Introduction

BEDES, the Building Energy Data Exchange Specification, has been created by Lawrence Berkeley National Laboratory (LBNL), with the help of the many stakeholders of the BEDES Working Group, and funded by the U.S. Department of Energy (DOE), to help standardize and facilitate the exchange of information on building characteristics and energy use. It is intended to be used in tools and activities that help stakeholders make energy efficiency investment decisions, track building performance, and implement energy efficiency policies and programs.

This spreadsheet represents the BEDES Dictionary Version 2.0 which will be used to support the analysis of the performance of buildings by providing a common set of terms and definitions for building characteristics, efficiency measures, and energy use.

The terms and definitions in this BEDES Dictionary were taken from a variety of sources in order to be as complete as possible as well as being inclusive of the existing implementations that characterize the energy use in buildings.

In order for the standardized terms and definitions of the BEDES Dictionary to be incorporated into different implementations, schemas and import/export formats will need to be developed for specific use cases by the appropriate stakeholders. This will allow compliance with BEDES, as described on the BEDES technical website (bedes.lbl.gov).

In Fiscal Year 2016 (FY 2016), LBNL and DOE continued to work with several early adopters of BEDES. These early adopters helped us discover how BEDES can be improved, and Version 2.0 is based on feedback from them, as well as stakeholders in general. We also updated the online interactive website that contains the BEDES Dictionary in a searchable format. The website includes links to the BEDES Technical and Strategic Working Groups Forums, as well as links to the use case schemas and import/export formats for compliant implementations. We also provided support to individual early adoptors in developing field mappings for their data formats.

The BEDES Community is a diverse group of stakeholders, including software developers, government entities (such as cities and states), energy consultants, and energy providers (such as utilities). A strong BEDES Community will be crucial to the success of BEDES for standardizing data exchange, both from a technical and implementation standpoint. We encourage all stakeholders to participate in the BEDES process, and to provide feedback to LBNL as BEDES continues to evolve. We also encourage all stakeholders to become members of the BEDES Working Group. You can request to become a member, or send general feedback about BEDES, by emailing BEDES-Support@lbl.gov.

Useful Links:

BEDES main website

http://energy.gov/eere/buildings/building-energy-data-exchange-specification-bedes

BEDES technical website

http://bedes.lbl.gov/

General Guidelines

Composing Terms

According to your particular use case or software data model, BEDES terms can map directly to single fields or can be combined to form composite terms using a variety of qualifiers. Below are some examples of the different ways in which BEDES terms can

Example

Terms as Separate Fields related in data records

Interval Frequency	Resource Boundary	Resource	Resource Value	Unit of Measure
Annual	Site	Energy	254	kBtu
Month	Source	Electricity	24	kWh
Hour	Site	Potable water	4	gallons

Composite Terms

AnnualSiteEnergyResourceValue = 254 kBtu

MonthSourceElectricityResourceValue = 24 kWh

HourSitePotableWaterResourceValue = 4 gallons

Individual Terms Listed as BEDES Mapping

Interval Frequency = "Annual", Resource Boundary = "Site", Resource = "Energy", Resource Value = [value], Unit of Measure = "kBtu"

Interval Frequency = "Month", Resource Boundary = "Source", Resource = "Electricity", Resource Value = [value], Unit of Measure = "kWh"

Interval Frequency = "Hour", Resource Boundary = "Site", Resource = "Potable water", Resource Value = [value], Unit of Measure = "gallons"

Global Terms

Global terms can be used in many different contexts, and combined with other terms in BEDES to create a field in a specific implementation of BEDES.

Note that a full list of Global Terms can be found on the "Global Terms" worksheet.

Constrained Lists

For terms whose value is a choice from a list, the Data Type is

List	*Definition*
Other	The term applies but none of the constrained list options are appropriate.
Unknown	The term applies, there is such a thing implemented, but which constrained list option is implemented is unknown.
None	The term applies but there is no such thing implemented.
Not applicable	The term does not apply.
Custom	The term applies, there is such a thing implemented, but none of the constrained list options are appropriate, so a custom option is designated.

Note:
"Custom" is an optional addition to any constrained list as needed, and must then include another accompanying field that is free text (or part of the implementation's own enumeration) to characterize the custom field.

