402,005	-$715,864	-$20,117,868

2.3 Natural Gas Cost Effectiveness Results

Table 2-6: 2017 ID Natural Gas Utility Cost Test (UCT) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Natural Gas Avoided Costs	$2,094,132	$11,111	$2,105,243
Electric Avoided Costs	$0	$0	$0
UCT Benefits	$2,094,132	$11,111	$2,105,243
Non-Incentive Utility Costs	$130,451	$4,222	$134,673
Incentive Costs	$608,137	$154,920	$763,057
UCT Costs	$738,587	$159,142	$897,729
UCT Ratio	2.84	0.07	2.35
Net UCT Benefits	$1,355,545	-$148,031	$1,207,514

Table 2-7: 2017 ID Natural Gas Total Resource Cost (TRC) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Natural Gas Avoided Costs	$2,094,132	$11,111	$2,105,243
Electric Avoided Costs	$0	$0	$0
Non-Energy Benefits	-$347	$91,491	$91,144
TRC Benefits	$2,093,785	$102,602	$2,196,387
Non-Incentive Utility Costs	$130,451	$4,222	$134,673
Customer Costs	$3,282,758	$136,439	$3,419,197
TRC Costs	$3,413,208	$140,661	$3,553,869
TRC Ratio	0.61	0.73	0.62
Residual TRC Benefits	-$1,319,424	-$38,059	-$1,357,482

Table 2-8: 2017 ID Natural Gas Participant Cost (PCT) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Gas Bill Reduction	$4,204,157	$23,069	$4,227,226
Electric Bill Reduction	$0	$0	$0
Non-Energy Benefits	-$347	$91,491	$91,144
Participant Benefits	$4,203,810	$114,560	$4,318,369
Customer Costs	$3,282,758	$136,439	$3,419,197
Incentive Received	-$608,137	-$154,920	-$763,057
Participant Costs	$2,674,621	-$18,481	$2,656,140
Participant Ratio	1.57	N/A	1.63
Net Participant Benefits	$1,529,188	$133,041	$1,662,230

Table 2-9: 2017 ID Natural Gas Rate Impact Measure (RIM) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Gas Avoided Cost Savings	$2,094,132	$11,111	$2,105,243
Non-Participant Benefits	$2,094,132	$11,111	$2,105,243
Gas Revenue Loss	$4,204,157	$23,069	$4,227,226
Non-Incentive Utility Costs	$130,451	$4,222	$134,673
Customer Incentives	$608,137	$154,920	$763,057
Non-Participant Costs	$4,942,744	$182,211	$5,124,955
RIM Ratio	0.42	0.06	0.41
Net RIM Benefits	-$2,848,612	-$171,100	-$3,019,712

2.4 Combined Fuel Cost Effectiveness Results

Table 2-10: 2017 ID Combined Fuel Utility Cost Test (UCT) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$40,339,290	$397,077	$40,736,366
Natural Gas Avoided Costs	$1,406,046	-$60,435	$1,345,611
UCT Benefits	$41,745,336	$336,641	$42,081,977
Non-Incentive Utility Costs	$1,094,344	$69,093	$1,163,437
Incentive Costs	$8,273,379	$699,629	$8,973,008
UCT Costs	$9,367,724	$768,722	$10,136,446
UCT Ratio	4.46	0.44	4.15
Net UCT Benefits	$32,377,612	-$432,081	$31,945,531

Table 2-11: 2017 ID Combined Fuel Total Resource Cost (TRC) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$40,339,290	$397,077	$40,736,366
Natural Gas Avoided Costs	$1,406,046	-$60,435	$1,345,611
Non-Energy Benefits	$9,549	$226,087	$235,636
TRC Benefits	$41,754,885	$562,728	$42,317,613
Non-Incentive Utility Costs	$1,094,344	$69,093	$1,163,437
Customer Costs	$16,667,418	$628,408	$17,295,825
TRC Costs	$17,761,762	$697,501	$18,459,263
TRC Ratio	2.35	0.81	2.29
Residual TRC Benefits	$23,993,123	-$134,772	$23,858,350

Table 2-12: 2017 ID Combined Fuel Participant Cost (PCT) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Bill Reduction	$51,112,158	$503,361	$51,615,518
Gas Bill Reduction	-$48,418	-$4,027	-$52,444
Non-Energy Benefits	$9,549	$226,087	$235,636
Participant Benefits	$55,277,446	$748,489	$56,025,935
Customer Costs	$16,667,418	$628,408	$17,295,825
Incentive Received	-$8,273,379	-$699,629	-$8,973,008
Participant Costs	$8,394,038	-$71,221	$8,322,817
Participant Ratio	6.59	N/A	6.73
Net Participant Benefits	$46,883,408	$819,710	$47,703,119

Table 2-13: 2017 ID Combined Fuel Rate Impact Measure (RIM) (Gross)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Cost Savings	$42,433,422	$408,188	$42,841,610
Non-Participant Benefits	$42,433,422	$408,188	$42,841,610
Electric Revenue Loss	$55,316,315	$526,429	$55,842,744
Non-Incentive Utility Costs	$1,094,344	$69,093	$1,163,437
Customer Incentives	$8,273,379	$699,629	$8,973,008
Non-Participant Costs	$64,684,039	$1,295,151	$65,979,190
RIM Ratio	0.66	0.32	0.65
Net RIM Benefits	-$22,250,617	-$886,963	-$23,137,580

3 Programs

3.1 Residential

The Company's residential portfolio is composed of several approaches to engage and encourage customers to consider energy efficiency improvements within their home. Prescriptive rebate programs are the main component of the portfolio, but are augmented by a variety of other interventions. These include: upstream buy-down of low-cost lighting and water saving measures, select distribution of low-cost lighting and weatherization materials, direct-install programs and a multi-faceted, multichannel outreach and customer engagement effort.

Nearly $1.5 million in rebates were provided directly to Idaho residential customers to offset the cost of implementing these energy efficiency measures. All programs within the residential portfolio contributed over 5,300 MWh and over 230,000 therms to the 2017 annual energy savings.

3.1.1 Program Changes

Program changes made at the beginning of 2017 to the residential programs include the addition of new program offerings, discontinuation of programs, and changes to eligibility or incentive levels. Avista communicates program changes once the Annual Conservation Plan is finalized and those changes become effective at the beginning of the year. In addition, some program changes are made throughout the year as necessary but these are less typical.

For nonresidential programs, rebates were updated to reflect business planning analysis to include inputs such as new unit energy savings (UES) and cost values. Changes were effective January 1, 2017 and Avista accepted rebate applications through March 31, 2017 for 2016 measures and amounts. This 90-day grace period is designed to allow for a smooth transition when incentive levels change. This provides a timely and balanced approach that gives adequate time for customers close out their "in process" projects in a fair and non-disruptive way.

The following outlines additions, adjustments and discontinuations of residential programs and incentive levels that took place during the 2017 program year.

3.1.1.1 Residential Program Discontinuations

The following measures and/or programs were discontinued from the residential portfolio:

- Effective August 1, 2017 we no longer pay on CFL product buy-downs through the Simple Steps (CLEAResult) Program. We moved to only paying on LED lamps and fixtures.

3.1.1.2 Residential Program Adjustments

Existing rebate amounts were increased, and savings values adjusted for the following measures:

- Effective October 1, 2017 the Table of Eligible Measures and Annual Generator Busbar Savings and the Product Incentive Ranges were amended in our CLEAResult contract.

The remaining sub-sections outline each residential program offered in 2017 and the verified participation, incentives, and energy savings, among other program achievements.

3.1.2 HVAC Program

Electric customers with electric home heat are eligible for a rebate for the installation of a variable speed motor on their forced air heating equipment ($100 rebate), or a conversion of electric straight resistance space heat to an air source heat pump ($900 rebate). Natural gas customers are eligible for a rebate for the installation of a high efficiency furnace or boiler ($300). Both electric and natural gas customers are also eligible for the installation of a smart thermostat. See Table 3-1 and Table 3-2 for 2017 first-year program participation, incentives received, and savings achieved.

3.1.3 Water Heat Program

The Water Heat Program offers a $180 incentive for a high efficiency natural gas tankless water heater, $200 incentive for heat pump water heaters, $7 buydown for Simple Steps, Smart Savings showerheads and $35 buydown for Simple Steps, Smart Savings clothes washers (reflected in point of purchase price). See Table 3-3 and Table 3-4 for 2017 first-year program participation, incentives received, and savings achieved.

3.1.4 ENERGY STAR HOMES

Avista customers with a certified ENERGY STAR Home or ENERGY STAR / ECORated Manufactured Home are eligible for a $1,000 or $800 rebate, respectively. Eligible homes must be all electric to qualify for these rebate levels. Alternatively, customers who subscribe to Avista electric service for lighting and appliances and natural gas service for space and water heating are eligible for a program rebate of $650 regardless of construction type. See Table 3-5 and Table 3-6 for 2017 first-year program participation, incentives received, and savings achieved.

3.1.5 Fuel Efficiency

The Fuel Efficiency Program offers incentives for converting existing straight resistance electric space heat to a natural gas furnace ($1,500 rebate); and/or converting their existing electric water heater to a natural gas water heater ($750 rebate). Homes that implement both the furnace and water heat conversions receive a $2,250 rebate. The program also offers an incentive for the conversion of electric to natural wall heaters ($1,300 rebate). See Table 3-7 for 2017 first-year program participation, incentives received, and savings achieved.

3.1.6 Residential Lighting

Avista continues to participate in the regional manufacturer buy-down of energy efficient lighting, through Northwest Energy Efficiency Alliance (NEEA), its contactors and self-directed giveaways. The bulbs resulted in 3,452 MWh in annual first-year savings during 2017 (see Table 3-6). The Company contributed over $169,000 in incentives toward this buy-down effort with the overall average incentive of $1.00 for a LED bulb and $0.40 for a CFL bulb.

3.1.7 Shell

The primary measures included in the Shell Program are wall, attic, floor insulation, duct sealing, and window replacements. Incentives are offered per square foot and vary from $0.15/sf for insulation measures to $3.54/sf for windows. See Table 3-9 and Table 3-10 for 2017 first-year program participation, incentives received, and savings achieved.

3.1.8 Opower/Oracle Home Energy Reports

Avista launched a Home Energy Reports (HER) program in June 2013, targeting 25,201 Idaho and high use electric customers. As of December, 2015, Avista had 17,598 customers still participating in the HER program. In January of 2016, Avista ‘refilled’ their existing Home Energy Reports Program by 8,022 customers bringing total distribution to approximately 25,620

electric customers in Idaho that received home energy reports throughout the duration of the 2016-2017 program years unless they opted-out or moved (Table 3-11). At the beginning of the 2017, approximately 23,364 treatment customers remained in the program. 2017 was the final year of the issuance of Opower/Oracle home energy reports to the high electric usage customers in Washington and Idaho. In the future, Avista hopes to initiate a new behavior program using the newly installed Advanced Metering Infrastructure (AMI) system.

See Table 3-12 for 2017 program participation, incentives received, and gross verified savings. The majority of the two-year (2016 - 2017) Home Energy Report program savings are recognized in the first year of the program.

Table 3-1: 2017 ID Electric HVAC Program Summary[7]

Measure	Project Count	Incentives	kWh Savings	Therms Savings	kWh Avoided Costs	Therms Avoided Cost	Non-Energy Benefits	Customer Incremental Costs	Non-Incentive Utility Costs
E Smart Thermostat DIY with Electric Heat	11	$800	6,499	-	$5,552	$0	$0	$6,098	$319
E Smart Thermostat Paid Install with Electric Heat	41	$4,790	27,770	-	$23,721	$0	$0	$18,317	$1,362
E Variable Speed Motor	367	$31,291	151,891	-	$136,846	$0	$0	$367,222	$7,855
E Electric To Air Source Heat Pump	67	$49,229	243,466	-	$262,133	$0	$0	$452,941	$15,046
E Electric to Ductless Heat Pump	61	$27,978	135,699	-	$176,169	$0	$0	$346,812	$10,112
Total	**547**	**$114,088**	**565,325**	**-**	**$604,420**	**$0**	**$0**	**$1,191,390**	**$34,692**

[7] All kWh and therm values reported in this table are gross, excluding the effect of applicable NTG ratios.

