

COMMON ENERGY EFFICIENCY TERMS AND DEFINITIONS

Adopted Program Budget

The program budget as it is adopted by the Commission. Inclusive of costs (+/-) recovered from other sources.

Advanced Technologies

Measures or processes which exceed the efficiency or thermodynamic performance of standard energy using equipment or processes.

Affiliate

Any person, corporation, utility, partnership, or other entity 5% or more of whose outstanding securities are owned, controlled, or held with power to vote, directly or indirectly either by an administrator or any of its subsidiaries, or by that administrator's controlling corporation and/or any of its subsidiaries as well as any company in which the administrator, its controlling corporation, or any of the administrator's affiliates exert substantial control over the operation of the company and/or indirectly have substantial financial interests in the company exercised through means other than ownership. For purposes of these Rules, "substantial control" includes, but is not limited to, the possession, directly and indirectly and whether acting alone or in conjunction with others, of the authority to direct or cause the direction of the management of policies of a company. A direct or indirect voting interest of five percent (5%) or more by the administrator, its subsidiaries, or its affiliates in an entity's company creates a presumption of control.

Avoided Costs

Avoided costs refers to the incremental costs avoided by the investor-owned utility when it purchases power from qualifying facilities, implements demand-side management, such as energy efficiency or demand-response programs, or other wise defers or avoids generation from existing/new utility supply-side investments or energy purchases in the market. Avoided costs also encompass the deferral or avoidance of transmission and distribution-related costs. (D.08-01-006, Footnote 2)

Baseline Data

The state of performance and/or equipment that what would have happened in the

absence of the program induced energy efficiency.

Coincident Peak Demand

The metered or estimated demand of a device, circuit, or building that occurs at exactly the same time as the system peak for a given year and weather condition.

Community Choice Aggregators

Organizations created by local governments pursuant to Assembly Bill 117 for the purpose of procuring power and administering energy efficiency programs on behalf of local citizens.

Competitive Solicitation

The process whereby parties are requested to submit bids offering innovative approaches to energy savings or improved program performance.

Conservation

Reduction of a customer's energy use achieved by relying on changes to the customer's behavior which may result in a lower level of end use service.

Conservation Measures

Activities and/or behaviors aimed at reducing energy consumption.

Conservation Programs

Programs which are intended to influence customer behavior as a means to reduce energy use.

Cost Effectiveness

An indicator of the relative performance or economic attractiveness of any energy efficiency investment or practice when compared to the costs of energy produced and delivered in the absence of such an investment.

Cream Skimming

Cream skimming results in the pursuit of a limited set of the most cost-effective measures, leaving behind other cost-effective opportunities. Cream skimming becomes a problem when lost opportunities are created in the process.

Cross Subsidization

Benefits enjoyed by one group, such as a customer class, which are funded by another group.

Custom Measures/projects

Energy efficiency efforts where the customer financial incentive and the ex ante energy

savings are determined using a site-specific analysis of the customer's facility (D.11-07-030 page 31).

Customer

Any person or entity that pays an electric and/or gas bill to an IOU or CCA and that is the ultimate consumer of goods and services including energy efficiency products, services, or practices.

Cumulative Savings

As clarified in D.07-10-032, cumulative savings represent the savings in that year from all previous measure installations (and reflecting any persistence decay that has occurred since the measures were installed) plus the first-year savings of the measures installed in that program year.

Deemed Measure

A prescriptive energy efficiency measure.

Delayed Installation

Products which are claimed as installed in a specific quarter but are likely to be installed at a later date (D.11-07-030, page 21).

Dual Test

The requirement that an energy efficiency activity pass both the TRC and the PAC cost effectiveness test.

E3 Calculator

The E3 calculator is a model developed by Energy Environmental Economics (or "E3" for use by the IOUs to map Commission-adopted avoided costs to energy efficiency programs for cost-effectiveness calculations.

Effective Useful Life (EUL)

An estimate of the median number of years that the measures installed under the program are still in place and operable.

Electricity Savings

Reduced electricity use (or savings) produced by either energy efficiency investments which maintain the same level of end use service or conservation actions which usually reduce energy use by reducing the quantity or quality of the baseline energy services demanded.

Emerging Technologies

New energy efficiency technologies, systems, or practices that have significant energy

savings potential but have not yet achieved sufficient market share (for a variety of reasons) to be considered self sustaining or commercially viable. Emerging technologies include late stage prototypes or under-utilized but commercially available hardware, software, design tools or energy services that if implemented appropriately should result in energy savings.

