

2016 True Up Report

Corrections of 2002-2015
Savings and Generation

Introduction

True Up is the annual process used to adjust and correct previous years' energy savings and renewable generation to reflect the best available information. The True Up process adjusts past savings and generation based on:

- Corrections to transaction errors
- Updated measure assumptions
- Anticipated evaluation results (for years and programs where there is yet to be an evaluation completed)
- Evaluation results (finalized prior to June 30, 2016)

This 2016 True Up report adjusts reportable Energy Trust savings from **2010-2015**. The majority of natural gas adjustments affect savings claims after 2012. Adjustments to electric savings and generation claims were spread across all years. This report does **not** cover 2016.

This report contains three sections that describe (1) definitions of terms used in this report, (2) savings adjustments and impacts by program, and (3) the difference between pre-True Up and post-True Up savings and generation by sector.

Summary

The 2016 True Up resulted in adjustments to Energy Trust's reportable annual electric and gas savings. The 2016 True Up did not result in any adjustments to reported renewable energy generation totals. Total electric savings from 2002-2015 decreased by 0.2 percent, from 526 aMW to 525 aMW, and total gas savings from 2003-2015¹ decreased by 0.3 percent, from 45.3 million therms to 45.2 million therms.

2015 reportable electric savings decreased by 2.0 percent and 2015 reportable gas savings decreased by 1.5 percent compared to the savings shown in Energy Trust's 2015 Annual Report. The 2016 True Up had significantly more Savings Realization Adjustment Factor (SRAF) adjustments than previous versions of the True Up, which reflects both the number of evaluations completed in 2016 and increased complexity as programs request the application of SRAFs at the program track level in addition to the program level. For comparison, the 2016 True Up had 76 adjustments compared to 36 adjustments in the 2015 True Up.

The largest changes underlying 2016 True Up adjustments were:

- Realization rate adjustments from the 2012 New Buildings Impact Evaluation
- Realization rate adjustments from the Impact Evaluation of Selected New Buildings Projects between 2011-2014
- Adjustments related to 2015 free-rider rate estimates for Existing Buildings, Existing Multifamily Buildings and Production Efficiency programs
- Updated NEEA savings results for 2014 and 2015
- Savings revisions for 2015 refrigerator measures in the Existing Buildings, Existing Multifamily Buildings, Products and New Buildings Programs based on an adjustment to Regional Technical Forum (RTF) savings numbers

The annual changes to electric and gas savings are summarized by program in the Results section below. Additionally, there are a series of tables that represent overall changes by sector for each year. Lastly, results from the 2016 True Up are shown for each funding utility within Energy Trust's service territory starting on page 14.

¹ Energy Trust's electric programs began in 2002 and gas programs began in 2003

Definitions and Reasons for Adjustments

Definitions

Working Savings/Generation: The estimate of anticipated results which are practical for data entry by program personnel while approving individual projects. These savings are based upon estimates of typical savings or generation for prescriptive measures and site-specific engineering calculations for custom energy-efficiency measures. Transmission and distribution line loss savings are not included in working savings, and no adjustments are made for free riders (FR), who are customers that would have installed the measures absent program influence, or for spillover, which represents customers who are influenced by the program but did not take the incentive for an efficiency measure. These adjustments are addressed when developing reportable savings/generation values.

The True Up process does not adjust working savings claimed in the past. Only reportable savings and generation are adjusted through the True Up process. New evaluation information used in True Up is incorporated in working savings estimates by updating measure savings and realization rate assumptions on a forward looking basis.

Reportable Savings/Generation: The estimate of savings results that are used when reporting Energy Trust achievements. Several factors are applied to working savings in order to arrive at reportable savings. Reportable energy savings are adjusted and updated annually through the True Up process based on new information. The factors applied to working savings in order to calculate reportable savings include;

- *Realization Rates (RR):* To adjust the initial estimate of savings; a realization rate of 100% indicates that resulting site savings aligned with expectations.
- *Net to Gross Ratio (NTG):* Another adjustment is for market effects and is known as a Net-to-Gross (NTG) ratio. The NTG ratio adjusts for free riders and spillover.
- *Line Losses:* The final adjustment, which is applied only to electric savings, is for avoided line and transformer losses. Line losses are 10% for residential and commercial measures and 6% for industrial measures.