Table 3-2: 2017 ID Natural Gas HVAC Program Summary[8]

Measure	Project Count	Incentives	kWh	Therms	kWh Avoided Costs	Therms Avoided Costs	Non-energy Benefits	Customer Incremental Costs	Non-incentive Utility Costs
G Natural Gas Boiler	13	$3,886	-	1,777	$0	$19,212	$0	$82,295	$683
G Natural Gas Furnace	1,243	$372,488	-	170,431	$0	$1,185,273	$0	$807,950	$42,148
G Smart Thermostat DIY with Natural Gas Heat	154	$11,413	-	7,390	$0	$51,393	$0	$28,719	$1,828
G Smart Thermostat Paid Install with Natural Gas Heat	309	$30,428	-	14,649	$0	$137,693	$0	$202,914	$4,896
Total	**1,719**	**$418,215**	**-**	**194,247**	**$0**	**$1,393,571**	**$0**	**$1,121,878**	**$49,555**

Table 3-3: 2017 ID Electric Water Heat Program Summary[5]

Measure	Project Count	Incentives	kWh	Therms	kWh Avoided Costs	Therms Avoided Costs	Non-energy Benefits	Customer Incremental Costs	Non-incentive Utility Costs
Simple Steps Showerheads	449	$2,239	54,431	-	$30,800	$0	$0	$4,904	$1,768
Simple Steps Clothes Washers	309	$20,676	22,557	-	$15,744	$0	$0	$28,329	$904
E Heat Pump Water Heater	2	$408	1,306	-	$1,466	$0	$0	$1,499	$84
Total	**760**	**$23,323**	**78,294**	**-**	**$48,011**	**$0**	**$0**	**$34,732**	**$2,756**

[8] All kWh and therm values reported in this table are gross, excluding the effect of applicable NTG ratios.

Table 3-4: 2017 ID Natural Gas Water Heat Program Summary[9]

Measure	Project Count	Incentives	kWh	Therms	kWh Avoided Costs	Therms Avoided Costs	Non-energy Benefits	Customer Incremental Costs	Non-incentive Utility Costs
Simple Steps Showerheads	449	$3,057	-	2,727	$0	$11,518	$0	$4,904	$410
G Tankless Water Heater	255	$51,040	-	23,205	$0	$250,886	$0	$388,025	$8,921
Total	**704**	**$54,098**	**0**	**25,932**	**$0**	**$262,404**	**$0**	**$392,929**	**$9,331**

Table 3-5: 2017 ID ENERGY STAR Homes Electric Program Summary[6]

Measure	Project Count	Incentives	kWh Savings	Therms Savings	kWh Avoided Costs	Therms Avoided Cost	Non-Energy Benefits	Customer Incremental Costs	Non-Incentive Utility Costs
E Energy Star Home - Manufactured, Furnace	19	$15,492	167,820	-	$177,323	$0	$3,133	$57,000	$10,178
E Energy Star Home - Manufactured, Heat Pump	1	$815	5,663	-	$7,874	$0	$0	$3,000	$452
E Energy Star Home - Stick Built, ID	20	$6,022	20,298	1,620	$19,888	$12,445	$0	$17,724	$1,142
Total	**40**	**$22,329**	**193,781**	**1,620**	**$205,085**	**$12,445**	**$3,133**	**$77,724**	**$11,771**

Table 3-6: 2017 ID ENERGY STAR Homes Natural Gas Program Summary[6]

Measure	Project Count	Incentives	kWh	Therms	kWh Avoided Costs	Therms Avoided Costs	Non-energy Benefits	Customer Incremental Costs	Non-incentive Utility Costs
G ENERGY STAR HOME - NATURAL GAS ONLY	2	$1,295	-	863	$0	$4,186	-$347	$6,000	$149
Total	**2**	**$1,295**	**-**	**863**	**$0**	**$4,186**	**-$347**	**$6,000**	**$149**

[9] All kWh and therm values reported in this table are gross, excluding the effect of applicable NTG ratios.

Table 3-7: 2017 ID Electric Fuel Conversion Program Summary[10]

Measure	Project Count	Incentives	kWh	Therms	kWh Avoided Costs	Therms Avoided Costs	Non-energy Benefits	Customer Incremental Costs	Non-incentive Utility Costs
E Electric To Natural Gas Furnace	95	$161,549	469,539	(31,670)	$609,571	-$243,300	$0	$429,774	$34,988
E Electric To Natural Gas Furnace & Water Heat	126	$341,240	968,695	(68,264)	$827,438	-$352,300	$0	$745,063	$47,493
E Electric To Natural Gas Wall Heater	13	$17,225	71,303	(4,867)	$60,906	-$25,118	$0	$57,110	$3,496
E Electric To Natural Gas Water Heater	84	$63,651	199,692	(14,104)	$145,991	-$72,789	$0	$253,828	$8,380
Total	**318**	**$583,666**	**1,709,229**	**(118,905)**	**$1,643,906**	**-$693,506**	**$0**	**$1,485,774**	**$94,357**

Table 3-8: 2017 ID Electric Residential Lighting Program Summary[7]

Measure	Project Count	Incentives	kWh	Therms	kWh Avoided Costs	Therms Avoided Costs	Non-energy Benefits	Customer Incremental Costs	Non-incentive Utility Costs
Simple Steps LED	159,896	$167,902	3,395,498	-	$2,443,334	$0	$0	$327,307	$140,242
Simple Steps CFL	4,298	$1,769	57,194	-	$25,456	$0	$0	$6,480	$1,461
Total	**164,194**	**$169,671**	**3,452,692**	**-**	**$2,468,790**	**$0**	**$0**	**$333,787**	**$141,703**

[10] All kWh and therm values reported in this table are gross, excluding the effect of applicable NTG ratios.

Table 3-9: 2017 ID Electric Shell Program Summary[11]

Measure	Project Count	Incentives	kWh	Therms	kWh Avoided Costs	Therms Avoided Costs	Non-energy Benefits	Customer Incremental Costs	Non-incentive Utility Costs
E Attic Insulation With Electric Heat	5	$1,008	1,394	-	$1,810	$0	$177	$7,810	$104
E Window Replc from Double Pane W Electric Heat	8	$3,742	5,365	-	$6,965	$0	$0	$58,044	$400
E Window Replc from Single Pane W Electric Heat	83	$17,996	39,111	-	$50,775	$0	$0	$435,495	$2,914
Total	**96**	**$22,746**	**45,870**	**-**	**$59,550**	**$0**	**$177**	**$501,349**	**$3,418**

Table 3-10: 2017 ID Natural Gas Shell Program Summary[8]

Measure	Project Count	Incentives	kWh	Therms	kWh Avoided Costs	Therms Avoided Costs	Non-energy Benefits	Customer Incremental Costs	Non-incentive Utility Costs
G Attic Insulation with Natural Gas Heat	7	$1,398	-	513	$0	$4,196	$0	$7,066	$149
G Floor Insulation with Natural Gas Heat	1	$230	-	63	$0	$307	$0	$975	$11
G Wall Insulation with Natural Gas Heat	1	$362	-	80	$0	$554	$0	$1,525	$20
G Window Replc with Natural Gas Heat	205	$52,125	-	11,201	$0	$77,897	$0	$1,418,295	$2,770
Total	**214**	**54,115**	**-**	**11,857**	**-**	**82,954**	**-**	**1,427,861**	**2,950**

[11] All kWh and therm values reported in this table are gross, excluding the effect of applicable NTG ratios.

Table 3-11: Opower/Oracle Participation Summary

State	Initial 2017 Participating Customers
ID	23,364

Table 3-12: 2017 ID Electric Residential Opower/Oracle Program Summary[12]

Measure	Project Count	Incentives	kWh	Therms	kWh Avoided Costs	Therms Avoided Costs	Non-energy Benefits	Customer Incremental Costs	Non-incentive Utility Costs
Opower/Oracle Home Energy Reports	1	$0	-739,094	-	-$68,314	$0	$0	$0	$115,467

[12] Savings from a behavioral program are distinct in that program year, therefore through the evaluation process, adjustments are accounted for (either positive or negative) in the second year when there is a 2-year measure life.

3.1.9 Residential Trend Analysis

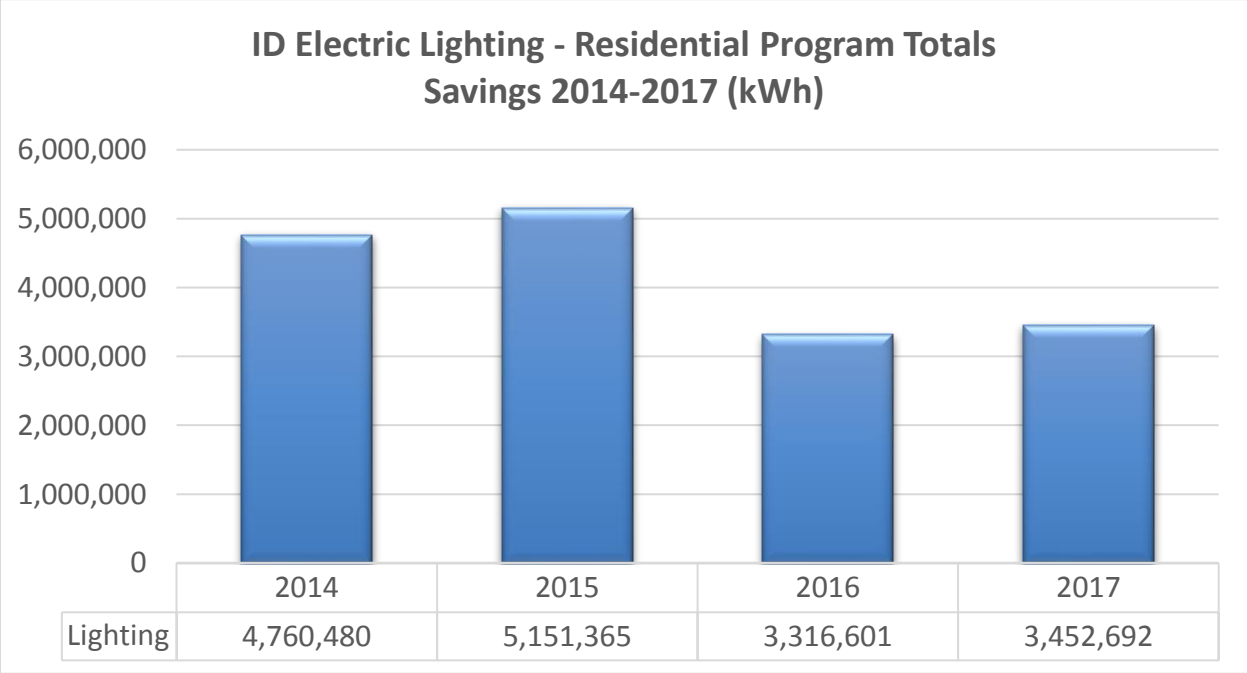
During 2017, the Company saw a decrease in savings from the previous year with the total savings decreasing by 2,628,077 kWh from 9,071,745 kWh in 2016 to 6,045,191 kWh in 2017[13]. The largest contributor to the change in savings for residential programs is attributed to the Fuel Efficiency program decreasing from 4,945,013 in 2016 to 1,709,229 in 2017.