Emissions Reductions

The Commission requires annual reporting of reduced emissions of carbon dioxide (CO₂), sulfur oxides (SO_x), nitrous oxides (NO_x), and particulate matter (PM₁₀) as a result of energy efficiency savings. The IOUs use the E3 calculator to compute the annual electric and natural gas emissions reductions, which are the units implemented in the year times the annual emission reduction for a particular measure. The E3 calculator calculates values of CO₂ in tons per kWh or therms; NO_x and PM₁₀ are in pounds per kWh or therms.

The following equations are from the “E3 Calculator Tech Memo” found at the following web link:

<http://ethree.com/documents/E3%20EE%20calcs/E3%20Calculator%20TechMemo%205d.doc>

Electric Reductions: CO₂ tons per year (*Emission[E][CO₂]*)

$$E_{CO_2} = \sum_{y=1}^y \left(\sum_{M=1}^{M} IN_{M,Q} \cdot NTG_M \cdot ER_{CO_2,M} \cdot Emission_{E,CO_2,IN} \cdot kWh [2] \cdot [2] \right)$$

Where

y = year of consideration. 2006 = 1. “Total Annual” used for years 2008 through the end of the implementation period.

Q = Quarter of the year. Jan-Mar 2006 = 1.

IN_{M,Q} = # of incremental of measures implemented in quarter Q. NTG_M =

Net-to-Gross ratio for measure M.

ER[CO₂]_M = Emission rate of CO₂ in tons per kWh of measure M. (The emissions rate for each measure is calculated using the product of the hourly measure savings load shape and the hourly heat rate for the IOU.).

kWh_{AM} = Annual kWh reduction for measure M.

NOX and PM-10 equations are the same. Just replace [CO2] with the appropriate indicator. Note that CO2 emission rate is in tons per kWh. NOX and PM-10 are in pounds per kWh.

Gas Reductions: CO2 tons per year (Emission[G][CO2])

$$\begin{aligned}
 & \sum_{y=2006}^{2010} \left(\sum_{Q=1}^4 \text{Th}_{AM} \text{NTG}_M \text{ER}_{CO_{GCT}} \text{Emission}_{GCOIN} \right) \times \dots \times \dots \\
 & = \dots \\
 & \sum_{y=2006}^{2010} \left(\sum_{Q=1}^4 \dots \right) \times \dots \times \dots \\
 & = \dots
 \end{aligned}$$

Where

y = year of consideration. 2006 = 1. "Total Annual" used for years 2008 through the end of the implementation period.

Q = Quarter of the year. Jan-Mar 2006 = 1.

IN_{M,Q} = # of incremental of measures implemented in quarter Q. NTG_M = Net-to-Gross ratio for measure M.

ER[CO2]_{GCT} = Emission rate of CO2 in tons per therm, based on the gas combustion type (GCT) specified on the input sheet for the measure.

Th_{AM} = Annual gas reduction (in therms) for measure M.

NOX and PM-10 equations are the same. Just replace [CO2] with the appropriate indicator. Note that CO2 emission rate is in tons per Therm. NOX and PM-10 are in pounds per Therm.

Energy Efficiency Groupware Application (EEGA)

The IOUs post reports to the EEGA webpage, which is accessible to the public: <http://eega.cpuc.ca.gov>.

End Use

1) The purpose for which energy is used (e.g. heating, cooling, lighting). 2) A class of energy use that an energy efficiency program is concentrating efforts upon. Typically categorized by equipment purpose, equipment energy use intensity, and/or building type.

Energy Efficiency

Activities or programs that stimulate customers to reduce customer energy use by making investments in more efficient equipment or controls that reduce energy use while maintaining a comparable level of service as perceived by the customer.

Energy Efficiency Measure

An energy using appliance, equipment, control system, or practice whose installation or implementation results in reduced energy use (purchased from the distribution utility) while maintaining a comparable or higher level of energy service as perceived by the customer. In all cases energy efficiency measures decrease the amount of energy used to provide a specific service or to accomplish a specific amount of work (e.g., kWh per cubic foot of a refrigerator held at a specific temperature, therms per gallon of hot water at a specific temperature, etc). For the purpose of these Rules, solar-powered, non generating technologies are eligible energy efficiency measures (D.09-12-022, OP 1).