Working savings for Energy Trust's commercial and industrial programs are adjusted for reporting to account for market effects by applying an evaluation factor at the *program level*, while working savings for Energy Trust's Existing Homes program are adjusted for market effects at the *measure level*. The evaluation factor applied to a measure or program's working savings, for any given program year, is calculated as follows:

$$\text{Evaluation Factor} = \text{Realization Rate} * (1 - \text{Free-rider Rate} + \text{Spillover Rate})$$

Free-rider rates are determined through Fast Feedback (FF), which is a short phone survey with a sample of recent program participants to assess satisfaction, understand customer decision making, and gather suggestions for program and process improvements. The survey is generally 10 or fewer questions and is customized for each program or measure of interest. The goal of Fast Feedback is to get accurate answers to important questions within two months of program participation and to minimize the burden on survey respondents.

Reasons for Adjustments

True Up adjusts reportable savings and generation estimates in different programs for different reasons. These adjustments fall into the following categories:

1) Corrections: Occasionally, through Energy Trust's routine quality assurance processes, transaction errors are discovered in the database, which require corrections. Individual transaction errors (i.e., typing errors that affect savings) are usually adjusted immediately and generic transaction errors (i.e., incorrect deemed savings value for a measure) are fixed once per year during True Up.

2) New Data: Projections are updated based upon improved measure simulations and new data on measure performance.

3) Anticipated Evaluation Results: Experience shows that evaluated estimates of savings and generation can be either lower or higher than reportable estimates. Reportable estimates are often based on typical savings for prescriptive measures or "as installed" engineering analysis for custom measures. Impact evaluation uses energy use data and/or improved data on post-installation operation to improve reportable estimates. However, impact evaluations cannot be completed until well after programs finish a year's activity. This is due to the need to utilize post-installation energy use data. Based upon Board of Directors direction in the July 2004 Strategic Planning Workshop, staff is attempting to anticipate these effects in reportable savings for programs where there is not yet evaluation information available.

For program years where savings have not been evaluated for free ridership or energy savings impact (realization rate), an anticipated evaluation result is applied prospectively until actual evaluation results are obtained and savings can be trued up. Anticipated evaluation results are calculated as the savings weighted average of the last three years of evaluated results. A program year is "closed" when evaluation results and free-rider rates specific to a given program year have been applied to savings in that program year, rather than the anticipated evaluation/ free-rider results that are applied before evaluations of that program year are complete.

4) Evaluation Results: Once finalized, evaluations provide the most reliable representation of realized savings, and can replace the refined projections described above in (2) and (3). Evaluation results may change Energy Trust savings estimates for a single year or all prior years. This is dependent upon what other evaluations have already been performed for prior years and whether results seem applicable to prior years (e.g., similar measures, participants and circumstances).

Results: Impacts by Program

Existing Buildings

The primary update to the Existing Buildings program during the 2016 True Up is the incorporation of the 2015 free-rider rate. The 2015 free-rider rate estimate has also been included in the development of the anticipated evaluation factors for 2017-2018.

Total electric savings from 2015 for the Existing Buildings program decreased by 3.6 million kWh as a result of the 2016 True Up adjustments. Total Existing Buildings gas savings for the same time period decreased by roughly 110,000 therms.

Table 1 describes the evaluations which provide results that have been applied to reportable savings in the Existing Buildings program.

Table 1: Existing Buildings Evaluations

Program	Year	Source	Type of Adjustment	Notes
Existing Buildings	2002-2011	2002-2011 Impact Evaluations	Evaluation Factor	Closed in previous True Ups
Existing Buildings	2012	2012 Impact Evaluation	Evaluation Factor	Closed in this True Up
Existing Buildings	2013-2015	2010-2012 Impact Evaluations	Anticipated Evaluation Factor	Realization Rate: 2010-2012 savings wtd. avg.
		2013-2015 Fast Feedback Free-rider Rates		Free-rider Rate: 2013-2015 savings wtd. avg.

Tables 2 and 3 describe the components of the evaluation factors that have been applied to reportable savings for 2012-2015, where blue shaded cells indicate anticipated evaluation results.

