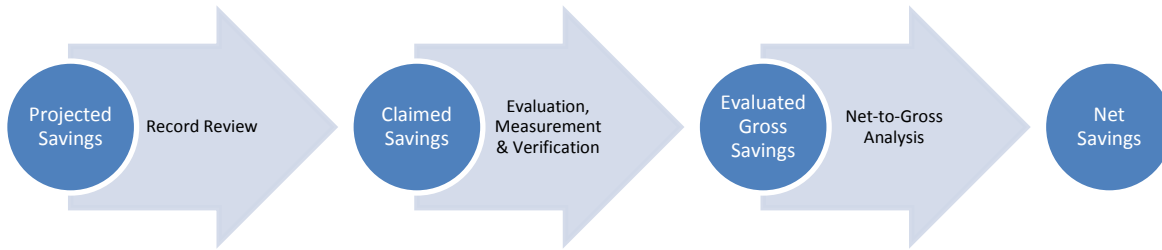


Savings Definitions and EM&V Components – Phase 1 & 2



Savings Terms	Definition ¹	EM&V		Treatment in UMP	
		Activity	Definition	Included	Format
Projected Savings (prepared by Administrator)	Expected savings estimates used for program design and portfolio planning purposes, calculated using algorithms or stipulated (deemed) saving values	Prepare evaluation plan			
Claimed Savings (prepared by Administrator)	The change in energy use and/or demand, expected to result directly from program-related actions taken by participants in an efficiency program as reported by the program administrator.	May include some QA/QC and verification activities conducted by program administrator.			
		Record Review QA/QC²	<p>Check for accuracy and/or validity of calculations, assumptions and sources (e.g., TRM).</p> <p>Conduct QA/QC of program projections for accuracy and consistency.</p> <p>Conduct evaluability assessment³.</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>Individual Protocols</p> <p>“Other Evaluation Issues.”</p> <p>“Other Evaluation Issues.”</p>
		Verification⁴	<p>Check calculation and data errors. Verify installation rates, functionality, and satisfies programmatic requirements. Verify key dependent variables to determine savings; e.g. hours of use, number of installations.</p>	<p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>Individual Protocols</p> <p>Individual Protocols</p> <p>Individual Protocols</p>

		Evaluation⁵	Develop research design. Develop sampling plan (as needed). Determine gross and/or net savings, first year and/or lifecycle Analyze persistence of savings.	Yes (for statistical analysis) Yes (first-year savings) Yes (long-term savings)	Individual Protocols Individual Protocols “Other Evaluation Issues.”
Evaluated Savings (prepared by Evaluator)	Savings estimates reported by an independent, third-party evaluator after the subject energy-efficiency activities and an impact evaluation have been completed. Differs from reported savings estimate in that an evaluator, to some degree, has conducted evaluation and/or verification activities.				
Metrics		NTG ratio, Realization rate, gross, net, first year (annual) and lifecycle			
Gross Savings	The change in energy consumption and/or demand that results directly from program-related actions taken by participants in an efficiency program, regardless of why they participated. Also referred to as “adjusted” gross savings, account for adjustments resulting from the M&V activities. The ratio of Evaluated Gross Savings and Claimed savings is the “gross savings realization rate.”				
		Net-to-Gross⁶ Analysis	Assess freeridership. Assess participant spillover. Assess nonparticipant spillover.	Yes	General NTG methodology chapter and individual measure protocols.
Net Savings	The total change in load that				

	is attributable to an energy-efficiency program. This change in load may include, implicitly or explicitly, factors such as common practice, free ridership and participant and non-participant spillover, induced market effects, and rebound effects. These factors may be considered in how a baseline is defined (e.g., common practice) and/or in adjustments to Gross Savings values.	
Other Evaluation Issues	These are adjustments to the savings, may be proscribed to either net or gross evaluated savings.	Assess rebound Assess leakage (outflow) Assess leakage (inflow)

- 1- Record Review: Review and assessment of program administration records, including data tracking system, project-specific records and rebate processing procedures to ensure proper tracking and reporting.
- 2- Evaluability assessment involves reviewing the program records and databases to ensure all relevant data for the assessment of impacts are collected in the appropriate format, unit, frequency, etc.
- 3- Verification: An independent assessment that the program has been implemented per the program design. For example, the objectives of measure installation verification are to confirm (1) the installation rate, (2) that the installation meets reasonable quality standards, and (3) the measures are operating correctly and have the potential to generate the predicted savings. Verification activities are generally conducted during on-site surveys of a sample of projects. Project site inspections, participant phone and mail surveys and/or Implementer and consumer documentation review are typical activities associated with Verification. Verification may include one time or multiple activities over the estimated life of the measures. Verification may include review of documentation. Verification is a subset of Evaluation.
- 4- Evaluation: The conduct of any of a wide range of assessment studies and other activities aimed at determining the effects of a program, understanding or documenting program performance, program or program-related markets and market operations, program-induced changes in energy efficiency markets, levels of demand or energy savings, or program cost-effectiveness. Market assessment, monitoring and evaluation (M&E), and measurement and verification (M&V) are aspects of evaluation.
- 5- Net-to-Gross Analysis: Assessment of behavioral effects, particularly freeridership, participant spillover, non-participant spillover, and rebound using accepted research methods.