3.1.9.1 Residential Lighting

The residential lighting program obtained 56% of the overall residential savings (3,452,692 kWh) in 2017. The Company continues to see a strong desire for LED measures in its Idaho service territory.

Please see Figure 3-1 below to illustrate the trend in savings from this program.

Figure 3-1: Idaho Electric Lighting Trend Analysis[14]



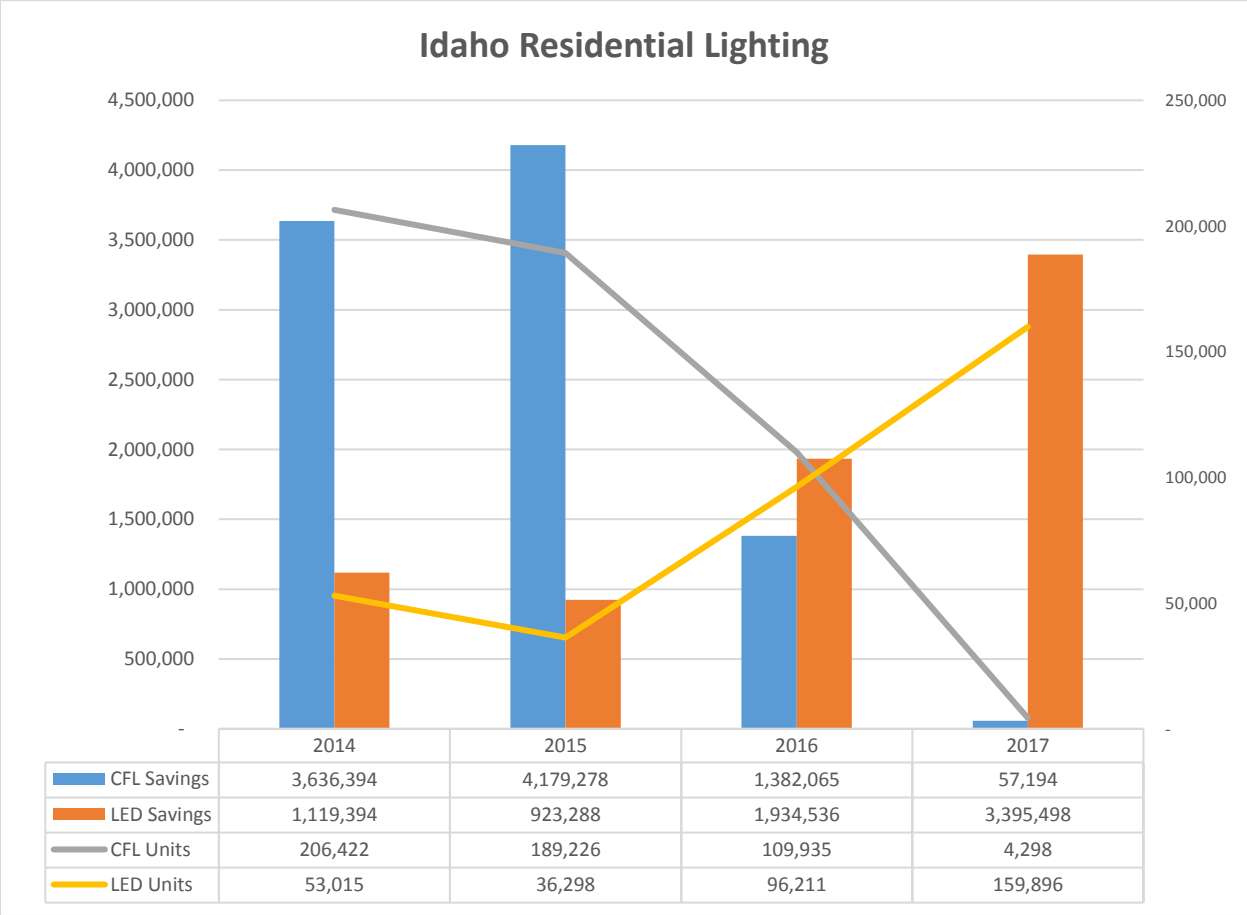
[13] Amounts exclude the Opower/Oracle Home Energy Reports. (5,306,098 kWh less -739,094 impact of Opower = 6,045,191 kWh)

[14] Savings numbers for 2014 are unverified gross, 2015-2017 is verified gross.

While the overall savings from residential lighting saw a slight increase in 2017, the overall number of units decreased from the prior year. This is due to CFL lamps no longer being incentivized by our DSM program. However, the number of LED units increased in number each year since 2015 going from 36,298 in 2015, 96,211 in 2016, and 159,896 units in 2017.

See figure 3-2 for an illustration of the CFL and LED trends for 2014-2017.

Figure 3-2: Idaho Electric Savings and Unit Count – Residential Lighting[15]



	2014	2015	2016	2017
CFL Savings	3,636,394	4,179,278	1,382,065	57,194
LED Savings	1,119,394	923,288	1,934,536	3,395,498
CFL Units	206,422	189,226	109,935	4,298
LED Units	53,015	36,298	96,211	159,896

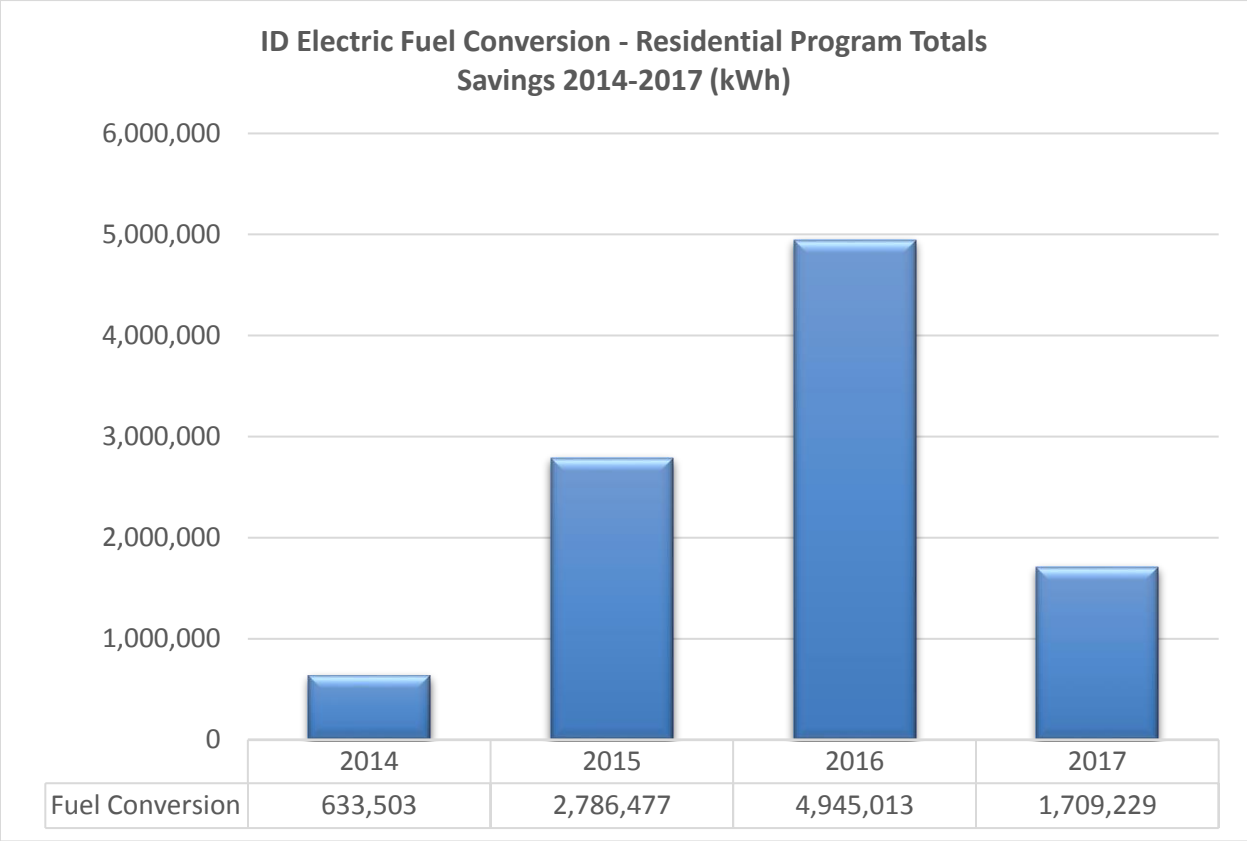
3.1.9.2 Residential Fuel Efficiency Program

The Fuel Efficiency Program obtained 1,709,229 kWh of savings in 2017 which is a decrease from the 4,945,013 achieved in 2016. In total, the Company served 1,866 customers in 2017 with the majority choosing to convert both their furnace and water heater (utilizing the "combo

[15] Savings numbers for 2014 are unverified gross, 2015-2017 is verified gross.

measure"). In the prior year, Avista served 811 customers with a similar share pursuing the combo measure. Avista's fuel efficiency tariff was revised in 2014 and increased incentives for electric to natural gas conversions. The electric to natural gas furnace conversion incentive has been revised over the years ranging from $900 in 2014 and increasing to $2,300 in 2016. During 2016, Avista revised the incentive to $1,500 and the program has maintained this incentive level throughout 2017. The below graph illustrates the trend in savings for the 2014-2017 periods.

Figure 3-3: Idaho Electric Fuel Conversion Trend Analysis[16]



3.1.9.3 Residential Shell Programs

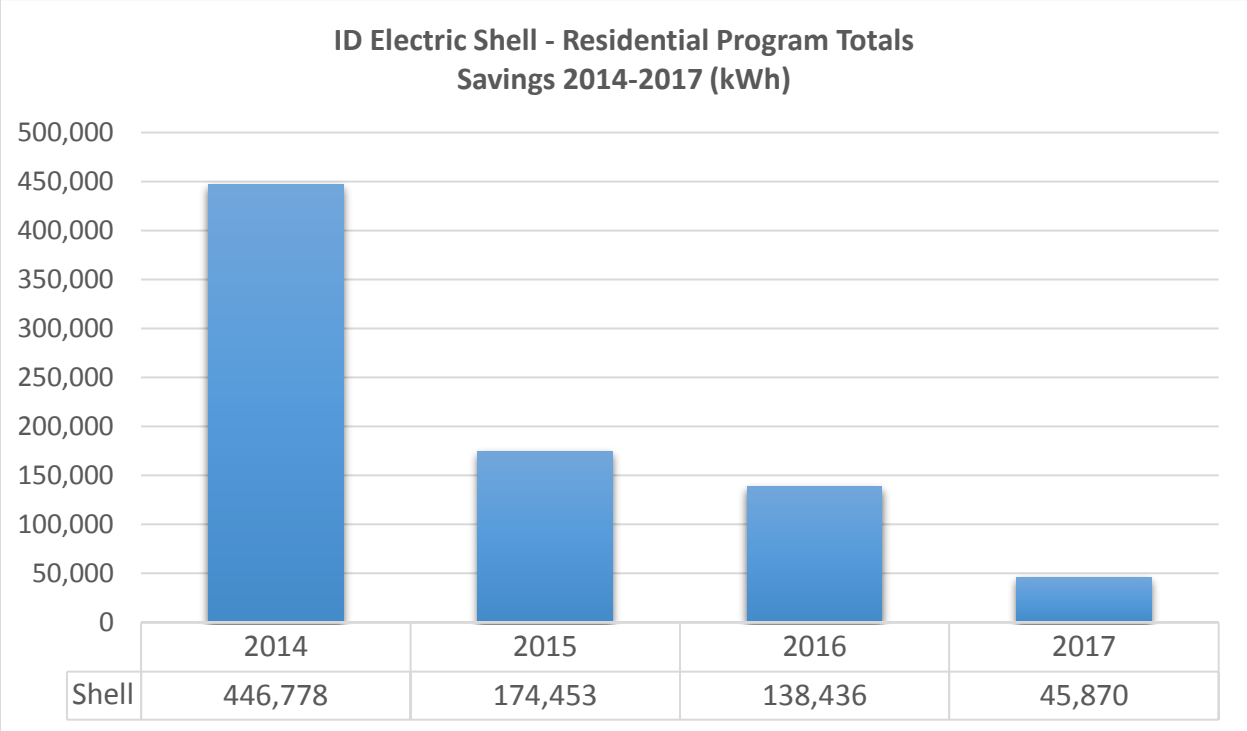
The residential shell program obtained residential savings of 45,870 kWh in 2017 which represents 1% of the overall savings in 2017. The savings derived from the residential shell program are primarily attributed to low u-factor window replacements. Of the 45,870 kWh in

[16]Savings numbers for 2014 are unverified gross, 2015-2017 is verified gross.

savings in 2017, 44,476 kWh was attributed to window projects. The below graph illustrates the changes to the shell program between 2014 and 2017.