Table 2: Existing Buildings Evaluation Factor Components—Electric

Existing Buildings Electric	Realization Rate*	Market Effects			Evaluation Factor	Evaluation
		Free-rider Rate	Participant Spillover	Non-Part. Spillover		
2013	98%	38%	1%	7%	69%	*Anticipated Results
2014	98%	24%	1%	7%	82%	*Anticipated Results
2015	98%	33%	1%	7%	73%	*Anticipated Results

* 2013-2015 realization rates are the average of 2010-2012 impact evaluation results

Table 3: Existing Buildings Evaluation Factor Components—Gas

Existing Buildings Gas	Realization Rate*	Market Effects			Evaluation Factor	Evaluation
		Free-rider Rate	Participant Spillover	Non-Part. Spillover		
2013	89%	28%	1%	7%	71%	*Anticipated Results
2014	89%	28%	1%	7%	71%	*Anticipated Results
2015	89%	35%	1%	7%	65%	*Anticipated Results

* 2013-2015 realization rates are the average of 2010-2012 impact evaluation results

Tables 4 and 5 describe the change in total savings claimed for the Existing Buildings program for the program years 2013-2015, for electric and gas savings, respectively.

Table 4: Existing Buildings Savings Change—Electric

Year	Savings Pre-True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
2013	108,584,370	108,584,370	0.00%
2014	130,573,638	130,573,638	0.00%
2015	120,519,301	116,872,072	-3.03%

Table 5: Existing Buildings Savings Change—Gas

Year	Savings Pre-True Up (therms)	Trued Up Savings (therms)	Change in Savings
2013	1,589,369	1,589,369	0.00%
2014	1,765,528	1,765,528	0.00%
2015	1,869,653	1,759,180	-5.91%

New Buildings

Three impact evaluations were completed for the New Buildings program in 2015. These impact evaluations results lead to savings adjustments for many projects that were completed by the program.

The 2012 New Buildings Impact Evaluation resulted in savings adjustments to all projects except megaprojects, code assistance projects and those included in the other two impact evaluations discussed below.

The Impact Evaluation of Selected 2011-2014 New Buildings Projects evaluated a sample of large projects and multiple phases of certain individual projects, and resulted in savings adjustments to the original engineering estimates for these projects, which were completed between 2011 and 2014.

The Path to Net Zero Impact Evaluation evaluated selected projects from that track and resulted in savings adjustments to all projects completed between 2010-2013 within the Path to Net Zero (PTNZ) track.

In addition, measure-specific savings adjustments were made on a per unit basis to high-efficiency refrigerator measures completed in 2015. The updated savings, which are slightly lower than the original savings amount, were implemented in order to conform with revisions to savings assumptions that were made by the Regional Technical Forum (RTF). The per unit savings value that will be claimed going forward for these refrigerator units has been updated to the RTF value.

As a result of 2016 True Up adjustments to the New Buildings program, total electric savings from 2010-2015 decreased by almost 400,000 kWh and total gas savings for the same time period decreased by 40,000 therms.

No new free-rider rate information was introduced for the New Buildings program in the 2016 True Up. Further, for the 2016 True Up, the New Buildings program did not receive any free-rider deduction from 2013-2015 due to the difficulty of measuring free ridership for new construction in relation to the stringent 2010 building code.

Table 6 describes the evaluation results that have been applied to reportable savings in each program year for the New Buildings program.

Table 6: New Buildings Evaluations

Program	Year	Source	Type of Adjustment	Notes
New Buildings	2002-2012	2002-2012 Impact Evaluations	Evaluation Factor	Closed in previous True Ups
New Buildings	2010-2013	2010-2013 Path to Net Zero Track Impact Evaluation	Evaluation Factor	Closed in this True Up
New Buildings	2011-2014	Impact Evaluation of Selected 2011-2014 Projects	Evaluation Factor	Closed in this True Up
New Buildings	2013-2015	2010-2012 Impact Evaluations	Anticipated Evaluation Factor	Realization Rate: 2010-2012 savings wtd. avg.

Tables 7 and 8 show the components of the evaluation factors that have been applied to reportable savings for 2013-2015 for the New Buildings program, where blue shaded cells indicate anticipated evaluation results.

