Appendix J: Relative Influence of Evaluation Updates with Scenario Analysis

The application of each type of evaluation parameter update to the original claimed savings allows for the analysis of the incremental effect of each parameter. This is useful in the context of understanding what elements of the evaluation findings may have been within the control of the implementer versus general market conditions, or which savings are realistically available to the grid versus those which did not likely happen at all.

Commission staff has built into the data tools a functionality called "scenarios". These represent the different conditions of toggling on and off different parameter updates. They are used in this report to adjust assumptions regarding savings and evaluation parameters and to illustrate the relative impacts of these parameters on savings as well as cost effectiveness. The cost effectiveness tool (CET) repeats calculations using specific evaluated parameters as adjusted inputs, depending on the scenario, to calculate measure, program, and portfolio-level cost effectiveness. The full evaluation scenario includes input adjustments for all evaluated parameters and is the basis for the CPUC's final portfolio evaluation results.

The high-level scenario matrix below gives an overview of the evaluation parameters adjusted for each scenario. An 'X' indicates that, when available, a specific evaluation parameter-level result is used as an input to the CET for a specific scenario. If a parameter is not evaluated for a particular claim, then the value is "passed-through" from the reported claim record. Similarly, if a claim record is not evaluated, then the claim values will be passed-through from the unevaluated claim. The detailed decision map, the proportion of claims updated is provided in the appendix titled "Evaluation Decision Framework".

Table J-1 High-Level Scenario Matrix

Scenario	NTGR	UES	RUL	EUL	IR	RR	Qty
Reported[1]							
EvalFull	✓	✓	✓	✓	✓	✓	✓
EvalFullGross	I	✓	✓	✓	✓	✓	✓
EvalGross	I						
EvalNet	✓						
EvalUES		✓					
EvalEUL			✓	✓			
EvalIR					✓		
EvalRR						✓	
EvalQty							✓
EvalNoUpdate							

[1] *All scenarios are single fuel with the exception of Reported which is duel fuel. All scenarios "zero-out" electrical savings for SCG and gas savings for SCE.*