Please see Figure 3-4 below to illustrate the trend in savings from this program.

Figure 3-4: Idaho Electric Shell Trend Analysis[17]



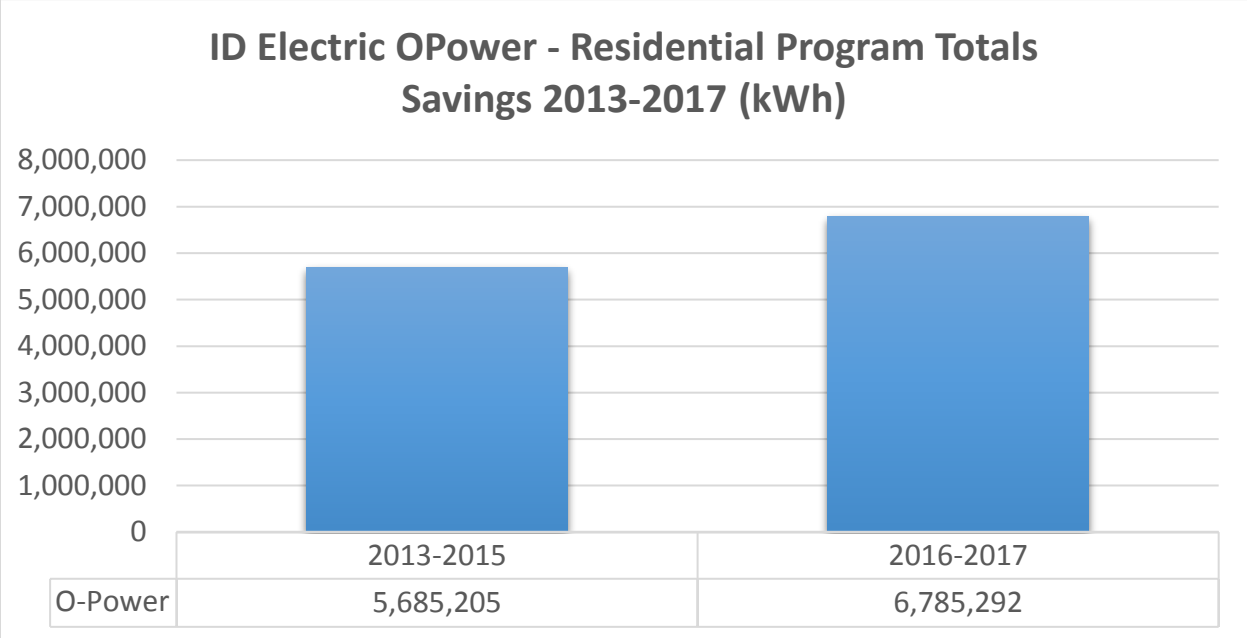
3.1.9.4 Opower/Oracle Home Energy Reports

Energy efficiency savings derived from Avista's behavior program continue to contribute a large percentage to the company's overall portfolio of savings. For the 2016-2017 program year, the Opower/Oracle Home Energy Reports captured savings of 6,785,292 kWh. While this savings amount recorded in 2016 was 7,750,716 kWh originally, the program received a realization rate of 97%, making the gross verified savings for 2016 7,524,386. Because the evaluation team estimated the overall two year program to be 6,785,292 kWh in total, there was an adjustment made to the 2017 savings of -739,094 kWh.

[17] Savings numbers for 2014 are unverified gross, 2015-2017 is verified gross.

Prior to the 2016-2017 program year, the Home Energy Reports were conducted over a two and a half year span rather than its current two year span. The below graph illustrates the comparison of the prior two and a half year program with the current two year program.

Figure 3-5: Idaho Electric Opower/Oracle Trend Analysis[18]



3.2 Low Income

The Company leverages the infrastructure of a single Community Action Partnership (CAP) agency to deliver energy efficiency programs for the Company's low income residential customers in the Idaho service territory. The program is designed to serve Avista residential customers in Idaho whose income falls between 175 percent and 250 percent of the most current federal poverty level.

A CAP agency has the resources to income qualify, prioritize and treat client's homes based upon a number of characteristics. In addition to the Company's annual funding, the agency has other monetary resources they can leverage when treating a home with weatherization or other

[18] Savings numbers for 2014 are unverified gross, 2015-2017 is verified gross.

energy efficiency measures. CAP agencies either have in-house and/or contract crews to install many of the efficiency measures of the program.

During the 2017 program year, the Low-Income program captured energy savings of more than 380,000 kWh. Table 3-13 below provides a recap of the 2014, 2015, 2016 and 2017 program year results for the Electric program.

Table 3-13: 2014-2017 Electric Program Overview[19]

	2017	2016	2015	2014
Participation and Savings				
Project Count	4,315	3,603	3,762	3,640
Energy Savings (kWh)	380,170	284,326	426,815	430,356
Program Benefits				
UCT Benefits	$325,530	$288,035	$467,447	$340,991
TRC Benefits	$460,126	$436,916	$773,781	$930,418
Program Costs				
UCT Costs	$609,580	$608,253	$775,927	$839,024
TRC Costs	$556,840	$516,775	$775,927	$766,545
Benefit/Cost Ratios				
Utility Cost Test (UCT)	0.53	0.47	0.60	0.41
Total Resource Cost Test (TRC)	0.83	0.85	1.00	1.21

The following table recaps the 2014-2017 Natural Gas Program for Low-Income. During 2017, the company achieved 1,427 therms of savings.

[19] Savings numbers for 2014 are unverified gross, 2015 is verified gross, 2016 is adjusted reported gross, and 2017 is verified gross.

Table 3-14: 2014-2017 Natural Gas Program Overview

	2017	2016	2015	2014
Participation and Savings				
Project Count	218	202	NA	NA
Energy Savings (Therms)	1,427	3,116	NA	NA
Program Benefits				
UCT Benefits	$11,111	$25,476	NA	NA
TRC Benefits	$102,602	$95,445	NA	NA
Program Costs				
UCT Costs	$159,142	$208,636	NA	NA
TRC Costs	$140,661	$187,270	NA	NA
Benefit/Cost Ratios				
Utility Cost Test (UCT)	0.07	0.12	NA	NA
Total Resource Cost Test (TRC)	0.73	0.51	NA	NA

3.2.1 Program Changes

In 2017, the Company continued to reimburse Community Action Agencies for 100% of the cost of installation for most energy efficiency measures defined on the “Approved List”. The Company also continued to offer a “Rebate List” of additional energy efficiency measures that allows the agency to receive partial reimbursement for improvements that are not as cost-effective as those on the Approved List but may still be necessary for the homes overall energy efficiency and functionality. The reimbursement amount is only equal to the avoided cost energy value of the improvement. This approach focuses the agency towards installing measures that have the greatest cost-effectiveness, from the utility perspective, but still offers an opportunity to fund other measures if needed. To allow for additional flexibility, the agency may also choose to utilize their Health and Safety dollars to fully fund the cost of the measures on the Rebate list.

3.2.2 2017 Program Details

Eligible efficiency improvements are similar to those offered under the traditional residential rebate programs. An Avista approved measure list is provided to the agencies in an attempt to

manage the cost-effectiveness of the low income program from a utility perspective (see Table 3-15).

The agencies are given discretion to spend their allotted funds on either electric or natural gas efficiency improvement based on the need of the clients The program includes improvements to insulation, infiltration, ENERGY STAR® doors and refrigerators along with fuel conversion from electric resistance space and water heat to natural gas. Avista's funding covers the full cost of the improvement from the Approved Measures list

Table 3-15: 2017 Low Income Program Approved Measure List

Electric Measures	Natural Gas Measures
• Air infiltration • Duct sealing • Insulation for attic, walls, floors, and ducts • LED lighting	• Air infiltration • Duct sealing • ENERGY STAR doors • ENERGY STAR windows • High efficiency furnace (90% AFUE) • High efficiency gas water heater • Insulation for attic, walls, floors, and ducts
	Fuel Conversion Measures
	• Electric to natural gas furnace • Electric to natural gas water heat • Electric to ductless heat pump

Along with the Approved Measure List, Avista has also established a "Rebate List" of eligible measures. The Rebate List allows the agencies to receive funding for other measures that are not as cost-effective as those on the Approved List but are still necessary for the homes' overall functionality. This measure list is outlined in Table 3-16.

Table 3-16: 2017 Low Income Program Rebate Measure List

Electric Measures	Natural Gas Measures
• Heat pump water heaters • ENERGY STAR refrigerators • ENERGY STAR doors • ENERGY STAR windows • Electric to air source heat pump	

Individually, the annual contract for each agency allows them to spend their annually allotted funds on either natural gas or electric efficiency measures at their discretion, and charge a 15 percent administration fee towards the cost of each measure. In addition, up to 15 percent of their annual funding allocation may be used towards Health and Safety improvements in support of energy efficiency measures installed in the home. It is at the agencies' discretion whether or not to utilize their funds for health and safety and other home repairs to ensure the habitability of the home where the energy efficiency improvements were installed. Refer to Table 3-17, Table 3-18, and Table 3-19 for low income program participation and savings details for the 2017 program year.

Table 3-17: 2017 ID Electric Low-Income Measures Summary[20]

Measure	Project Count	Incentives	kWh Savings	Therm Savings	kWh Avoided Costs	Therms Avoided Cost	Non-Energy Benefits	Customer Incremental Costs*	Non-Incentive Utility Costs
CFL Bulbs	62	$3,300	4,810	-	$1,573	$0	$0	$2,860	$257
E Air Infiltration	35	$40,005	10,577	-	$11,388	$0	$0	$34,661	$1,860
E Duct Sealing	12	$5,512	2,015	-	$2,196	$0	$0	$4,776	$359
E Energy Star Doors	16	$3,646	1,108	-	$2,503	$0	$11,552	$3,159	$409
E Energy Star Windows	29	$1,422	247	-	$533	$0	$6,812	$1,232	$87
E Health And Safety	24	$51,641	0	-	$0	$0	$58,231	$44,742	$0
E INS - Attic	15	$9,329	1,663	-	$3,232	$0	$0	$8,083	$528
E INS - Duct	11	$3,874	158	-	$154	$0	$0	$3,356	$25
E INS - Floor	18	$26,466	4,664	-	$10,535	$0	$0	$22,930	$1,721
E INS - Wall	1	$163	61	-	$138	$0	$0	$141	$23
E To G Furnace Conversion	26	$179,547	162,012	(5,839)	$210,330	-$44,857	$39,000	$155,562	$34,362
E To G H20 Conversion	38	$150,185	123,492	(5,857)	$93,640	-$26,689	$19,000	$130,123	$15,298
E To Heat Pump Conversion	18	$69,619	31,359	-	$33,506	$0	$0	$60,319	$5,474
Total	**305**	**$544,709**	**342,165**	**(11,696)**	**$397,077**	**-$71,546**	**$0**	**$491,969**	**$64,871**

*Customer incremental costs are the incremental measure cost absent any incentive. Therefore, the values should not be zero for the low income program. These incremental values are used in cost-effectiveness calculations.