Table 7: New Buildings Evaluation Factor Components—Electric

New Buildings Electric	Realization Rate*	Market Effects			2010 Code Evaluation Factor	Blended Eval. Factor	Evaluation
		Free-rider Rate	Participant Spillover	2007 Code Evaluation Factor			
2013	93%	0%	1%	n/a	94%	N/A	*Anticipated Results
2014	93%	0%	1%	n/a	94%	N/A	*Anticipated Results
2015	93%	0%	1%	n/a	94%	N/A	*Anticipated Results

* 2013-2015 realization rates are the average of 2010-2012 impact evaluation results

Table 8: New Buildings Evaluation Factor Components—Gas

New Buildings Gas	Realization Rate	Market Effects			2010 Code Evaluation Factor	Blended Eval. Factor	Evaluation
		Free-rider Rate	Participant Spillover	2007 Code Evaluation Factor			
2013	95%	0%	1%	n/a	96%	N/A	*Anticipated Results
2014	95%	0%	1%	n/a	96%	N/A	*Anticipated Results
2015	95%	0%	1%	n/a	96%	N/A	*Anticipated Results

* 2013-2015 realization rates are the average of 2010-2012 impact evaluation results

Tables 9 and 10 describe the change in total reportable savings claimed for the New Buildings program for the program years 2013-2015, for electric and gas savings, respectively.

Table 9: New Buildings Savings Change—Electric

Year	Savings Pre-True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
2013	86,798,755	86,129,262	-0.77%
2014	46,205,621	45,733,244	-1.02%
2015	50,053,303	49,105,824	-1.89%

Table 10: New Buildings Savings Change—Gas

Year	Savings Pre-True Up (therms)	Trued Up Savings (therms)	Change in Savings
2013	455,426	415,272	-8.82%
2014	672,219	672,219	0.00%
2015	552,377	547,032	-0.97%

Production Efficiency

The 2016 True Up introduced adjustments to Production Efficiency program savings based on free-rider rate findings from the 2015 Fast Feedback survey of program participants. Final 2015 free-rider rate findings had the effect of decreasing electric savings and very slightly increasing gas savings for 2015 compared to the anticipated free-rider rate that was applied during the program year. No new impact evaluation results were included in the adjustments made to Production Efficiency program savings in the 2016 True Up.

Two individual measures from 2015 were also corrected during this True Up. These measures had no SRAF applied to them, and thus a reportable savings correction was made by applying the new SRAF to their savings.

As a result of 2016 True Up adjustments, reportable electric savings for 2015 were reduced by 6.7 percent (0.85 aMW) and reportable gas savings for 2015 increased by 1.3 percent (25,000 therms).

Table 11 describes evaluations which provide results that have been applied to reportable savings in each program year for the Production Efficiency program.

Table 11: Production Efficiency Evaluations

Program	Year	Source	Type of Adjustment	Notes
Production Efficiency	2002-2011	2002-2011 Impact Evaluations	Evaluation Factor	Closed in previous True Ups
Production Efficiency	2013-2015	2009-2011 Impact Evaluations	Anticipated Evaluation Factor	Realization Rate: 2009-2011 savings wtd. avg.
		2013-2015 Fast Feedback Free-rider Rates		Free-rider Rate: 2013-2015 savings wtd. avg.

Tables 12 and 13 show the components of the evaluation factors that have been applied to reportable savings for 2013-2015, where shaded cells indicate anticipated evaluation results.

Table 12: Production Efficiency Evaluation Factor Components—Electric

Production Efficiency Electric	Realization Rate*	Market Effects			Evaluation Factor	Evaluation
		Free-rider Rate	Participant spillover	Non-Part. Spillover		
2013	94%	20%	1%	1%	77%	*Anticipated Results
2014	94%	32%	1%	1%	66%	*Anticipated Results
2015	94%	23%	1%	1%	74%	*Anticipated Results

* 2013-2015 realization rates are the average of 2009-2011 impact evaluation results

Table 13: Production Efficiency Evaluation Factor Components—Gas

Production Efficiency Gas	Realization Rate*	Market Effects			Evaluation Factor	Evaluation
		Free-rider Rate	Participant spillover	Non-Part. Spillover		
2013	97%	23%	1%	1%	77%	*Anticipated Results
2014	97%	21%	1%	1%	79%	*Anticipated Results
2015	97%	22%	1%	1%	78%	*Anticipated Results

* 2013-2015 realization rates are the average of 2009-2011 impact evaluation results

Tables 14 and 15 describe the change in total annual savings claimed for the Production Efficiency program as a result of 2016 True Up adjustments, for electric and gas savings, respectively.