An example might be a custom verification program, where "Custom" is added to the existing constrained List for "Verification", and then a second field called "Custom Verification "

Sample Mapping

Adoptors who wish to map to BEDES will have to follow this mapping template. Below is an example of an adoption mapping. The table should be read left to right for each implementation field. If there are no unit conversions required, then this can be explicitly expressed, see column F. See the BEDES Mapping Procedure document under bedes.lbl.gov/technical-documentation

Example

Implementation Table Name	Implementation Field	Implementation Value	Implementation Units	BEDES Term	BEDES Mapping	BEDES Unit	Unit Conversion
Building Info	Gross Floor Area (ft2)	[value]	ft2	Gross Area	Floor Area Qualifier = "Gross"		
					Area = [value]	ft2	=[value]
	Building Type	Hopital	n/a	Occupancy Classification	Occupancy Classification = "Inpatient hospital"		
		Office			Occupancy Classification = "Office"		
		School			Occupancy Classification = "Education"		
		Supermarket			Occupancy Classification = "Grocery store"		
		Restaurant			Occupancy Classification = "Food Service"		
	Number of Employees	[value]	people	Workers On Main Shift Quantity	Occupant Quantity Type = "Workers on main shift"		
					Quantity = [value]	people	=[value]
	Number of Floors Above Grade	[value]	floors	Above Grade Floors Quantity	Location ="Above grade"		
					Spatial Unit Type = "Floors"		
					Quantity = [value]	floors	=[value]
	Owner	[value]	n/a	Owner Full Name	Contact Label = "Owner"		
					Full Name = [value]	n/a	
Energy Use	Site EUI (MJ/ft2)	[value]	MJ/ft2	Annual Site Energy Resource Intensity	Interval Frequency = "Annual"		
					Resource Boundary = "Site"		
					Resource = "Energy"		
					Resource Intensity = [value]	kBtu/ft2	=[value]*0.94781712
	Annual Electricity (renewable)	[value]	kWh	Annual Renewable Electricty Resource Value	Interval Frequency = "Annual"		
					Resource Generation = "Renewable"		
					Resource = "Electricity"		
					Resource Value = [value]	kWh	=[value]

Term	Definition	Data Type	Unit of Measure	Definition Source
Conditioning Status	A description of the state of "conditioning" of a premises or space, where	Constrained List	n/a	LBNL
	Premises is artificially heated.	*Heated*	n/a	LBNL
	Premises is not artificially heated.	*Unheated*	n/a	LBNL
	Premises is artificially cooled.	*Cooled*	n/a	LBNL
	Premises is not artificially cooled.	*Uncooled*	n/a	LBNL
	Premises is conditioned if it is actively cooled, heated, ventilated, and/or controlled	*Conditioned*	n/a	LBNL
	Premises is partially conditioned by artificial heating, cooling, ventilation, or	*Semi conditioned*	n/a	LBNL
	Premises is not conditioned by any artificial cooling, heating, ventilation, and/or	*Unconditioned*	n/a	LBNL
	Premises is ventilated mechanically.	*Ventilated*	n/a	LBNL
	Premises is not ventilated by any means	*Unventilated*	n/a	LBNL
Building Energy Code Or Standard	The name of an energy efficiency code or standard that is applied to building	Constrained List	n/a	LBNL
	American Society of Heating, Refrigeration and Air Conditioning Engineers.	*ASHRAE*		
	The "International Energy Conservation Code IECC" published by the International	*IECC*	n/a	LBNL
	The "Building Energy Efficient Standards for Residential and Nonresidential	*California Title 24*	n/a	LBNL
	The "Standard for the Design of High-Performance Green Buildings, Except Low-	*189.1*	n/a	LBNL
	The "International Green Construct Code (IgCC)" published by the International	*IgCC*	n/a	LBNL
Building Energy Code Or Standard	The version number, such as "90.1" for ASHRAE Standard.	String	n/a	
Building Energy Code Year	Year for the Energy Code or Standard used with the Energy Code term. As the	Year Format from Metadata	n/a	LBNL
Energy Software Tool	A software program that is used in some fashion to calculate the energy	String	n/a	LBNL
Energy Software Tool Version	The release version of the software tool used to calculate energy performance of a	String	n/a	
Sector Classification	The sector classification appropriate for the premises. Also, the sector-appropriate	Constrained List	n/a	LBNL
	Residential designs are meant to accommodate the needs of people residing on	*Residential*	n/a	LBNL
	Commercial designs are meant to accommodate the making of a profit, either	*Commercial*	n/a	LBNL
	Industrial designs are meant to accommodate the making of a profit by providing a	*Industrial*	n/a	LBNL
Notes	Brief note on additional information.	String	n/a	LBNL/IEP
Description	A longer text description.	String	n/a	
Equipment Terms				
Efficiency Qualifier	Variations in the quantification of the effectiveness with which equipment, a product, process, or system performs.	Constrained List	n/a	LBNL
	A ratio of energy output to input.	*Efficiency*	n/a	LBNL
	The percentage of the energy to which the cell is exposed to (input resource) that is actually converted into effective energy (output resource) under standard testing conditions. For solar cells, this is calculated by dividing a cell's power output (in watts) at its maximum power point by the input light (in watts per square meter) and the surface area of the solar cell (in square meters).	*Energy conversion*	n/a	LBNL
	Reflectance is the ratio of the energy reflected from the surface of the interface to the total incident energy. There is a reflection of light at the interface between the first layer of a solar cell and the incident medium, usually air, and there is also reflection at the interfaces between the individual layers within the solar cell. All these processes result in a total reflectance between the solar cell and air. This means that a part of the incident energy that can be converted into a usable energy by the solar cell is lost by reflection.	*Reflectance*	n/a	Solar Cells
	The external quantum efficiency of a solar cell is the percentage of photons that are converted to electric current when the cell is operated under short circuit conditions after the reflected and transmitted light has been lost.	*External quantum*	n/a	LBNL
	The fill factor is the ratio of the actual maximum attainable power to the product of the open circuit voltage and short circuit current.	*Fill factor*	n/a	LBNL
	The amount of light (luminous flux) produced by a light source, usually measured in lumens, as a ratio of the amount of power consumed to produce it, usually measured in watts.	*Efficacy*	n/a	BEDES Beta