[20] All kWh and therm values reported in this table are gross, excluding the effect of applicable NTG ratios.

Table 3-18: 2017 ID Electric Low-Income Customer Outreach Summary[21]

Measure	Project Count	Incentives	kWh Savings	Therm Savings	kWh Avoided Costs	Therms Avoided Cost	Non-Energy Benefits	Customer Incremental Costs*	Non-Incentive Utility Costs
Customer Outreach LEDs (Low Income)	3,705	$0	38,004	-	$27,347	$0	$0	$20,025	$4,468

Table 3-19: 2017 ID Natural Gas Low-Income Measures Summary[17]

Measure	Project Count	Incentives	kWh	Therms	kWh Avoided Costs	Therms Avoided Costs	Non-energy Benefits	Customer Incremental Costs*	Non-incentive Utility Costs
G Air Infiltration	45	$43,093	-	246	$0	$1,712	$0	$37,952	$650
G Duct Sealing	19	$9,979	-	162	$0	$1,128	$0	$8,788	$428
G Energy Star Doors	16	$2,471	-	31	$0	$332	$11,552	$2,176	$126
G Energy Star Windows	21	$1,264	-	63	$0	$684	$4,933	$1,113	$260
G HE Furnace	31	$23,381	-	485	$0	$3,370	$21,627	$20,592	$1,280
G HE WH 50G	8	$1,112	-	32	$0	$157	$0	$979	$60
G Health And Safety	22	$49,613	-	0	$0	$0	$53,379	$43,694	$0
G INS - Attic	23	$13,939	-	176	$0	$1,902	$0	$12,276	$723
G INS - Duct	16	$4,332	-	154	$0	$988	$0	$3,816	$376
G INS - Floor	14	$4,433	-	57	$0	$621	$0	$3,904	$236
G INS - Wall	3	$1,304	-	20	$0	$218	$0	$1,149	$83
Total	**218**	**$154,920**	**-**	**1,427**	**$0**	**$11,111**	**$91,491**	**$136,439**	**$4,222**

*Customer incremental costs are the incremental measure cost absent any incentive. Therefore, the values should not be zero for the low income program. These incremental values are used in cost-effectiveness calculations.

[21] All kWh values reported in this table are gross, excluding the effect of applicable NTG ratios.

3.3 Nonresidential

The nonresidential energy efficiency market is delivered through a combination of prescriptive and site-specific offerings. Any measure not offered through a prescriptive program is automatically eligible for treatment through the site-specific program, subject to the criteria for participation in that program. Prescriptive paths for the nonresidential market are preferred for measures that are relatively small and uniform in their energy efficiency characteristics.

In 2017, more than 1,500 prescriptive and site specific nonresidential projects were incented. Additionally, the Small Business program installed over 23,000 individual measures. Avista's tariff rider funded more than $6.8 million for energy efficiency incentives in nonresidential and small business applications. Nonresidential programs realized over 36,500 MWh and over 71,000 therms in annual first-year energy savings. Table 3-20 through Table 3-25 provide detail on the electric, natural gas, and dual fuel nonresidential programs.

3.3.1 Program Changes

Program changes made at the beginning of 2017 to the nonresidential programs include the addition of new program offerings, discontinuation of programs, and changes to eligibility or incentive levels. Avista communicates program changes once the Annual Conservation Plan is finalized and those changes become effective at the beginning of the year. In addition, some program changes are made throughout the year as necessary but these are less typical.

For nonresidential programs, rebates were updated to reflect business planning analysis to include inputs such as new unit energy savings (UES) and cost values. Changes were effective January 1, 2017 and Avista accepted rebate applications through March 31, 2017 for 2016 measures and amounts. This 90 day grace period allows for a smooth transition when rebate programs change to allow enough time for customers in the pipeline to complete their projects yet close out changes in a timely but balanced approach.

The remaining sub-sections outline each nonresidential program offered in 2017 and the verified participation, incentives, and energy savings, among other program achievements.

3.3.2 Prescriptive Path

Prescriptive paths do not require pre-project contracting, as the site-specific program does, and thus lend themselves to streamlined administrative and marketing efforts. Incentives are established for these prescriptive programs by applying the incentive formula contained within Schedules 90 and 190 to a prototypical installation. Actual costs and savings are tracked, reported and available to the third-party impact evaluator. When applicable, the prescriptive measures utilize RTF unit energy savings. See Table 3-20 and Table 3-21 for 2017 first-year program participation, incentives received, and savings achieved.

3.3.3 Site Specific Path

Site specific is the most comprehensive offering of the nonresidential segment. Avista's Account Executives work with nonresidential customers to provide assistance in identifying energy efficiency opportunities. Customers receive technical assistance in determining potential energy and cost savings as well as identifying and estimating incentives for participation. Site specific incentives are capped at seventy percent of the incremental project cost for all projects with simple paybacks of less than 15 years. All projects must have a measure life of 10 years or more. Site specific projects include appliances, compressed air, HVAC, industrial process, motors (non-prescriptive), shell and lighting, with the majority being HVAC, lighting and shell.

See Table 3-22 and Table 3-23 for 2017 first-year program participation, incentives received, and savings achieved.

3.3.4 Small Business Program

The Small Business (SB) program is administered by SBW consulting and is a direct installation/audit program providing customer energy-efficiency opportunities by: (1) directly installing appropriate energy-saving measures at each target site, (2) conducting a brief on-site audit to identify customer opportunities and interest in existing Avista programs, and (3) providing materials and contact information so that customers are able to follow up with additional energy efficiency measures under existing programs. This program is only available to customers who receive electric and/or natural gas service under Rate Schedule 11 in Idaho and Washington. Schedule 11 customers typically use less than 250,000 kWh per year. See Table 3-24 and Table 3-25 for 2017 first-year program participation, incentives received, and savings achieved.

Direct-install measures include:

- Faucet aerators
- Showerheads
- Pre-rinse spray valves
- Screw-in LED's
- Smart power strips
- CoolerMisers
- VendingMisers

Table 3-20: 2017 ID Electric Nonresidential Prescriptive Measures Summary[22]

Measure	Project Count	Incentives	kWh Savings	Therms Savings	kWh Avoided Costs	Therms Avoided Cost	Non-Energy Benefits	Customer Incremental Costs	Non-Incentive Utility Costs
PSC Lighting Exterior	226	$490,293	2,453,547	-	$1,128,250	$0	$0	$1,022,839	$12,438
PSC Lighting Interior	1,011	$4,218,681	20,666,146	(279)	$13,115,968	-$1,184	$6,587	$5,368,144	$144,591
Air Guardian	1	$89,001	381,527	-	$168,945	$0	$0	$94,674	$1,862
ESG PSC Case Lighting	53	$42,055	270,959	-	$107,237	$0	$0	$67,383	$1,182
ESG PSC Controls	13	$9,703	64,901	-	$26,114	$0	$0	$18,084	$288
ESG PSC Motors	41	$26,454	259,151	-	$163,202	$0	$0	$28,140	$1,799
PSC Food Service Equipment	12	$5,542	52,534	-	$26,706	$0	$0	$81,801	$294
PSC Green Motors Rewind	11	$3,365	36,743	-	$16,120	$0	$0	$91,642	$178
PSC Insulation	4	$2,545	20,409	-	$18,319	$0	$0	$4,924	$202
PSC Motor Controls HVAC	3	$5,805	74,241	-	$49,336	$0	$0	$11,779	$544
Total	**1,375**	**$4,893,443**	**24,280,159**	**(279)**	**$14,820,197**	**-$1,184**	**$6,587**	**$6,789,410**	**$163,378**

[22] All kWh and therm values reported in this table are gross, excluding the effect of applicable NTG ratios.

Table 3-21: 2017 ID Natural Gas Nonresidential Prescriptive Measures Summary[23]

Measure	Project Count	Incentives	kWh Savings	Therms Savings	kWh Avoided Costs	Therms Avoided Cost	Non-Energy Benefits	Customer Incremental Costs	Non-Incentive Utility Costs
PSC Food Service Equipment	20	$21,322	-	14,301	$0	$65,347	$0	$124,989	$12,746
PSC Insulation	6	$9,202	-	11,735	$0	$87,672	$0	$55,440	$17,100
PSC Commercial HVAC	23	$12,348	-	11,752	$0	$67,853	$0	$122,352	$13,235
Total	**49**	**$42,872**	**-**	**37,788**	**$0**	**$220,872**	**$0**	**$302,781**	**$43,081**

Table 3-22: 2017 ID Electric Nonresidential Site Specific Measures Summary[19]

Measure	Project Count	Incentives	kWh Savings	Therms Savings	kWh Avoided Costs	Therms Avoided Cost	Non-Energy Benefits	Customer Incremental Costs	Non-Incentive Utility Costs
ESG SS Cases	5	$37,197	267,496	-	$492,709	$0	$0	$54,202	$5,432
SS Industrial Process	1	$170,799	834,089	-	$2,019,453	$0	$0	$315,749	$22,262
SS Lighting Exterior	30	$208,185	1,189,910	-	$1,977,126	$0	$0	$513,226	$21,796
SS Lighting Interior	32	$616,746	3,823,699	-	$8,023,684	$0	$0	$1,105,433	$88,453
SS Multifamily Fuel Conversion	1	$167,804	275,061	(13,974)	$12,669	-$5,841	$0	$423,708	$140
SS Shell	1	$1,117	5,081	-	$4,561	$0	$0	$1,503	$50
ESG SS Controls	3	$49,671	266,024	-	$176,537	$0	$0	$75,482	$1,946
SS Compressed Air	2	$186,033	3,966,226	-	$7,048,534	$0	$0	$327,502	$77,703
SS Motors	1	$12,613	78,231	-	$189,638	$0	$0	$19,167	$2,091
Total	**76**	**$1,450,165**	**10,705,816**	**(13,974)**	**$19,944,910**	**-$5,841**	**$0**	**$2,835,972**	**$219,873**

[23] All kWh and therm values reported in this table are gross, excluding the effect of applicable NTG ratios.

Table 3-23: 2017 ID Gas Nonresidential Site Specific Measures Summary[24]

Measure	Project Count	Incentives	kWh Savings	Therms Savings	kWh Avoided Costs	Therms Avoided Cost	Non-Energy Benefits	Customer Incremental Costs	Non-Incentive Utility Costs
SS Appliances	1	$761	-	398	$0	$2,310	$0	$3,798	$451
SS Shell	2	$924	-	513	$0	$3,835	$0	$3,675	$748
ESG SS Cases	3	$4,368	-	1,651	$0	$9,592	$0	$17,177	$1,871
ESG SS HVAC	1	$3,369	-	1,858	$0	$10,790	$0	$6,658	$2,105
Total	**7**	**$9,422**	**-**	**4,420**	**$0**	**$26,527**	**$0**	**$31,308**	**$5,174**

Table 3-24: 2017 ID Electric Nonresidential Small Business Summary[20]

Measure	Project Count	Incentives	kWh Savings	Therms Savings	kWh Avoided Costs	Therms Avoided Cost	Non-Energy Benefits	Customer Incremental Costs	Non-Incentive Utility Costs
SB Appliances	917	$51,320	280,553	-	$60,792	$0	$0	$0	$17,509
SB Lighting	10,444	$196,970	853,971	-	$380,687	$0	$0	$0	$109,644
SB Water Heat	3,619	$17,122	416,238	-	$171,256	$0	$0	$0	$49,325
SB Audit	5,310	$120,399	-	-	$0	$0	$0	$134,520	$0
Total	**20,290**	**$385,811**	**1,550,762**	**-**	**$612,735**	**$0**	**$0**	**$134,520**	**$176,478**

[24] All kWh and therm values reported in this table are gross, excluding the effect of applicable NTG ratios.