Energy Efficiency Programs

Programs that reduce customer energy use by promoting energy efficiency investments or the adoption of conservation practices or changes in operation which maintain or increase the level of energy services provided to the customer.

Energy Efficiency Savings

The level of reduced energy use (or savings) resulting from the installation of an energy efficiency measure or the adoption of an energy efficiency practice, subject to the condition that the level of service after the investment is made is comparable to the baseline level of service. The level of service may be expressed in such ways as the volume of a refrigerator, temperature levels, production output of a manufacturing facility, or lighting level per square foot.

Evaluation, Measurement and Verification (EM&V)

Activities that evaluate, monitor, measure and verify performance or other aspects of energy efficiency programs or their market environment.

Evaluation Project Budget

The project level evaluation budget as it is defined by the program administrators or Energy Division for internal program budgeting and management purposes. Inclusive of direct and allocated overhead and costs (+/-) recovered from other sources.

Ex Ante Values

Estimated savings values calculated based on assumptions prior to the evaluation of the portfolio cycle. These savings reflect the IOU reported savings, which are trued up with final evaluation.

Ex Ante Review

The review process that occurs before savings for a measure or project savings claim is “frozen” to verify that the ex ante values used to calculate the reported savings are reasonable and based on best available information.

Financial Incentive

Financial support (e.g., rebates, low interest loans, free technical advice) provided to customers as an attempt to motivate the customers to install energy efficient measures or undertake energy efficiency projects. (See Rebate)

Free Drivers

A free driver is a non-participant who adopted a particular efficiency measure or practice as a result of a utility program. (From April 2006 EM&V Protocols)

Free riders (Free Ridership)

Program participants who would have installed the program measure or equipment in the absence of the program.

Fuel Substitution

Programs which are intended to substitute energy using equipment of one energy source with a competing energy source (e.g. switch from electric resistance heating to gas furnaces).

Funding Cycle

Period of time for which funding of energy efficiency programs have been approved by the Commission.

Gas Savings

Reduced natural gas usage (or savings) produced by either energy efficiency investments which maintain the same level of end use service or conservation actions which can reduce energy use by reducing the quantity or quality of the baseline services provided.

Gross Savings

Gross savings count the energy savings from installed energy efficiency measures irrespective of whether or not those savings are from free riders, i.e., those customers who would have installed the measure(s) even without the financial incentives offered under the program. Gross savings are adjusted by a net-to-gross ratio to produce net savings, that is, to remove the savings associated with free riders.

Gross Realization Rate

Gross Realization Rate (GRR) is the ratio of achieved energy savings to predicted energy savings; as a multiplier on Unit Energy Savings, the GRR takes into account the likelihood that not all Commission-approved projects undertaken by IOUs will come to fruition.

Hard to Reach, Residential

Those customers who do not have easy access to program information or generally do not participate in energy efficiency programs due to a language, income, housing type, geographic, or home ownership (split incentives) barrier. These barriers are defined as:

Language – Primary language spoken is other than English, and/or Income

– Those customers who fall into the moderate income level (income levels less than 400% of the federal poverty guidelines and/or

Housing Type – Multi-family and Mobile Home Tenants, and/or

Geographic – Businesses in areas other than the San Francisco Bay Area, San Diego area, Greater Los Angeles Area (Los Angeles, Orange, San Bernardino, Riverside and Ventura counties) or Sacramento, and/or

Home Ownership – Renters

Incremental Measure Cost

The additional cost of installing a more efficient measure calculated from the price differential between energy-efficient equipment and services and standard or baseline state. These costs include any direct or indirect incremental cost that is attributable to the energy efficiency activity. This may include design assistance, surveys, materials and labor, commissioning costs, etc.

Information & Education

Information and education programs can provide a wide range of activities designed to inform or educate a customer or customer group. Generally these range from in-depth, one-on-one, on-site or centrally located classroom style instruction in topics related to energy efficiency, to programs that target information to specific types of customers, to general information provided to a wide range of customers, to short inexpensive public service announcements on FCC approved communication frequencies. Programs intended to provide customers with information regarding generic (not customer specific) conservation and energy efficiency opportunities. For these programs, the information may be unsolicited by the customer.

Innovation Incubator

A low-cost, stand-alone program designed to grow innovative energy saving programs and processes for the larger portfolio over the long term. The incubator funds new program ideas that meet reasonable scientific scrutiny for potentially cost-effective energy savings and peak reduction.