Term	Definition	Data Type	Unit of Measure	Definition Source
	A factor is used to compare the relative efficiency of water heaters, dishwashers, clothes washers, and clothes dryers. Energy Factor (EF) is the quotient of the capacity equipment divided by the sum of the equipment electrical energy for mechanical operation or standby, and the water heating energy. The units are volume (or weight) per energy per cycle. For dishwashers, the EF is the reciprocal of the sum of energy per cycle, and expressed in cycles per kWh. The higher the EF value means a more efficient equipment. It is the ENERGY STAR energy performance metric. This factor may vary based on equipment features such as water heating boosters or truncated cycles. The federal EnergyGuide label on equipment shows the annual energy consumption and cost, which use the energy factor. The EF does not appear on the EnergyGuide label. Unlike annual energy use, the EF does not take into account the estimated annual energy use in standby mode. The energy factor for a dehumidifier is calculated by dividing the water removed from the air by the energy consumed, measured in liters per kilowatt hour (L/kWh).	*Energy factor*	n/a	EPA
	Water Factor, WF, is the quotient of the total weighted per-cycle water consumption	*Water factor*	n/a	ENERGY STAR
	Combined Energy Factor (CEF) is the energy performance metric for clothes dryers; the higher the CEF the more efficient the clothes dryer. CEF is the quotient of the test load size, 8.45 lbs for standard dryers and 3 lbs for compact dryers, C, divided by the sum of the machine electric energy use during standby and operational cycles. The equation is shown here: CEF = C (lbs) / (Eon + Estandby). The units are pounds per kWh, the higher the value, the more efficient the clothes dryer is. lbs/kWh	*Combined energy factor*	n/a	EPA
	Idle energy rate represents the total idle energy consumed by the machine including all tank heaters) and controls, or while maintaining at a stabilized operating condition or temperature such as a thermostat(s) set point during the time period specified. Booster heater (internal or external) energy consumption should not be included. It's measured while equipment is enclosed. Also called standby energy rate. For cooking equipment, the purposes of the idle rate can be normalized based on the area of the (bottom) cooking surface. kWh/hr, Btu/h per ft^2 or W/ft^2	*Idle energy rate*	n/a	EPA
	PUE is a measure of data center infrastructure efficiency, representing the amount of energy that is needed per unit delivered to IT equipment. It is computed as the total annual source energy divided by the annual IT source energy.	*Power usage effectiveness*	n/a	EPA
	The ratio of energy delivered to heat cold water compared to the energy consumed by the water heater, as determined following standardized DOE testing procedure.	*Recovery*	n/a	DOE
	The fraction of total energy transfer between the evaporator coil and air that is associated with sensible capacity (change in air temperature) expressed as a dimensionless value.	*Rated sensible heat ratio*	n/a	LBNL
	Indicates how well the motor converts electrical power into mechanical power and is defined as output power divided by input power expressed as a percentage (0-1).	*Motor*	n/a	LBNL
	A measure of how much power transferred through the drive is lost as heat, expressed as a percentage (0-1).	*Drive*	n/a	LBNL
	Rate of heat loss from the recirculation loop when operating. MMBtu/hr	*Recirculation energy loss rate*	n/a	LBNL
	The heat loss coefficient to ambient conditions. (UA) Btu/h·ft2·°F	*Off cycle heat loss coefficient*	n/a	LBNL
	Overall annual efficiency of a heating system	*Annual heating*	n/a	LBNL
	Overall annual efficiency of a cooling system	*Annual cooling*	n/a	LBNL
	Efficiency of boiler equipment	*Boiler*	n/a	LBNL
	The measure of how much energy is extracted from the fuel and is the ratio of heat transferred to the combustion air divided by the heat input of the fuel. (0-1)	*Combustion*	n/a	LBNL
	The efficiency of heat transfer between the combustion process and the heated steam, water, or air. (0-1)	*Thermal*	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