Table 3-25: 2017 ID Gas Nonresidential Small Business Measures Summary[25]

Measure	Project Count	Incentives	kWh Savings	Therms Savings	kWh Avoided Costs	Therms Avoided Cost	Non-Energy Benefits	Customer Incremental Costs	Non-Incentive Utility Costs
SB Water Heat	3,619	$28,120	-	28,975	$0	$103,617	$0	$0	$20,211
Total	**3,619**	**$28,120**	**-**	**28,975**	**$0**	**$103,617**	**$0**	**$0**	**$20,211**

[25] All kWh and therm values reported in this table are gross, excluding the effect of applicable NTG ratios.

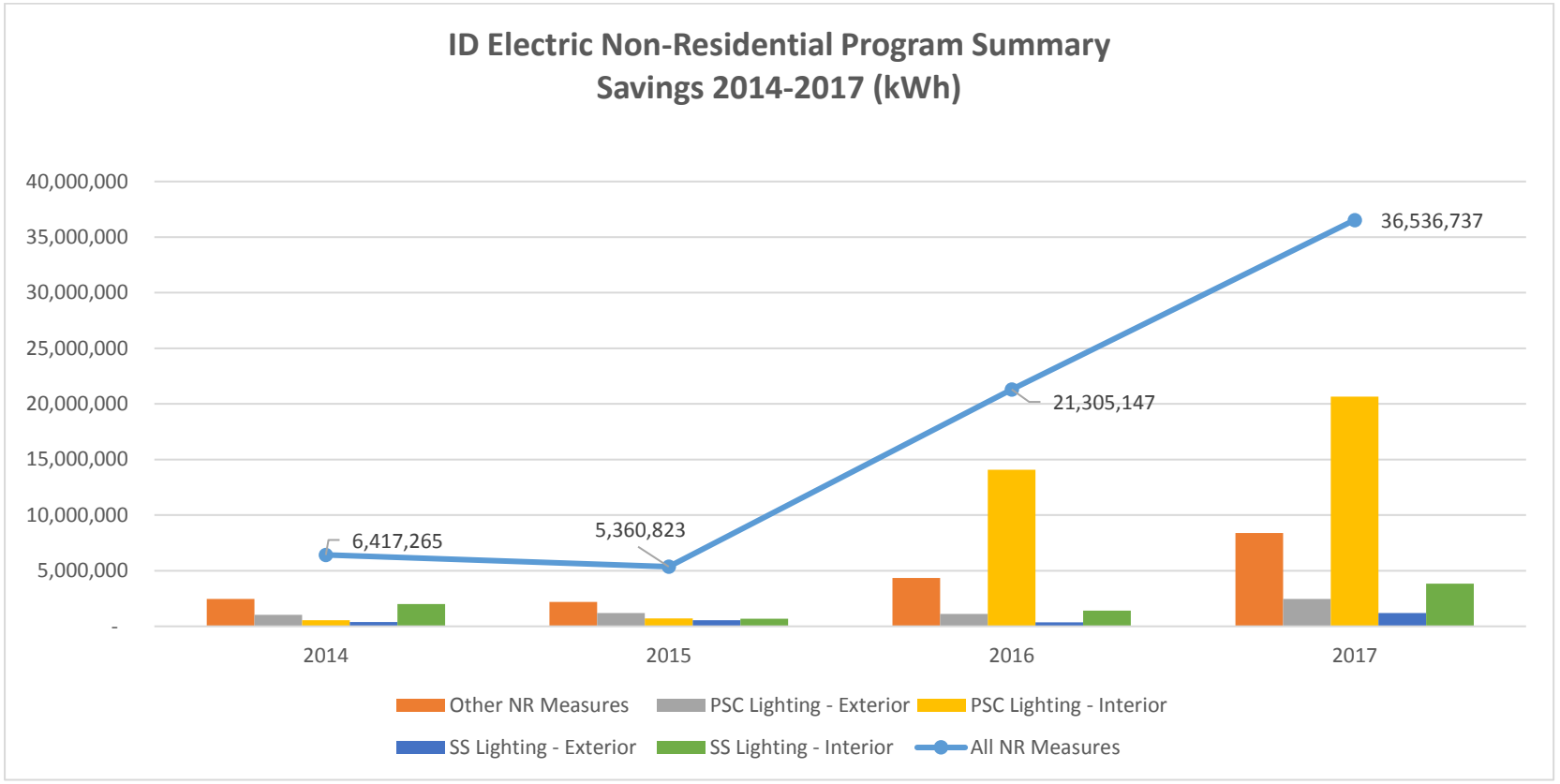
3.3.5 Non-Residential Trend Analysis

During 2017, total non-residential savings significantly increased from the previous year with the total savings increasing from 21,305,147 kWh in 2016 to 36,536,737 kWh in 2017 (a 15,231,590 kWh change). The largest contributors to the overall savings for 2017 was a result of the company's prescriptive interior lighting program which obtained 20,666,146 kWh or 57% of overall non-residential savings. In Figure 3-5, the Non-residential Prescriptive Lighting – Interior programs have been identified by the yellow bars for 2014, 2015, 2016 and 2017.

Other Non-Residential Measures, which are identified by the orange bars, continued to increase going from 2,203,859 kWh in 2015 to 7,278,505 kWh in 2017. The individual programs and measures included in this category for 2017 include Small Business (1,550,762 kWh), Energy Smart Grocer (1,128,531 kWh) and Site Specific (5,158,688 kWh). In 2016, the largest contributors to this category included Prescriptive Energy Smart Case Lighting (918,377 kWh), Site Specific Industrial Process (707,012 kWh) and Prescriptive Motor Controls HVAC (464,088 kWh). In 2015, the largest contributors to this category included Prescriptive Energy Smart Case Lighting (719,497 kWh), Prescriptive Energy Smart Industrial Process (390,989 kWh) and Site Specific Multifamily measures (272,581 kWh). For 2014, the largest contributors were Site Specific HVAC Combined (636,815 kWh), Prescriptive Energy Smart – Case Lighting (518,839 kWh) and Site Specific Industrial Process (437,212 kWh).

All other lighting measures, identified by the grey, blue, and green bars in Figure 3-5 remained relatively level as compared to the Non-residential Prescriptive Lighting – Interior program. Figure 3-5 below summarizes these savings for the 2014-2017 annual periods.

Figure 3-5: Idaho Electric Non-Residential Trend Analysis[26]



[26] Savings numbers for 2014 are unverified gross, 2015-2017 are verified gross.

3.4 Customer Outreach

Energy efficiency outreach strategies incorporate both broad-reach and targeted communication as well as attendance at local community events. Energy Efficiency is also featured throughout the year in Avista's "Connections" monthly newsletter, which is distributed with the bill and posted online.

3.4.1 Residential Customer Outreach

Avista's residential outreach included the popular, "Efficiency Matters" promotion (April-June). During the seven-week contest, TV viewers could watch any KREM newscast for Avista's energy-efficiency word of the day and enter it on krem.com for a chance to win a new RAV4 Hybrid. Television commercials featured energy-efficiency tips and Avista rebates. The finalé event was also covered by KREM and included eight minutes of live news coverage.

For the summer of 2017, Avista ran the "Way to Save" broad-reach advertising campaign to increase awareness of/drive participation in our energy-efficiency programs for residential customers. The campaign was updated from the year prior with new voice-over for the thirty-second TV commercials, and 12 fifteen-second TV spots were created to reinforce messaging (six spots promoted our rebates and six commercials highlighted energy-saving tips). Print and online advertising, as well as social media, were also utilized throughout the campaign to extend reach.

Avista also leveraged local sponsorships for "Energy Efficiency Night" at a Spokane Chiefs hockey game.

Although available to all customers, Avista conducts targeted outreach for low income and seniors. This outreach included several Energy Fairs, one of which was part of a broader event, the Avista LIRAP Appointment Day which promoted efficiency and assistance like other energy fairs but partnered with the local CAP agency, SNAP, to offer actual energy assistance appointments. Communications tactics used to increase awareness of the Energy Fairs included a direct mail, posters, emails, news releases, and print/ radio/ online advertising. In-person outreach efforts also included mobile outreach such as numerous partnerships with local food banks as well as other venues and workshops at senior centers. Additional details around these efforts can be found in the low-income section of the report.

3.4.2 Low-Income Customer Outreach

In partnership with the Company's DSM efforts, Avista's Consumer Affairs department conducts conservation education and outreach for our low income, senior and vulnerable customers. The company reaches the target population through workshops, energy fairs, mobile and general outreach. Each of these methods include demonstrations and distribution of low-cost and no-cost materials with a focus on energy efficiency, conservation tips and measures, and information regarding energy assistance that may be available through agencies. Low income and senior outreach goals increase awareness of energy assistance programs such as the

Avista Low Income Rate Assistance Program (LIRAP), the Low Income Home Energy Assistance Program (LIHEAP) and Project Share.

The company has recognized the following educational strategies as efficient and effective activities for delivering the energy efficiency and conservation education and outreach:

- Energy Conservation workshops for groups of Avista customers where the primary target audiences are seniors and low income participants.
- Energy Fairs where attendees can receive information about low cost/no cost methods to weatherize their home; this information is provided in demonstrations and limited samples. In addition, fair attendees can learn about billing assistance and demonstrations of the online account and energy management tools. Community partners that provide services to low income populations and support to increase personal self-sufficiency are invited, at no cost, to host a booth to provide information about their services and how to access them.
- Mobile Outreach is conducted through the Avista Energy Resource Van (ERV) where visitors can learn about effective tips to manage their energy use, bill payment options and community assistance resources.

General Outreach is accomplished by providing energy management information and resources at events (such as resource fairs) and through partnerships that reach our target populations. General Outreach also includes bill payment options and assistance resources in senior and low income publications.

In 2017, Avista participated in 174 events including workshops, energy fairs, mobile outreach events, and general outreach partnerships and events reaching approximately 14,518 customers in Washington and Idaho. Table 3-26 is an overview of different activities by type in ID.

Table 3-26: 2017 ID Low Income Outreach Event and Bulb Giveaway Summary

Description	Number of Events/Activities	Contacts	LEDs
Energy Fairs	2	224	448
Outreach	16	960	1,269
Mobile	32	1,941	2,257
Workshops	12	305	457
Total	**62**	**3,430**	**4,431**

3.4.3 Nonresidential Customer Outreach

To complement our residential outreach, two advertorials were placed to increase awareness of Avista's energy efficiency programs for Commercial and Industrial customers. The first advertorial featured Wear-Tek, a metal casting production foundry and machine facility, and was placed in 11 publications in February and March. The customer highlighted in the second

advertorial was Cenex/ Zip Trip, and ran in 12 publications in July and August. Both advertorials are also posted on myavista.com.

We also continued our effort of building awareness of energy efficiency and programs through our electronic newsletter to commercial customers.

As opportunities arise, energy efficiency tips are provided to local media outlets. Typical topics include winter weather and summer heat energy efficiency tips. Avista provides updates to area vendors about program information through mailings and webinars who in turn pass that information on to their customers. The general awareness efforts successfully position Avista to actively pursue and react to these earned media opportunities.

One earned media highlight was Avista being included in the cover story for the August/September issue of American Gas Magazine. The article focused on energy efficiency programs for small and midsize businesses and featured three national utilities—Avista, Con Edison, and PSE&G.