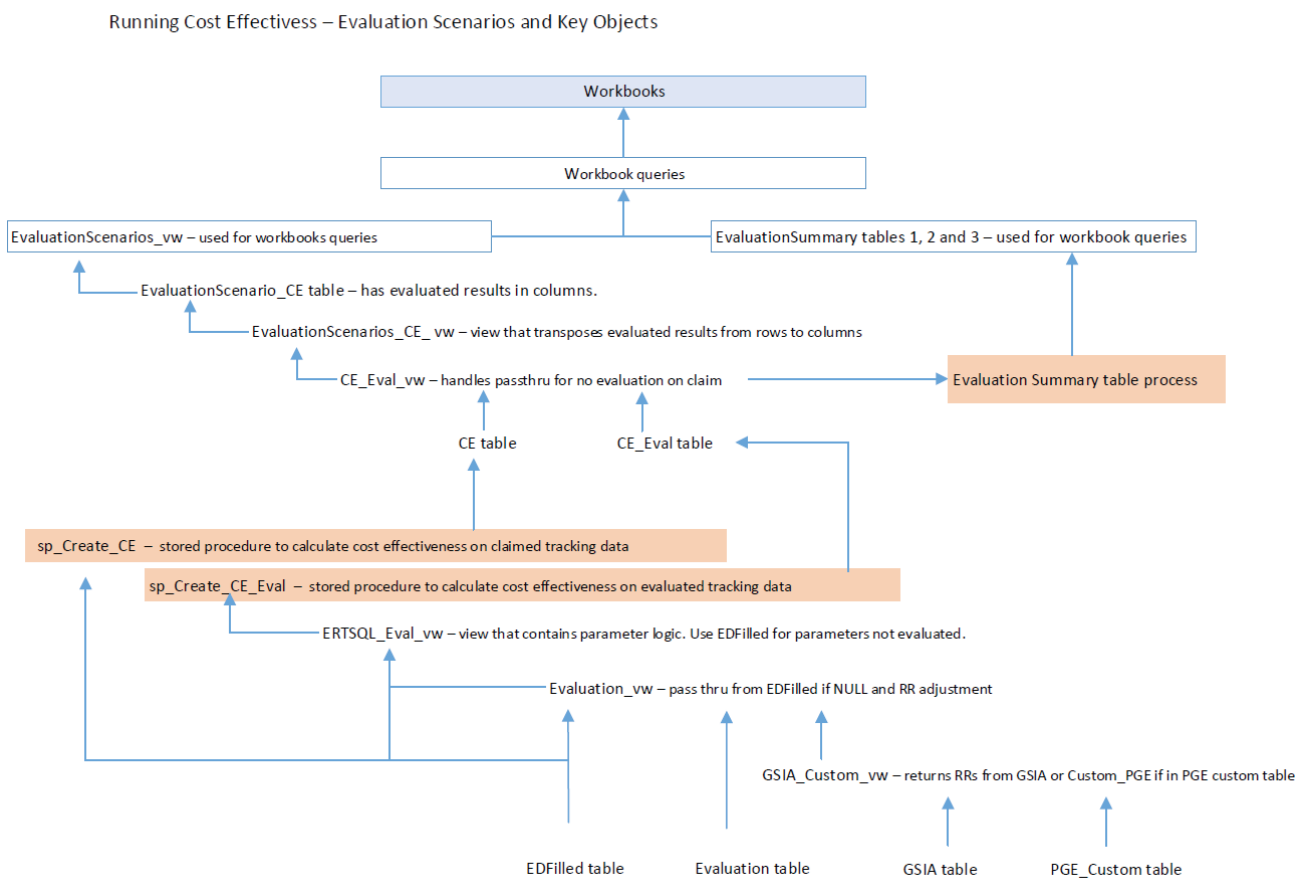
Running Evaluation Scenarios and Key Objects

The following flowchart illustrates how reported (unevaluated) and evaluated data flows through the cost effectiveness process. The CET pulls the various data parameters (claimed and evaluated) to run cost effectiveness and savings summaries on each scenario to produce data for summary workbooks by sector, appendices, and graphics displayed in the Energy Efficiency Statistics page in the Energy Efficiency Data Portal [http://eestats.cpuc.ca.gov/Views/EEDataPortal.aspx].

Source Data are the EDFILLED and Evaluation tables, both of which are found in the Data Appendix. The process of creating EDFILLED is described here. The process of creating the Evaluation table is found here.

The outputs from the scenarios are available to users when downloading the full set of 2010-2012 tools described in these appendices including the Cost Effectiveness Tool and the CET_1012_AnnualReport_Review database. The incremental outputs from this tools were the foundation for developing an portfolio level summary of the relative influence of each evaluation update.

Figure J-1 Running Cost Effectiveness, Data Flow



Scenario outputs and relative influence of parameter updates

The following graphics provide an illustration of the relative influence of each parameter update. Several caveats are necessary to appreciate the limitations and value of these graphics, and in fact their calculation is pathway-dependent. First, more than one parameter update may have been applied to a measure (e.g. unit energy savings and installation rate were updated for an installed light bulb). Hence the influence of each parameter cannot be completely isolated but they interact. Second, the parameter may have multiple factors within its calculation that could influence the value (e.g. hours of use within the unit energy savings) and this break down is at the highest parameter level. Third, the parameter gauging program influence (the net to gross ratio) is estimated in the program plans, and in many cases updated with evaluated results. The graphics show the program attribution in its two constituent parts to illustrate that the additional net adjustments from evaluation were small relative to the already assumed net adjustment.

The following parameter adjustments in the graphics are defined as follows:

a.) Installation Rate – the units were verified as installed and operating
b.) Unit Energy Savings Adjustment – savings per unit installed (for deemed measures)
c.) Realization Rate – savings achieved versus expected (ratio used for custom projects)
d.) Program influence Expected Adjustment (reported) – planning assumption of program influence
e.) Program influence Evaluation Adjustment – incremental difference in program influence found through field evaluation.