	Efficiency of the fan, excluding motor and drive. (Usually between 0 and 1)	*Fan*	n/a	LBNL
	Efficiency of sensible heat recovery in percentage.	*Heat recovery*	n/a	LBNL
	The net total energy (sensible plus latent, also called enthalpy) recovered by the supply airstream adjusted by electric consumption, case heat loss or heat gain, air leakage and air flow mass imbalance between the two airstreams, as a percent of the potential total energy that could be recovered plus associated fan energy.	*Energy recovery*	n/a	NREL
	The ratio of accumulated non-active energy divided by battery energy.	*Battery energy ratio*	n/a	LBNL
Efficiency Metric Qualifier	The measure used to quantify efficiency	Constrained List	n/a	LBNL
	Annual fuel utilization efficiency is a thermal efficiency measure of combustion equipment like furnaces, boilers, and water heaters. The AFUE differs from the true 'thermal efficiency' in that it is not a steady-state, peak measure of conversion efficiency, but instead attempts to represent the actual, season-long, average efficiency of that piece of equipment, including the operating transients. It is a dimensionless ratio of useful energy output to energy input, expressed as a percentage. For example, a 90% AFUE for a gas furnace means it outputs 90 BTUs of useful heating for every 100 BTUs of Natural Gas input (where the rest may be wasted heat in the exhaust). A higher AFUE means higher efficiency.	*AFUE*	n/a	LBNL
	Coefficient of performance - a measure of the amount of power input to a system compared to the amount of power output by that system.	*COP*	n/a	LBNL
	Energy efficiency ratio - the ratio of output cooling energy (in BTU) to electrical input energy (in Watt-hour).	*EER*	n/a	LBNL
	Like SEER, this is a measurement of the efficiency of a system and the units are the same (BTU/h divided by Watt). However, this measures the efficiency of the system in heating mode, not cooling mode. Therefore it applies only to heat pumps or reversible air conditioning units and not to units that only cool a space.	*HSPF*	n/a	LBNL
	The efficiencies of large industrial air conditioner systems, especially chillers, are given in kW/ton to specify the amount of electrical power that is required for a certain power of cooling. In this case, a smaller value represents a more efficient system. However, to be valid, this number must be reported at various operating conditions, especially the indoor and outdoor temperatures, and the difference between chilled water return and chilled water supply.	*kW per ton*	n/a	LBNL
	Seasonal energy efficiency ratio - ratio of output cooling energy (in BTU) to electrical input energy (in Watt-hour). However the SEER is a representative measurement of how the system behaves over a season where the outdoor temperature varies.	*SEER*	n/a	LBNL
Efficiency Value	The numeric value associated with an Efficiency Qualifier, given in the associated Efficiency Metric	Decimal	Dependent on Qualifier	LBNL
Capacity Qualifier	The capacity refers to the energy or physical load amount that equipment can handle.	Constrained List	n/a	LBNL
	The energy, in watt-hours (Wh), consumed by the battery charger in battery maintenance and standby modes of operation over a period of time. A standard 48-hour period is used for evaluation, consisting of 36 hours of maintenance mode operation followed by 12 hours of standby mode operation.	*Accumulated nonactive energy*	n/a	EPA
	The energy, in watt-hours (Wh), that may be delivered by the battery under specified discharge conditions. Battery energy is measured at a constant current discharge rate of 0.2 C, beginning with a fully charged battery and ending at the manufacturer specified cutoff voltage.	*Battery energy*	n/a	EPA
	Industry standard cell voltage multiplied by the number of cells in the battery pack. Nominal Battery Voltage is typically listed on battery packaging.	*Nominal voltage*	n/a	EPA
	The equipment's nameplate rated voltage is tested at standard testing conditions and indicates the voltage at which the equipment is designed to work.	*Rated voltage*	n/a	EPA
	Power load capacity of equipment in the premises, such as total kW of a server farm.	*Connected load*	n/a	
