

Efficiency Vermont 2018 Savings Claim Verification Report Summary

On or before April 1st each year Efficiency Vermont (EVT) is required to submit a report of energy savings achieved during the previous calendar year. Pursuant to the Public Utility Commission's (PUC) Process and Administration of an Order of Appointment – the governing document for the operation of Energy Efficiency Utilities, the Public Service Department (PSD) reviews this “Savings Claim” and makes a recommendation to the PUC as to what the PSD has evaluated to be the actual level of savings achieved.

The PSD evaluation includes a thorough review of projects completed by EVT to identify errors or mischaracterizations of projects that can result in the savings being decreased or increased. EVT's energy savings claim portfolio is first organized into sub-categories of residential and commercial savings and each of these sub-categories is then broken down again into smaller sub-components. This structure allows for a statistically significant sample of projects to be reviewed and evaluated, where the difference between actual savings and claimed savings that is observed in evaluated projects can be applied to the remainder of projects in the portfolio. Projects that are randomly selected in the sample are evaluated by the PSD team by a variety of methods. This process for evaluating savings – widely used across the country – saves time and expense of reviewing every single project for which EVT claims savings while providing an accurate understanding of results. The sampling of projects to be reviewed, ensures that no one project could have a disproportionate impact on the overall savings being measured. The annual structure of this review allows the PSD and the PUC to ensure that EVT is making appropriate progress towards the three-year savings goals set by the PUC, called quantitative performance indicators (QPIs).

For 2018, EVT submitted a savings claim of 127,090,750 gross kWh. Through the process described above, the PSD determined that EVT achieved 97.6% of this total. This percentage is termed a ‘realization rate’, as in “EVT realized 97.6% of the energy savings they claimed”. This overall realization rate represents a weighted combination of 12 separate realization rates that were created for each sub-competent of the overall savings claim, which ranged between 90.0% and 100.0%. Each realization rate developed for the sub-components had an impact on the overall realization rate proportional to the amount of savings claimed in the respective sub-component. In addition to annual energy savings measured in kWh, performance during defined peak times as measured in Summer and Winter kW is also evaluated as well as MMBtu, water savings and Total Resource Benefit (this is an estimate of the monetary value of the energy and water savings).

These results represent ‘gross’ results and do not include additional factors, such as freerider (participants who would have participated without an incentive) and program spillover rates (measures installed in Vermont that did not take advantage of program offerings). The ‘net’

results come from the application of these results to the entire 2018 EVT savings database including the factors described above. As part of the evaluation process the PSD performs a quality assurance check on the application of the realization rates to the database. This results in the 'net' savings used to determine progress towards the QPIs.

The Table on the following page provides the overall results from the savings report prepared by the PSD. A full copy of the verification report can be found on the PUC and PSD websites. It contains full details on the project selection process and what adjustments were made and why. [[EVT 2018 Verification Report](#)]

2018 Gross Electric Realization Rate by Program Group

Program Group	Energy Saved		Winter kW Reduction		Summer kW Reduction	
	EVT Gross Claimed kWh	Realization Rate	EVT Gross Claimed kW	Realization Rate	EVT Gross Claimed kW	Realization Rate
C&I and Multifamily						
Custom Retrofit	22,743,898	90.0%	2,825	90.5%	2,805	92.7%
Custom NC/MOP	13,743,573	95.2%	1,776	97.6%	1,969	94.6%
Prescriptive Lighting	13,375,627	99.8%	2,425	100.0%	1,825	100.0%
Prescriptive Non-Lighting	482,334	95.5%	67	94.4%	63	94.3%
Efficient Products	16,428,530	100.0%	1,507	100.5%	3,036	99.6%
Smartlight	16,303,771	100.0%	1,573	100.0%	3,069	100.0%
Upstream HVAC	580,464	100.0%	-43	31.5%	13	123.7%
C&I Subtotal	83,658,197	96.4%	10,131	97.3%	12,779	97.5%
Residential						
Efficient Products	36,616,930	99.9%	10,176	99.7%	3,961	99.2%
Residential Retrofit/Low-Income Single-Family	1,191,115	100.0%	279	98.8%	104	100.1%
Home Performance with ENERGY STAR ^a	140,332	100.0%	34	100.0%	1	100.0%
Residential New Construction	867,580	99.6%	229	99.8%	80	99.7%
Smartlight	4,691,673	100.0%	1,416	100.0%	392	100.0%
Upstream HVAC (+ HP water heaters) ^b	-75,076	100.0%	-633	69.4%	-10	-165.9%
Residential Subtotal	43,432,553	99.9%	11,500	101.4%	4,527	99.9%
Portfolio Total	127,090,750	97.6%	21,631	99.4%	17,306	98.1%

a These saving were preadjusted prior to the EVT claim being submitted based upon a HPwES study carried out by the PSD resulting in the 100% realization rate shown in the table

b Negative values generally represent a switch from fossil fuels to electricity, resulting in an increase in electrical use.

The table below shows the first of EVT's three years of EVT's savings verification period of 2018-2020.

2018 Gross Electric Realization Rate

Program Group	Energy Saved		Winter kW Reduction		Summer kW Reduction	
	EVT Gross Claimed kWh	Realization Rate	EVT Gross Claimed kW*	Realization Rate	EVT Gross Claimed kW*	Realization Rate
2018 Results						
C&I Subtotal	83,658,197	96.4%	10,131	97.3%	12,779	97.5%
Residential Subtotal	43,432,553	99.9%	11,500	101.4%	4,527	99.9%
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As stated previously, the above results are applied to the EVT savings database on a project-by-project basis, in order to produce accurate 'net' savings numbers that are used to certify if EVT is performing as required to meet their goals. The charts below summarize EVT's progress toward those goals.