The statewide and utility specific results are provided in the following series of graphics. The net adjustments are the largest for all three utilities and statewide for electric savings (about half). Gross adjustments made up the other half with the relative influence being attributable mostly to the unit energy savings (25 percent) adjustment and equally, but in different directions, the installation rate (upward 11 percent) and realization rate (downward 11 percent). Hence the influence of the programs was not drastically different from portfolio planning expectations, and the adjustments for gross savings estimates were a function of new information regarding performance and assumptions that was gathered in the field data collection.

Figure J-2 Statewide Relative Parameter Influence – GWh

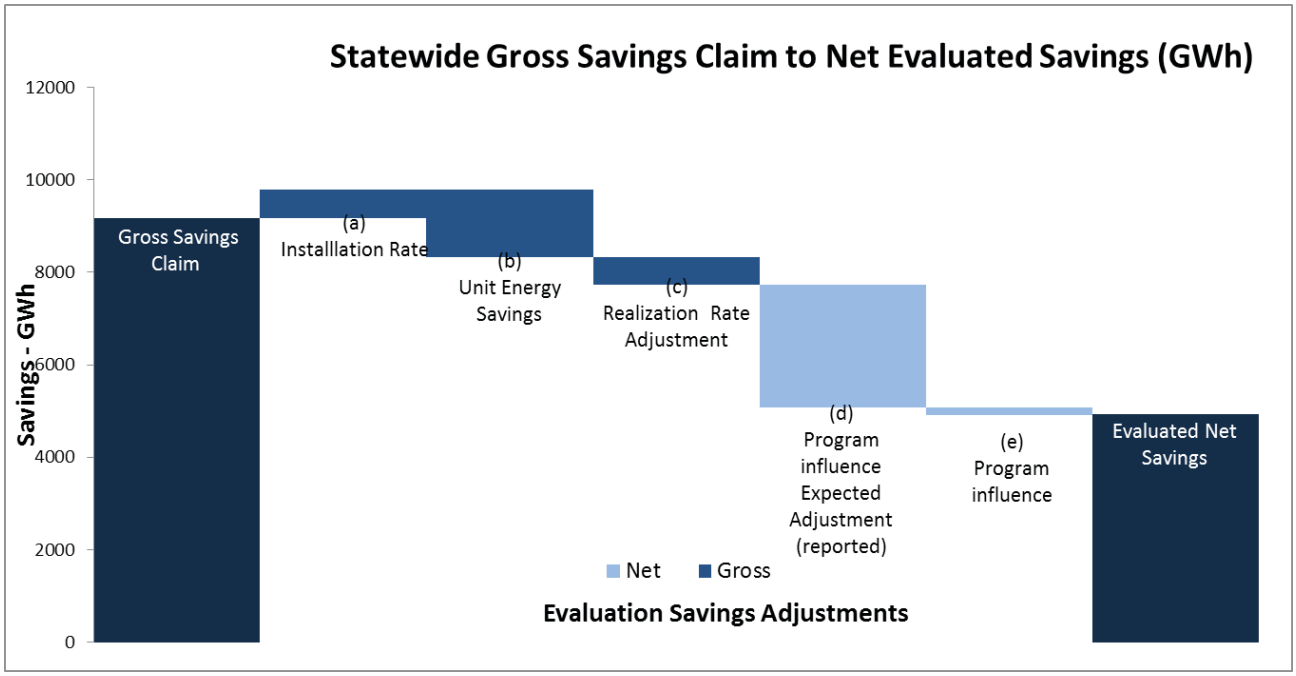


Figure J-2 PG&E Relative Parameter Influence – GWh

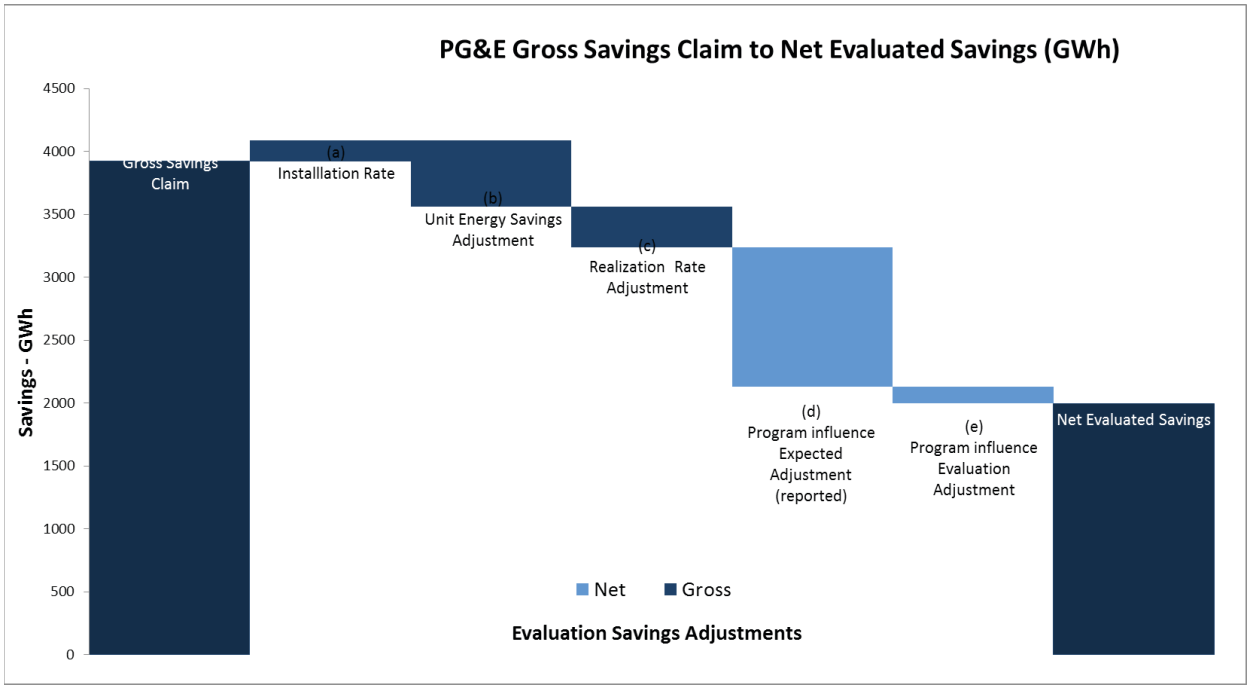


Figure J-3 SCE Relative Parameter Influence – GWh

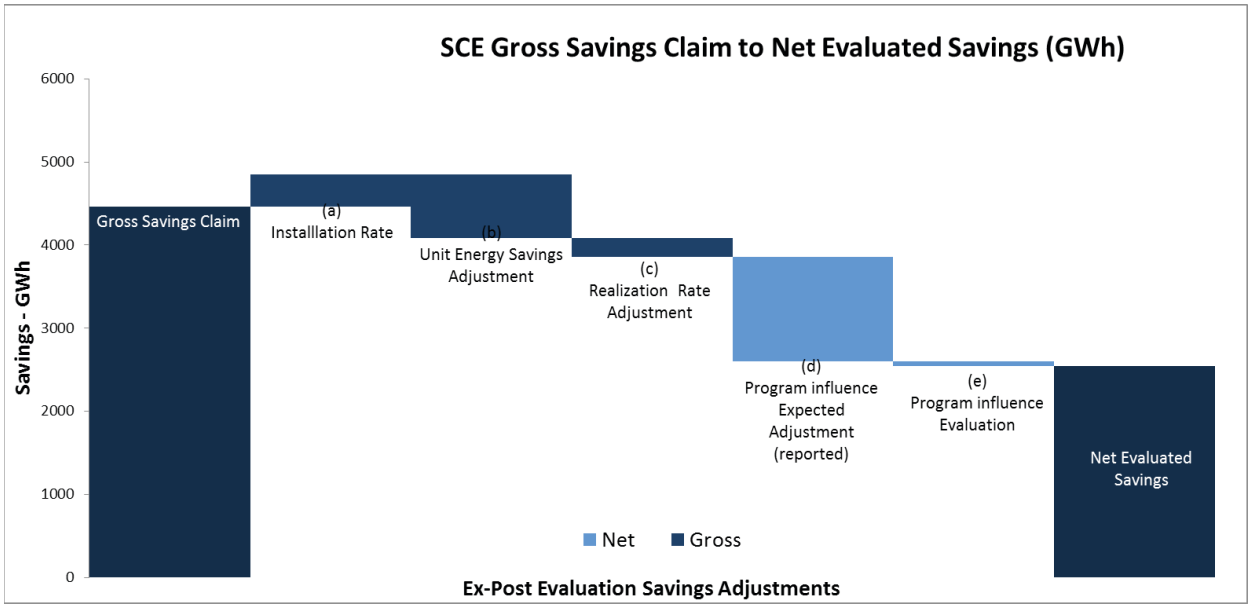
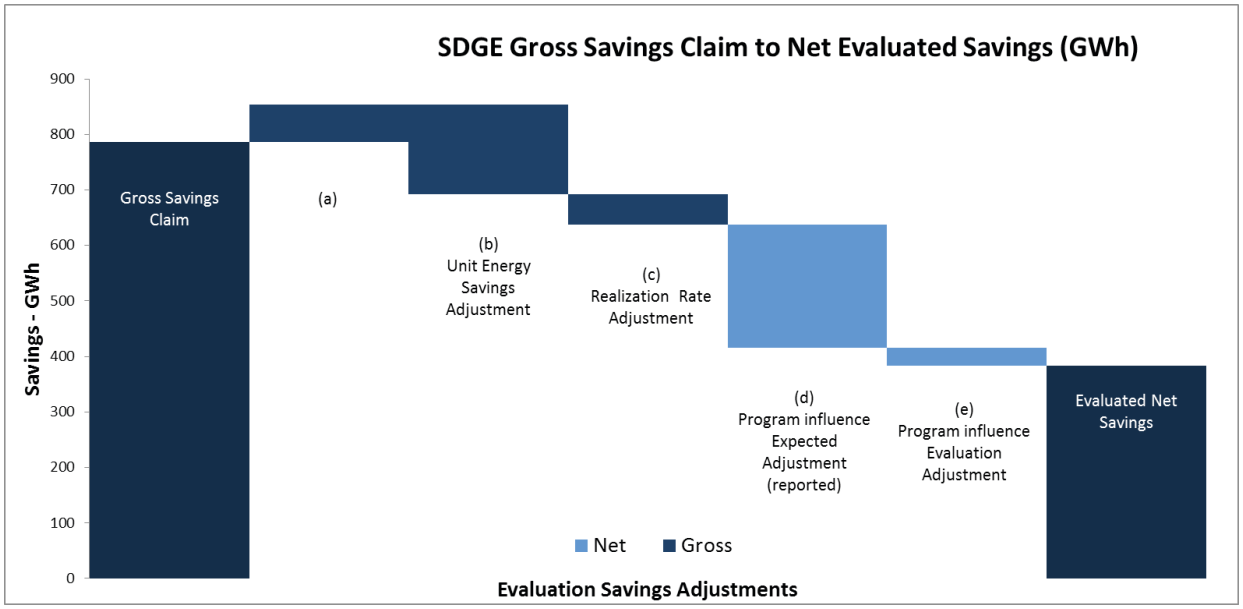



Figure J-4 SDG&E Relative Parameter Influence – GWh