4 Evaluation, Measurement, and Verification (EM&V)

Nexant, Inc., in partnership with Research Into Action, (the evaluation team) was retained as the Company's external evaluator to independently measure and verify the portfolio energy savings for the 2016-2017 biennium period. The energy efficiency savings and associated cost-effectiveness results presented in this 2017 Annual Report are based on the evaluation findings and are presented as gross, verified savings.

The impact and process evaluation reports can be found in the Appendix.

5 Generation and Distribution Efficiency

5.1 Generation and Distribution

Avista did not complete any efficiency projects at its generation facilities in 2017.

During 2017, Avista's Grid Modernization Programs completed an upgrade of two Washington feeders with annual savings of 375 MWh and one Idaho feeder with annual savings of 112 MWh.

The Grid Modernization Program was created to provide a thorough examination of Avista's electric distribution circuits for programmatically addressing the upgrading and modernization of the facilities. The Program focuses on selecting and improving the worst performing feeders that have been assessed to provide the most opportunity for improvement in the areas of reliability and energy efficiency. This includes the identification, prioritization, selection, and engineering analysis of the distribution circuits. Grid Modernization performs a comprehensive inventory of each of the electric feeders on the system in order to appropriately prioritize and select the candidate feeders for the Program. The feeder criteria information is then used to rank the potential benefits for each circuit compared with all of the other distribution feeders Avista's system.

Grid Modernization was initially optimized at a cycle interval of 60 years, meaning that over that period of time the program would rebuild every feeder in the distribution system. Selection of this interval related to the average life span of our distribution infrastructure as well as the 20 year interval cycle time for the Wood Pole Management (WPM) program. These two programs are integrated in several important ways. Grid Modernization relies on the inspection data from Wood Pole Management (WPM) for its asset condition assessment, and targets the timing of feeder rebuilds to optimize the value of wood pole inspections and follow-up already performed. Wood Pole Management (WPM) relies on the poles inspected for the Grid Modernization program as contributing to the total number of poles that WPM has to inspect annually to remain on the 20 year inspection cycle. Further, the Grid Modernization program also integrates activities of other operational programs beyond Wood Pole Management (WPM), including the PCB transformer change-out program, vegetation management, various budgeted maintenance programs, and the segment reconductor and feeder tie program.

The Grid Modernization Program aims to accomplish a comprehensive modernization approach from both an energy efficiency and reliability perspective. The following is a list of the programs'

targeted criteria: Reliability Index Analysis, Peak Loading Study, Load Balancing, High Loss Conductors, Feeder Reconfiguration or Relocation, Primary Trunk and Lateral Conductor Analysis, Feeder Tie Location and Opportunities, Voltage Quality Study, Voltage Regulator Settings, Fuse Coordination and Sizing Analysis, Distribution Line Loss Assessment, Transformer Core Losses, Power Factor Analysis, Power Factor Correction, Distribution Automation Deployment, Open Wire Secondary Analysis, Existing Pole Analysis, Underground Facilities, and Vegetation Management.

With approximately 350 feeders in Avista's system and a targeted 60 year life cycle, Grid Modernization should be completing almost 6 feeders each year when staffed and funded appropriately. Grid Modernization has 17 feeders that have been worked on so far (in varying forms of design, construction, or completion) – Grid Modernization has fully completed 6 of approximate 350 feeders. Please see the below table that identifies the program results and plans which extends through 2020.

Table 6-1 shows the Grid Modernization Plan by Feeder.

Table 6-1: Grid Modernization Plan by Feeder

Feeder	State	Construction Start Date	Construction End Date	Baseline Report Date	Baseline Report Version	Estimated Annual Pri. Reconductor MWh Savings	Estimated Annual Transformer Loss MWh Savings	Total Estimated Annual MWh Savings***,****
9CE 12F4	WA	-	2009	Annual MWh Energy Savings were not estimated or documented at this time*				
BEA 12F1	WA	2012	2012	Annual MWh Energy Savings were not estimated or documented at this time**				
F&C 12F2	WA	2012	2012	Annual MWh Energy Savings were not estimated or documented at this time**				
BEA 12F5	WA	2013	2013	Annual MWh Energy Savings were not estimated or documented at this time**				
CDA 121	ID	2012	2013	Annual MWh Energy Savings were not estimated or documented at this time**				
WIL 12F2	WA	2013	2015	Annual MWh Energy Savings were not estimated or documented at this time**				
OTH 502	WA	2015	2015	Annual MWh Energy Savings were not estimated or documented at this time				
M23 621	ID	2014	2015	3/20/2015	Version 4	412.6	163.2	575.8
RAT 231	ID	2014	2015	3/17/2015	Version 3	0.0	148.7	148.7
WAK 12F2	WA	2015	2016	3/3/2015	Version 7	40.3	135.3	175.6
MIL 12F2	WA	2016	2017	3/10/2015	Version 4	21.0	164.8	185.8
SPI 12F1	WA	2015	2019	4/1/2015	Version 2	31.6	83.2	114.8
RAT 233	ID	2016	2019	3/17/2015	Version 5	90.3	381.4	471.7
SPR 761	WA	2017	2019	9/17/2015	Version 3	49.9	55.7	105.6
ORO 1280	ID	2017	2017	10/19/2015	Version 1	3.5	108.2	111.7
TUR 112	WA	2017	2018	5/6/2016	Version 2	140.1	92.7	232.8
PDL 1201	WA	2017	2017	5/27/2016	Version 2	23.5	165.5	189.0
MIS 431	ID	2018	2023	8/22/2006	Version 1	128.8	128.3	257.1
F&C 12F1	WA	2018	2019	11/16/2016	Version 1	1.8	258.5	260.3
HOL 1205	ID	2018	2018	3/30/2017	Version 1	0	65.5	65.5
BEA 12F2	WA	2019	2020	10/13/2017	Version 1	8.8	260.5	269.3
M15 514	ID	2019	TBA	4/30/2018	Version 1	0	245.6	245.6
SIP 12F4	WA	TBA	TBA	TBA	Version 1	0	272.8	0.0

* Completed under the DREE Program. Annual MWh Energy Savings may have been estimated and provided by others, however they did not follow the same analysis process and documentation that was started by Grid Modernization in late 2013, and may not be able to be recreated

** Completed under the Feeder Upgrade Program. Annual MWh Energy Savings may have been estimated and provided by others, however they did not follow the same analysis process and documentation that was started by Grid Modernization in late 2013, and may not be able to be recreated

*** Additional MWh savings estimated through Distribution Automation improvements are not included in these figures

**** Additional MWh savings estimated through the removal of Open Wire Secondary districts are not included in these figures

Also in 2017, Avista's LED Streetlight Change-Out Program successfully converted 9,439 High-Pressure Sodium (HPS) streetlights to Light Emitting Diode (LED) technology, resulting in an energy savings of 101 MWh in Washington and 38 MWh in Idaho.

Avista manages streetlights for many local and state government entities to provide street, sidewalk, and/or highway illumination for their streets by installing overhead streetlights. The primary driver for converting overhead streetlights from HPS lights to LED lights is the significant improvement in energy savings, lighting quality to customers, and resource cost savings. In all, the five year program will change out over 28,000 streetlights by end of 2019.

Table 6-2 shows the Distribution Efficiency Savings by Program.

Table 6-2: Distribution Efficiency Savings by Program

Program	WA MWh Savings	ID MWh Savings	Total MWh Savings
Grid Modernization	375	112	487
LED Streetlight Change-Out	101	38	139
Total	476	150	626

6 Regional Market Transformation

Avista's local energy efficiency portfolio consists of programs and supporting infrastructure designed to enhance and accelerate the saturation of energy efficiency measures through a combination of financial incentives, technical assistance, program outreach and education. It is not feasible for Avista to independently have a meaningful impact upon regional or national markets.

Consequently, utilities within the northwest have cooperatively worked together through the Northwest Energy Efficiency Alliance (NEEA) to address those opportunities that are beyond the ability or reach of individual utilities. Avista has been participating in and funding NEEA since the 1997 founding of the organization.

Table 7-1 show the NEEA savings and the associated costs.

Table 7-1: NEEA Savings and Associated Costs for Avista

Fuel Type	NEEA Energy Savings 2017 (Final Reported as of March 2018	2017 Costs (Avista Financials)	Avista Current Funding Share (WA & ID Combined)
Electric	5,291 MWh	$574,037	5.768% (WA/ID)
Natural Gas	n/a	$113,814	15.63% (WA/ID)

6.1 Avista Electric Energy Savings Share

All figures provided represent the amounts that are allocated to Avista service territory, which is a combination of site-based energy savings data (where available) or an allocation of savings based on funding share. When the funding share allocation approach is applied, the funding share for Avista is split 70%/30% between Avista Washington and Avista Idaho. The total current funding share is noted in the table above. Funding share for Avista varies by funding cycle and within cycle if funding composition changes.

6.2 Avista Natural Gas Energy Savings Share

The Natural Gas 2015-2019 business plan does not forecast energy savings in the short-term of this cycle (2015-2019). The business plan is focused on developing the portfolio of initiatives that will deliver savings in future years (anticipating 2019+).

6.3 2017 Costs

NEEA annual costs do not map directly to the annual energy savings for a given year. Due to the Market Transformation nature of NEEA's work, the energy savings investments are heavy up front, and the return (in the form of energy savings) lags by a few years or more. Approximately 68% of the regional energy savings value delivered in 2017 are from initiatives for which the investment period was 2010-2014. The current investment period has a forecasted energy stream that extends beyond 2019.

NEEA costs include all costs of NEEA operations and value delivery, including:

- Energy savings initiatives
- Investments in market training and infrastructure
- Stock assessments, evaluations, data collection, and other regional and program research
- Emerging technology research and development, and
- All administrative costs

Avista's criteria for funding NEEA's electric market transformation portfolio calls for the portfolio to deliver incrementally cost-effective resources beyond what could be acquired through the Company's local portfolio alone. Avista has historically communicated with NEEA the importance of NEEA delivering cost-effective resources to our service territory. The Company believes that NEEA will continue to offer cost-effective electric market transformation in the foreseeable future. Avista will continue to play an active role in the organizational oversight of NEEA. This will be critical to insure that geographic equity, cost-effectiveness and resource acquisition continue to be primary areas of focus.

7 Energy Efficiency Expenditures

During 2017, Avista incurred over $12.1 million in costs for the operation of electric and natural gas energy efficiency programs in Idaho, with $11.0 million for electric energy efficiency and $1.1 million for natural gas energy efficiency. Of this amount, $687,851 was contributed to the Northwest Energy Efficiency Alliance to fund regional market transformation ventures.

Seventy four percent of expenditures were returned to ratepayers in the form of incentives or products (e.g. CFLs). During the 2016 calendar year, $120 thousand, or 1.0 percent, was spent on evaluation in an effort to continually improve program design, delivery and cost-effectiveness.

Evaluation, as well as other implementation expenditures, can be directly charged to the appropriate state and/or segment(s). In cases where the work benefits multiple states or segments, these expenditures are charged to a “general” category and are allocated based on avoided costs for cost- effectiveness purposes.

The expenditures illustrated in the following tables represent actual payments incurred in the 2017 calendar year and often differ from the cost-effectiveness section where all benefits and costs associated with projects completing in 2017 are evaluated in order to provide matching of benefits and expenditures resulting in a more accurate look at cost-effectiveness.

Table 7-1 and Table 7-2 below, provide a summary of energy efficiency expenditures by fuel type.