Table 14: Production Efficiency Savings Change—Electric

Year	Savings Pre-True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
2015	110,215,676	102,806,086	-6.72%

Table 15: Production Efficiency Savings Change—Gas

Year	Savings Pre-True Up (therms)	Trued Up Savings (therms)	Change in Savings
2015	2,040,217	2,065,834	1.26%

Existing Homes

The 2016 True Up introduced adjustments to Existing Homes program savings based on free-rider rate findings from the 2014 and 2015 Fast Feedback surveys of program participants.

- Final 2014 free-rider rate findings had the effect of decreasing electric and gas savings compared to the anticipated free-rider rate that was applied during the program year.
- Final 2015 free-rider rate findings also had the effect of decreasing electric and gas savings compared to the anticipated free-rider rate that was applied during the program year.

No additional adjustments were made to Existing Homes program savings beyond those due to updated free-rider rates. In total, 2016 True Up adjustments decreased reportable electric savings for the Existing Homes program by 234,646 kWh and gas savings by 23,756 therms.

Tables 16 and 17 describe the change in total savings claimed for the Existing Homes program for the 2014-2015 program years, for electric and gas savings, respectively.

Table 16: Existing Homes Savings Change—Electric

Year	Savings Pre-True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
2014	44,822,017	44,697,317	-0.28%
2015	45,002,004	44,892,058	-0.24%

Table 17: Existing Homes Savings Change—Gas

Year	Savings Pre-True Up (therms)	Trued Up Savings (therms)	Change in Savings
2014	1,046,896	1,032,493	-1.38%
2015	940,853	931,499	-0.99%

New Homes and Products

The 2016 True Up revised 2015 electric savings for refrigerator and freezer measures downward to align with revised savings assumptions made by the RTF. Additionally, electric and gas savings were adjusted for Carry Home the Savings measures to align with revised savings assumptions made by the RTF, which reflect updated baseline conditions for the components in the kit.

In total, 2016 True Up adjustments decreased reportable electric savings for the New Homes and Products program by 234,646 kWh and gas savings by 23,756 therms.

Tables 18 and 19 show the change in total electric and gas savings claimed for the New Homes and Products program for 2015 as a result of True Up adjustments.

Table 18: New Homes and Products Savings Change—Electric

Year	Savings Pre-True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
2015	83,935,455	83,762,763	-0.21%

Table 19: New Homes and Products Savings Change—Gas

Year	Savings Pre-True Up (therms)	Trued Up Savings (therms)	Change in Savings
2015	1,098,309	1,099,303	0.09%

NEEA

2015 savings for NEEA were revised in the 2016 True Up as a result of updated savings estimates reported by NEEA. Savings for the Commercial sector increased substantially for 2015, while the Industrial and Residential sectors decreased.

According to NEEA internal savings reports, increases in 2015 savings were driven by better-than-expected results in the Commercial Sector. The commercial

commissioning, commercial real estate and other commercial codes initiatives performed resulted in more than double the forecasted savings. The Industrial Sector's decrease in savings was due to reductions in savings from the drive power and reduced wattage lamp replacement initiatives. The Residential Sector's decrease in savings was due to reductions in expected savings from a handful of initiatives, including clothes washers, dishwashers, ductless heat pumps, efficient homes, heat pump water heaters, televisions and residential lighting. Multifamily codes and other residential standards initiatives also resulted in fewer than expected savings.

NEEA's savings revisions for 2015 also included, as always, updated savings estimates for other NEEA initiatives based on final market data and updated service-territory allocations.

Table 20 shows the change to total reportable electric savings claimed for NEEA market transformation initiatives by sector for 2015.

Table 20: 2015 NEEA Electric Savings Change

Sector	Savings Pre-True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
Commercial	8,496,284	17,639,386	107. 61%
Industrial	1,826,235	1,383,003	-24. 27%
Residential	54,171,473	48,485,090	-10. 50%

Results: Impacts by Sector

The following tables summarize the changes in total annual electric and gas savings for 2002-2015 as a result of 2016 True Up adjustments. In the tables below, an average megawatt (aMW) means that loads are reduced by an average of one megawatt or 8,760 MWh during each year of a measure's estimated useful life. Where units are listed as MMTh, this reflects the annual therm savings achieved in each year of a measure's useful life, stated in millions of therms.

Tables 21 and 22 describe the change to total annual reportable savings claimed by Energy Trust for the years 2002-2015.