Installation Rate

Installation Rate is the ratio of the number of verified installations of a measure divided by the number of claimed installations rebated by the utility during a claim period. Typically Installation Rates used on an ex ante basis will be based upon previous ex post evaluations.

Institutional Barriers

A type of market barrier: In this case, the internal organizational hurdles that inhibit the evaluation and or choice to take energy efficiency actions.

Least Cost/Best Fit

The procurement of cost-effective supply and demand-side resources that, regardless of ownership, meet capacity and energy deliverability requirements. Energy efficiency resources are constructed from the bottoms up approach that aggregates the demand and energy savings from various energy-saving measures and activities into applicable end-use categories such as space cooling, space heating, lighting, and refrigeration, in order to provide near- and long-term peaking, intermediate, and baseload requirements.

Levelized Cost

An estimate of the annualized cost of installing an energy efficiency measures divided by the annual energy savings. Typically calculated by multiplying the incremental cost of the measure by capital recovery factor (function of discount rate and expected useful life of the measure) and then dividing by annual energy savings.

Load Management

Programs which reduce or shift electric peak demand away from periods of high cost electricity to non-peak or lower cost time periods, with a neutral effect on or negligible increase in electric use.

Lost Opportunities

Energy efficiency measures that offer long-lived, cost-effective savings that are fleeting in nature. A lost opportunity occurs when a customer does not install an energy efficiency measure that is cost-effective at the time, but whose installation is unlikely to be cost-effective if the customer attempts to install the same measure later.

Market Effect

A market effect is a change in the structure or functioning of a market or the behavior of participants in a market that result from one or more program efforts. Typically these efforts are designed to increase in the adoption of energy-efficient products, services or practices and are causally related to market interventions. Market effects include reductions in energy consumption and/or demand in a utility's service area caused by the presence of the DSM program, beyond program related gross or net savings of participants. These effects could result from: (a) additional energy efficiency actions that program participants take outside the program as a result of having participated; (b) changes in the array of energy-using equipment that manufacturers, dealers and contractors offer all customers as a result of program availability; and (c) changes in the energy use of non-participants as a result of utility programs, whether direct (e.g., utility program advertising) or indirect (e.g., stocking practices such as (b) above or changes in consumer buying habits)." Participant spillover is described by (a), and non participant spillover, by (b) and (c). Some parties refer to non-participant spillover as "free-drivers." (From EM&V Protocols, April 2006)

Market Transformation

Decision (D.)09-09-047, defines market transformation as "long-lasting, sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where continuation of the same publicly-funded intervention is no longer appropriate in that specific market. Market transformation includes promoting one set of efficient technologies until they are adopted into codes and standards (or otherwise adopted by the market), while also moving forward to bring the next generation of even more efficient technologies to the market."¹⁰⁰

Marketing, Education and Outreach (ME&O)

Communications activities designed to identify, reach and motivate potential customers to take actions to either learn more about or invest in energy efficiency opportunities.

Measures

- 1) Specific customer actions which reduce or otherwise modify energy end use patterns.
- 2) A product whose installation and operation at a customer's premises results in a reduction in the customer's on-site energy use, compared to what would have happened otherwise.

Net savings

The savings realized when free ridership is accounted for. The savings is calculated by multiplying the gross savings by the net to gross ratio.

Net to Gross Ratio

A ratio or percentage of net program savings divided by gross or total impacts. Net to gross ratios are used to estimate and describe the free-ridership that may be occurring within energy efficiency programs.

Non-price Factors

Those factors included in cost effectiveness tests, other than commodity prices and transportation and distribution costs, e.g., environmental factors.

Non-Resource Program

Energy efficiency programs that do not directly procure energy resources that can be counted, such as marketing, outreach and education, workforce education and training, and emerging technologies.

Participant Test

The Participant Test is the measure of the quantifiable benefits and costs to the customer due to participation in a program. Since many customers do not base their decision to participate in a program entirely on quantifiable variables, this test cannot be a complete measure of the benefits and costs of a program to a customer. (See SPM link under Attachment A.)

Partnership

Coordinated efforts of a utility and a local government or other entity to use the strengths of both parties to achieve energy savings goals.