Table 7-1: Avista Electricity Energy Efficiency Expenditures (ID)[27]

Segment	Incentives	Implementation	EM&V	NEEA	Total
Residential	$935,823	$404,165	$0	$0	$1,339,988
Low Income	$544,709	$64,871	$0	$0	$609,580
Nonresidential	$6,729,420	$559,729	$0	$0	$7,289,149
Regional	$0	$480	$29,189	$574,037	$603,707
General	$0	$820,388	$12,437	$0	$832,825
Research	$0	$300,233	$0	$0	$300,233
Total	**$8,209,952**	**$2,149,866**	**$41,626**	**$574,037**	**$10,975,480**

Table 7-2: Avista Natural Gas Energy Efficiency Expenditures (ID)

Segment	Incentives	Implementation	EM&V	NEEA	Total
Residential	$541,765	$27,297	$0	$0	$569,062
Low Income	$157,692	$4,305	$0	$0	$161,997
Nonresidential	$80,414	$68,466	$0	$0	$148,880
Regional	$0	$894	$0	$113,814	$114,708
General	$0	$62,266	$78,558	$0	$140,824
Total	**$779,871**	**$163,227**	**$78,558**	**$113,814**	**$1,135,471**

[27] Idaho Case AVU-E-06 Order 33769 required a reallocation of expenses from Idaho to Washington from previous years which is reflected in the above table. Calculations for cost effectiveness tests for the current year should exclude the reallocation from previous years and include an increase to Idaho electric residential incentives and a decrease to Washington electric residential incentives in the amount of $102,235. Also for any calculations there should be an increase to Idaho electrical residential implementation in the amount of $45,377 and a decrease to Washington electrical residential implementation in the amount of $44,856 (the difference of $521 was charged to another account). In addition for any calculations there should be an increase to Idaho electrical general EMV and a decrease to Washington electrical general EMV in the amount of $130,185.

8 Tariff Rider Balances

As of the start of 2017, the Idaho electric and natural gas (aggregate) tariff rider balances were underfunded by $6.0 M. During 2017, $8.7 million in tariff rider revenue was collected to fund energy efficiency while $12.1 million was expended to operate energy efficiency programs. The $3.37 million under-collection of tariff rider funding resulted in a year-end balance of $9.4 million underfunded balance.

Table 8-1 illustrates the 2017 tariff rider activity by fuel type.

Table 8-1 Tariff Rider Activity (2017)

	Electric	Natural Gas
Beginning Balance (Underfunded)	($5,946,150)	($76,913)
Energy Efficiency Funding	$7,347,001	$1,393,272
Net Funding of Operations	$1,400,850	$1,316,360
Energy Efficiency Expenditures	$10,975,480	$1,135,471
Ending Balances (Underfunded)	**($9,574,630)**	**$180,889**

9 Actual to Annual Conservation Plan Comparison

For 2017 operations, Avista exceeded budgeted electric energy efficiency expenditures by $4.1 million, or 160 percent, and natural gas expenditures were more than budgeted by $54,166, or 105 percent. The biggest driver of expenditures is incentives. This demand for incentives was slightly higher than anticipated and its impact resulted in the underfunding in the Idaho electric and natural gas programs. It is difficult to predict customer acceptance of programs, which affects the incentive expenditures.

While the Annual Conservation Plan provides an expectation for operational planning, Avista is required to incent all energy efficiency that qualifies under Schedules 90 and 190. Since customer incentives are the largest component of expenditures, customer demand can easily impact the funding level of the Tariff Riders.

Table 9-1 provides detail on the budget to actual comparison of energy efficiency expenditures by fuel type.

Table 9-1 Annual Conservation Plan to Actual Comparison[28]

	Electric	Natural Gas
Annual Conservation Plan		
Incentives Budget	$3,713,774	$598,429
Non-incentives and Labor	$3,160,095	$482,876
Total Budgeted Expenditures	**$6,873,869**	**$1,081,305**
Actual 2017 Expenditures		
Incentives	$8,209,952	$779,871
Non-incentives and Labor	$2,765,529	$355,599
Total Actual Expenditures	$10,975,480	$1,135,471
Variance	**($4,101,611)**	**($54,166)**

[28] Budget values are from 2017 Annual Conservation Plan

10 Net Cost Effectiveness Results

This section reports the cost-effectiveness results with net to gross values, including freeridership and spillover, as determined in the impact evaluation activities.

10.1 Electric Cost Effectiveness Results

Table 10-1: 2017 ID Electric Utility Cost Test (UCT) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$25,912,862	$397,077	$26,309,939
Natural Gas Avoided Costs	-$509,461	-$71,546	-$581,007
UCT Benefits	$25,403,401	$325,530	$25,728,932
Non-Incentive Utility Costs	$963,894	$64,871	$1,028,765
Incentive Costs	$7,665,243	$544,709	$8,209,952
UCT Costs	$8,629,137	$609,580	$9,238,716
UCT Ratio	2.94	0.53	2.78
Net UCT Benefits	$16,774,265	-$284,049	$16,490,215

Table 10-2: 2017 ID Electric Total Resource Cost (TRC) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$25,912,862	$397,077	$26,309,939
Natural Gas Avoided Costs	-$509,461	-$71,546	-$581,007
Non-Energy Benefits	$9,896	$134,596	$144,492
TRC Benefits	$25,413,298	$460,126	$25,873,424
Non-Incentive Utility Costs	$963,894	$64,871	$1,028,765
Customer Costs	$13,384,660	$491,969	$13,876,629
TRC Costs	$14,348,554	$556,840	$14,905,393
TRC Ratio	1.77	0.83	1.74
Residual TRC Benefits	$11,064,744	-$96,714	$10,968,030

Table 10-1: 2017 ID Electric Participant Cost (PCT) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Bill Reduction	$51,112,158	$503,361	$51,615,518
Gas Bill Reduction	-$48,418	-$4,027	-$52,444
Non-Energy Benefits	$9,896	$134,596	$144,492
Participant Benefits	$51,073,637	$633,929	$51,707,566
Customer Costs	$13,384,660	$491,969	$13,876,629
Incentive Received	-$7,665,243	-$544,709	-$8,209,952
Participant Costs	$5,719,417	-$52,740	$5,666,677
Participant Ratio	8.93	N/A	9.12
Net Participant Benefits	$45,354,220	$686,669	$46,040,889

Table 10-2: 2017 ID Electric Rate Impact Measure (RIM) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Cost Savings	$25,912,862	$397,077	$26,309,939
Non-Participant Benefits	$25,912,862	$397,077	$26,309,939
Electric Revenue Loss	$51,112,158	$503,361	$51,615,518
Non-Incentive Utility Costs	$963,894	$64,871	$1,028,765
Customer Incentives	$7,665,243	$544,709	$8,209,952
Non-Participant Costs	$59,741,294	$1,112,940	$60,854,235
RIM Ratio	0.43	0.36	0.43
Net RIM Benefits	-$33,828,433	-$715,864	-$34,544,296

10.2 Natural Gas Cost Effectiveness Results

Table 10-5: 2017 ID Natural Gas Utility Cost Test (UCT) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$1,019,936	$11,111	$1,031,047
Natural Gas Avoided Costs	$0	$0	$0
UCT Benefits	$1,019,936	$11,111	$1,031,047
Non-Incentive Utility Costs	$130,451	$4,222	$134,673
Incentive Costs	$608,137	$154,920	$763,057
UCT Costs	$738,587	$159,142	$897,729
UCT Ratio	1.38	0.07	1.15
Net UCT Benefits	$281,349	-$148,031	$133,318

Table 10-6: 2017 ID Natural Gas Total Resource Cost (TRC) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$1,019,936	$11,111	$1,031,047
Natural Gas Avoided Costs	$0	$0	$0
Non-Energy Benefits	-$347	$91,491	$91,144
TRC Benefits	$1,019,589	$102,602	$1,122,191
Non-Incentive Utility Costs	$130,451	$4,222	$134,673
Customer Costs	$3,282,758	$136,439	$3,419,197
TRC Costs	$3,413,208	$140,661	$3,553,869
TRC Ratio	0.30	0.73	0.32
Residual TRC Benefits	-$2,393,620	-$38,059	-$2,431,678

Table 10-3: 2017 ID Natural Gas Participant Cost (PCT) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Bill Reduction	$4,204,157	$23,069	$4,227,226
Gas Bill Reduction	$0	$0	$0
Non-Energy Benefits	-$347	$91,491	$91,144
Participant Benefits	$4,203,810	$114,560	$4,318,369
Customer Costs	$3,282,758	$136,439	$3,419,197
Incentive Received	-$608,137	-$154,920	-$763,057
Participant Costs	$2,674,621	-$18,481	$2,656,140
Participant Ratio	1.57	N/A	1.63
Net Participant Benefits	$1,529,188	$133,041	$1,662,230

Table 10-4: 2017 ID Natural Gas Rate Impact Measure (RIM) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Cost Savings	$1,019,936	$11,111	$1,031,047
Non-Participant Benefits	$1,019,936	$11,111	$1,031,047
Electric Revenue Loss	$4,204,157	$23,069	$4,227,226
Non-Incentive Utility Costs	$130,451	$4,222	$134,673
Customer Incentives	$608,137	$154,920	$763,057
Non-Participant Costs	$4,942,744	$182,211	$5,124,955
RIM Ratio	0.21	0.06	0.20
Net RIM Benefits	-$3,922,808	-$171,100	-$4,093,908

10.3 Combined Fuel Cost Effectiveness Results

Table 10-9: 2017 ID Combined Fuel Utility Cost Test (UCT) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$25,912,862	$397,077	$26,309,939
Natural Gas Avoided Costs	$510,476	-$60,435	$450,040
UCT Benefits	$26,423,337	$336,641	$26,759,979
Non-Incentive Utility Costs	$1,094,344	$69,093	$1,163,437
Incentive Costs	$8,273,379	$699,629	$8,973,008
UCT Costs	$9,367,724	$768,722	$10,136,446
UCT Ratio	2.82	0.44	2.64
Net UCT Benefits	$17,055,614	-$432,081	$16,623,533

Table 10-10: 2017 ID Combined Fuel Total Resource Cost (TRC) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Costs	$25,912,862	$397,077	$26,309,939
Natural Gas Avoided Costs	$510,476	-$60,435	$450,040
Non-Energy Benefits	$9,549	$226,087	$235,636
TRC Benefits	$26,432,887	$562,728	$26,995,615
Non-Incentive Utility Costs	$1,094,344	$69,093	$1,163,437
Customer Costs	$16,667,418	$628,408	$17,295,825
TRC Costs	$17,761,762	$697,501	$18,459,263
TRC Ratio	1.49	0.81	1.46
Residual TRC Benefits	$8,671,125	-$134,772	$8,536,352

Table 10-5: 2017 ID Combined Fuel Participant Cost (PCT) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Bill Reduction	$51,112,158	$503,361	$51,615,518
Gas Bill Reduction	-$48,418	-$4,027	-$52,444
Non-Energy Benefits	$9,549	$226,087	$235,636
Participant Benefits	$55,277,446	$748,489	$56,025,935
Customer Costs	$16,667,418	$628,408	$17,295,825
Incentive Received	-$8,273,379	-$699,629	-$8,973,008
Participant Costs	$8,394,038	-$71,221	$8,322,817
Participant Ratio	6.59	N/A	6.73
Net Participant Benefits	$46,883,408	$819,710	$47,703,119

Table 10-6: 2017 ID Combined Fuel Rate Impact Measure (RIM) (Net)

	Regular Income Portfolio	Low Income Portfolio	Overall Portfolio
Electric Avoided Cost Savings	$26,932,798	$408,188	$27,340,986
Non-Participant Benefits	$26,932,798	$408,188	$27,340,986
Electric Revenue Loss	$55,316,315	$526,429	$55,842,744
Non-Incentive Utility Costs	$1,094,344	$69,093	$1,163,437
Customer Incentives	$8,273,379	$699,629	$8,973,008
Non-Participant Costs	$64,684,039	$1,295,151	$65,979,190
RIM Ratio	0.42	0.32	0.41
Net RIM Benefits	-$37,751,241	-$886,963	-$38,638,204