Table 21: Electric Savings Impact 2002-2015

Sector	Savings Pre-True Up (aMW)	Trued Up Savings (aMW)	Change in Savings (aMW)	Percent Change
Commercial	185. 51	186. 09	0. 58	0. 31%
Industrial	161. 57	160. 68	(0. 90)	-0. 55%
Residential	178. 86	178. 16	(0. 70)	-0. 39%
Total	525. 94	524. 92	(1. 01)	-0. 19%

Table 22: Gas Savings Impact 2002-2015

Sector	Savings Pre-True Up (MMTh)	Trued Up Savings (MMTh)	Change in Savings (MMTh)	Percent Change
Commercial	18.91	18.76	(0.15)	-0.80%
Industrial	6.66	6.69	0.03	0.38%
Residential	19.74	19.72	(0.02)	-0.12%
Total	45.31	45.16	(0.15)	-0.33%

Results: Impacts by Utility

The following tables show final reportable annual savings and generation totals for each of the utilities in Energy Trust's service territory after the 2016 True Up adjustments were implemented.

Table 23: Portland General Electric savings (aMW), 2002-2015

Year	Commercial	Industrial	Renewables	Residential	Total
2002	3.95	1.81	0.00	3.61	9.37
2003	4.03	0.89	0.02	3.84	8.78
2004	4.24	1.17	0.01	5.32	10.75
2005	5.18	14.22	0.42	5.01	24.84
2006	3.92	2.85	0.03	6.94	13.74
2007	3.78	3.75	46.84	8.37	62.75
2008	5.57	2.86	1.84	8.22	18.50
2009	7.11	4.49	0.55	5.71	17.86
2010	10.47	8.77	0.96	7.31	27.50
2011	10.99	8.92	1.08	8.51	29.51
2012	13.97	10.16	2.51	10.48	37.12
2013	12.97	12.76	1.87	9.24	36.85
2014	13.94	10.93	0.72	12.29	37.88
2015	12.17	7.04	3.04	12.02	34.27
Total	112.30	90.63	59.90	106.88	369.71

Table 24: Pacific Power savings (aMW), 2002-2015

Year	Commercial	Industrial	Renewables	Residential	Total
2002	1.94	1.62	-	2.11	5.67
2003	1.73	2.68	14.27	2.64	21.32
2004	3.14	8.66	0.08	3.61	15.49
2005	2.41	5.96	0.04	3.36	11.77
2006	1.69	4.98	1.96	4.60	13.23
2007	2.05	4.00	0.08	6.31	12.45
2008	2.74	3.83	31.47	5.51	43.55
2009	3.10	3.51	2.12	3.57	12.30
2010	7.86	7.06	2.42	5.29	22.62
2011	8.40	6.55	0.40	5.33	20.69

2012	10.73	5.68	2.37	6.45	25.23
2013	11.65	4.73	1.00	5.82	23.19
2014	7.58	5.92	1.67	8.47	23.63
2015	8.79	4.86	0.87	8.20	22.71
Total	73.79	70.05	58.75	71.28	273.86

Table 25: NW Natural savings (MMTh), 2002-2015

Year	Commercial	Industrial	Residential	Total
2003	0.00	-	0.61	0.61
2004	0.08	-	0.92	1.00
2005	0.44	-	0.95	1.39
2006	1.29	-	0.95	2.24
2007	1.15	0.00	1.13	2.28
2008	1.10	0.01	1.34	2.45
2009	1.10	0.19	1.20	2.49
2010	2.01	0.54	1.39	3.94
2011	1.89	1.01	1.58	4.47
2012	2.19	0.61	2.52	5.32
2013	1.85	0.94	2.12	4.91
2014	2.21	0.94	1.96	5.10
2015	1.97	2.02	1.87	5.85
Total	17.27	6.26	18.53	42.06

Table 26: Cascade Natural Gas savings (MMTh) 2002-2015

Year	Commercial	Industrial	Residential	Total
2006	0.05	-	0.02	0.08
2007	0.02	-	0.13	0.15
2008	0.05	-	0.12	0.17
2009	0.07	0.05	0.13	0.25
2010	0.20	0.05	0.07	0.32
2011	0.22	0.09	0.11	0.42
2012	0.15	0.10	0.15	0.40
2013	0.16	0.06	0.12	0.33
2014	0.23	0.04	0.14	0.41
2015	0.34	0.05	0.16	0.55
Total	1.49	0.43	1.16	3.08