Peak Demand, Reported (per OP 1 of D.06-06-063 as modified by D.12-05-015) The peak megawatt load reduction contained in the most recently adopted DEER used to estimate and verify peak demand savings values. The DEER method utilizes an estimated average grid level impact for a measure between 2 PM and 5 PM during a “heat wave” defined by a three consecutive weekdays for weather conditions that are expected to produce a regional grid peak event. DEER utilizes a 3-day “heat wave” that occurs on consecutive days in June through September such that the three consecutive days do not include weekends or holidays, and where the heat wave is ranked by giving equal weight to the peak temperature during the 72-hour period, the average temperature during the 72-hour period and the average temperature from noon – 6 PM over the three days.

Peak Demand-General (kW)

- 1) The maximum level of metered demand during a specified period, such as a billing month, or during a specified peak demand period.
- 2) Extremely high energy use, usually with reference to a particular time period.

Peak Savings- Coincident (kW)

The estimated peak (e.g. highest) demand savings (MW or kW) from a program for a specific time, date, and location coincident with the forecasted system peak for a given area and a given set of weather conditions. This estimate must also include consideration of the likelihood that the equipment is actually on at the time of coincident peak. Usage of this definition: Resource planning- for making adjustments to forecasts of peak usage for understanding reserve margins and reliability purposes.

Peak Savings- Daily Average (kW)

The average peak demand savings (kWh impacts/ # of hours in the peak rate period) for a given utility during their peak season. Example for SCE-Peak period is for summer weekdays from 12-6 PM. So - daily average savings would be the number of kWh saved/ # of kWhs saved for all weekday peak periods (= kWh/5 days/week * 12 weeks/summer* 6 hours/day = kW average. Usage: Cost effectiveness analysis, primarily for valuing energy savings that occur during the peak period using “peak” average avoided costs.

Peak Savings –Non coincident (kW)

Estimated highest level of peak savings(kW or MW) for a given program during the peak time period for a given utility on the hottest day of a “normal” weather year. Thus if a group of measures saved 1MW at 2PM, 1.7 MW at 3PM, 1.6 MW at 4PM, 1.0 MW at 5 PM and 1.2 MW at 6 PM, the peak non coincident savings would be 1.7 MW. This savings estimate does not take into account how many of the affected devices or equipment will be operating during the peak time period. Usage: Cost effectiveness analysis and procurement.

Peer Review Group (PRG)

A subset of the Program Advisory Group consisting of non-financially interested members who will review utility submittals to the Commission, assess overall portfolio plans, plans for bidding out pieces of the portfolio, and the bid evaluation criteria for selecting third-party programs.

Performance Uncertainties

A market barrier: refers to new technologies or systems whose efficiency or system performance levels are uncertain due to lack of experience.

Portfolio

All IOU and non-IOU energy efficiency programs funded by ratepayers that are implemented during a program year or cycle. May also refer to a group of programs sponsored, managed, and contracted for by a particular IOU.

Portfolio Reporting

Regularly scheduled reporting by the portfolio administrators directly to the Commission. Metrics reported are: portfolio budgets and expenditures, measures installed, services rendered, and other program activity deemed relevant to Energy Division's responsibility to support the Commission's responsibilities of quality assurance, policy oversight, and EM&V.

Pre-commercialization

A phase in the life of a product before it is readily available on the market.

Program

A collection of defined activities and measures that

- are carried out by the administrator and/or their subcontractors and implementers,
- target a specific market segment, customer class, a defined end use, or a defined set of market actors (e.g. designers, architects, homeowners),
- are designed to achieve specific efficiency related changes in behavior, investment practices or maintenance practice in the energy market, • and are guided by a specific budget and implementation plan.

Program Activities

Any action taken by the program administrator or program implementer in the course of implementing the program.

Program Administrator

An entity tasked with the functions of portfolio management of energy efficiency programs and program choice.

Program Administrator Cost (PAC) Test

Under portfolio evaluation of cost effectiveness, the PAC test contains the program benefits of the TRC test, but costs are defined differently to include the costs incurred by the program administrator but not the costs incurred by the participating customer. (See the SPM link under Attachment A.)

Program Advisory Group (PAG)

Advisory groups for each utility service area composed of energy efficiency experts representing customer groups, academic organizations, environmental organizations, agency staff and trade allies in the energy market.

Program Cycle

The period of time over which a program is funded and implemented.

Program Implementation Plan

A detailed description of a program that includes program theory, planned program processes, expected program activities, program budget, projected energy savings and demand reduction and other program plan details as required by the Commission, assigned ALJ, or Energy Division.