	Amount of heat energy rejected to its surroundings. MMBtu/hr	*Waste heat*	n/a	BuildingSync
	Dimensional size of equipment.	*Size*	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
	Volume capacity of equipment or asset, such as a pool.	*Volume*	n/a	LBNL
Capacity	The capacity value associated with Capacity Qualifier.	Decimal	Dependent on Qualifier	LBNL
Consumption Rate Type	Rate measurement type for resource consumption of the system.	Constrained List	n/a	LBNL
	The nameplate input power is either (a) the input power marked on the nameplate (watts), or (b) where only nameplate input voltage and current ranges are provided, the highest value achieved by multiplying a nameplate input voltage limit and its corresponding current limit (Volt-Amperes).	*Nameplate input power*	n/a	EPA
	Amount of power drawn or supplied by a device under standard operating conditions.	*Nominal power*	n/a	LBNL
	Electric power consumed while equipment is switched off or in a standby mode.	*Idle power*	n/a	LBNL
	Peak power exerted by a system.	*Maximum power output*	n/a	LBNL
	The equipment's rated, maximum-power-point power at standard testing conditions.	*Rated power*	n/a	LBNL
	The rate of parasitic fuel consumption by heating equipment. Primarily, this will be composed of the electrical energy used for control and display purposes.	*Parasitic fuel*	n/a	LBNL
	Amount of power drawn by a specific lamp.	*Watts per lamp*	n/a	LBNL
	Water use of an equipment which depends on its chosen setting. For instance, the estimated per cycle water draw for a dishwasher or washing machine under typical conditions. Units are expressed as the number of gallons of water delivered to the machine during one cycle.	*Water cycle draw*	n/a	LBNL
	Resource drawn per average cycle of an appliance, such as washer, dryer, dishwas	*Energy cycle draw*	n/a	BuildingSync
	Average daily volume of water drawn by the system.	*Daily draw*	n/a	LBNL
Consumption Rate	Rate at which resource is consumed by the system.	Decimal	Dependent on Qualifier	LBNL
Percentage Of Total Installed Capacity	Portion of maximum, peak or rated installed capacity of a system, piece, or set of equipment that is either available or being used.	Decimal	Percent	LBNL
Percentage Of Total Floor Area Served	Portion of the total floor area within a defined zone that is being served by a system, piece, or set of equipment.	Decimal	Percent	LBNL
Duty Cycle	Percent of time the system operates.	Decimal	Percent	BuildingSync
Quantity	The number of systems described by this specification, i.e. the multiplier that renders the total conditions on the premises.	Integer	n/a	LBNL
Quantity Of Modules Per System	Number of units in each system. For instance, a photovoltaic system will have a number of modules per array. In an office, there will be a number of displays per workstation.	Integer	n/a	LBNL
Quantity Intensity	The number of entities per unit area. This can be used to represent load densities (e.g., People/ft2, Watts/ft2)	Decimal	Dependent on Qualifier/ft2	LBNL
Year Of Manufacture	Year the product was produced and labeled by the manufacturer.	Year Format from Metadata	n/a	LBNL
Manufacturer	Manufacturer of the product.	String	n/a	LBNL
Date	Date	Date	n/a	LBNL
Date Status	Status of the associated Date	Constrained List	n/a	LBNL
		Created	n/a	
		Modified	n/a	
		Installed	n/a	
		Collected	n/a	
		Received	n/a	
		Measured	n/a	
		Start	n/a	
		End	n/a	
		Awarded	n/a	
		Submitted	n/a	
		Reviewed	n/a	
		Due	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
Demand Response Participation	Demand response participation requires changes in electric usage by end-use customers from their normal consumption patterns in response to changes in the price of electricity over time, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized.	Constrained List	n/a	DOE
	This system is used to offset energy consumption during demand response events. Or this premises participates in demand response events.	*Participate*	n/a	LBNL
	This system is not used to offset energy consumption during demand response events. Or this premises does not participate in demand response events.	*No participation*	n/a	LBNL