Program Implementers

An entity or person that puts a program or part of a program into practice based on contacts or agreements with the portfolio manager.

Program Strategy

The set of activities deployed by the program in order to achieve the program's objectives.

Program Year(s)

The calendar year(s) during which the program operates.

Ratepayer

Those customers who pay for gas or electric service under regulated rates and conditions of service.

Rebate

A financial incentive paid to the customer in order to obtain a specific act, typically the installation of energy efficiency equipment.

Remaining Useful Life (RUL)

An estimate of the median number of years that a measure being replaced under the program would remain in place and operable had the program intervention not caused the replacement.

Report Month

The month for which a particular monthly report is providing data and information. For example, the report month for a report covering the month of July 2006, but prepared and delivered later than July 2006, would be July 2006.

Resource Programs

Energy Efficiency programs that generate energy savings that are quantified and tracked by program administrators.

Resource Value

An estimate of the net value of reliable energy (e.g., kWh, therms) and capacity (e.g., kW, Mcfd) reductions resulting from an energy efficiency program. This includes the

net present value of all of the costs associated with a program and all of the estimated benefits (both energy and capacity). The calculation of resource value and associated benefits should be consistent with the avoided costs adopted in the most recent Commission proceeding or otherwise provided for by the Commission.

Savings Decay

The reduction of cumulative savings due to previous measure installations passing their Remaining Useful Life or Effective Useful Life. Per D.09-09-047 and until EM&V results inform better metrics, IOUs may apply a conservative deemed assumption that 50% of savings persist following the expiration of a given measure's life.¹⁰¹

Service Area

The geographical area served by a utility.

Short Term/Long Term

Planning terms referring to the timing or expected timing of program activities, program impacts, or program funding. Short term indicates program activities, program impacts, or program funding that occurs during the current program cycle. Long term indicates program activities, program impacts, or program funding that occurs beyond the current program cycle.

Source-BTU Consumption

Conversion of retail energy forms (kWh, therms) into the BTU required to generate and deliver the energy to the site. This conversion is used to compare the relative impacts of switching between fuel sources at the source or BTU level for the three-prong test required for fuel-substitution programs.

Standard Practice Manual (SPM)

The California Standard Practice Manual: Economic Analysis of Demand-side Programs and Projects is jointly issued by the California Public Utilities Commission and the California Energy Commission. The SPM provides the definitions for the standard cost effectiveness tests and their components used for energy efficiency programs. SPM tests are further clarified in Commission Decisions as cited in the Cost-Effectiveness Rules in this Policy Manual.

Statewide

Energy efficiency programs or activities that are essentially similar in design and available in all Commission regulated utility service areas in California.

Third Party/Non-IOU

Non-regulated implementers of ratepayer funded energy efficiency activities.

Total Resource Cost Test (TRC)

The TRC test measures the net resource benefits from the perspective of all ratepayers by combining the net benefits of the program to participants and non-participants. The benefits are the avoided costs of the supply-side resources avoided or deferred. The TRC costs encompass the cost of the measures/equipment installed and the costs incurred by the program administrator. (See SPM link under Attachment A.)

Unit Energy Consumption

Unit Energy Consumption (UEC) is the expected annual energy consumption of a technology, group of technologies, or process.

Unit Energy Savings

Unit Energy Savings (UES) is the estimated difference in annual energy consumption between a measure, group of technologies or processes and baseline, expressed as kWh for electric technologies and therms for gas technologies

Upstream Incentives

Incentives provided to manufacturers or retailers of high efficiency products in order to encourage their production and sales, in contrast to the more common downstream incentives, which are provided directly to customers as rebates.

Workpapers

Documentation prepared by the program administrators or program implementers that documents the data, methodologies, and rationale used to develop ex-ante estimates that are not already fully contained in the Database for Energy Efficiency Resources (DEER) (D.10-04-029, footnote page 20).

Zero Net Energy

Zero Net Energy is defined as the implementation of a combination of building energy efficiency design features and on-site clean distributed generation such that the amount of energy provided by on-site renewable energy sources is equal to the energy consumed by the building annually, at the level of a single “project” seeking development entitlements and building code permits. Definition of zero net energy at this scale enables a wider range of technologies to be considered and deployed, including district heating and cooling systems and/or small-scale renewable energy projects that serve more than one home or business.