Rated Lifetime	Rated life time of operation in number of years.	Decimal	Years	LBNL
Useful Life	The expected remaining service life of a component.	TimeDuration	TimeDuration	LBNL
Warranty Duration	The time duration of a warranty for the component	TimeDuration	TimeDuration	
Location	Spatial location or installation location. This can apply to systems, opaque surfaces, etc. The Conditioning Status can be used with location for a finer grained description, such as Conditioned Basement. Illustrations will be added when the BEDES website is developed. Additional locations include the Occupancy Classification constrained list.	Constrained List	n/a	LBNL
	A roof structure that forms the exterior upper covering of a premises.	*Roof*	n/a	LBNL
	The area in a building between the above-ground floor and the ground.	*Crawlspace*	n/a	LBNL
	A floor structure usually made of concrete. In the context of Location, a component could be next to or in a slab.	*Slab*	n/a	LBNL
	A space allocated for storage or parking of motor vehicles.	*Garage*	n/a	LBNL
	The space above the garage.	*Above garage*	n/a	
	The floor of a building at ground level.	*Ground floor*	n/a	LBNL
	Chamber that supplies conditioned air to the zone	*Supply chamber*	n/a	LBNL
	Chamber to receive the return air	*Return chamber*	n/a	LBNL
	Chamber to receive the return air and mix it with outside air.	*Mixed chamber*	n/a	LBNL
	Used to convey air from a source to the final delivery components	*Duct*	n/a	LBNL
	Terminal units are the ones that provide conditioned air to the zone. Some types of terminal units are VAV boxes, fan-powered mixing boxes and induction terminal units. Terminal units may also include a heating or cooling coil.	*Terminal*	n/a	LBNL
	The outdoor space that is exposed to outside conditions. This can also be applied to Opaque Surfaces to describe the fact that one side of the surface is next to outside conditions.	*Exterior*	n/a	LBNL
	The inside space that is not exposed to outside conditions. This can also be applied to Opaque Surfaces to describe the fact that both sides of the surface are next to conditioned spaces.	*Interior*	n/a	LBNL
	Located at the meter.	*Meter*	n/a	LBNL
	Space directly under a counter.	*Under counter*	n/a	LBNL
	Located on a conveyer.	*Conveyer*	n/a	LBNL
	Located or can be easily relocated to the location where it is to be used.	*Point of use*	n/a	LBNL
	Space above the ground level.	*Above grade*	n/a	LBNL
	Space below the ground level.	*Below grade*	n/a	LBNL
	Space is partially above ground if any part of it is below grade.	*Partially below grade*	n/a	
	Located on the ground	*On grade*		
	Location designated as an emergency area, such as an assembly area, and exit route, emergency door, etc.	*Emergency*	n/a	LBNL
	Location is an entrance for the public.	*Public entrance*	n/a	
	Location is an exit.	*Exit*	n/a	LBNL
	Located at an on-site central plant.	*Central plant on site*	n/a	LBNL
	Located at an off-site central plant.	*Central plant off site*	n/a	LBNL
	Located within air stream, ex. fan motor within air stream.	*Within air stream*	n/a	LBNL
		All zones	n/a	
		Core	n/a	
	The area in a building that is between the finished ceiling and the roof.	*Attic*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	The basement floor of a premises can be partly or entirely below ground	*Basement*	n/a	
	Located in an enclosed un-occupied space	*Closet*	n/a	
		Building integrated	n/a	
Equipment Operational Mode	Operational mode or state of equipment.	Constrained List	n/a	LBNL
	Connected to a power source, activated, receiving a main charge or ready to use, and is providing one or more of its primary functions.	*On*	n/a	EPA
	Not connected to a power source, produces no function, and cannot be switched into any other mode with a remote control unit, an internal signal, or an external signal.	*Off*	n/a	EPA
	Traffic is not passed across ports of equipment. For instance, network data rate is 0 kb/s.	*Idle*	n/a	EPA
	Traffic is passed across ports of equipment at relatively slow data rate. For instance, network data rate of 1.0 kb/s (0.5 kb/s in each direction) as defined in the Energy Star test procedure.	*Low data rate*	n/a	EPA
	Traffic is passed across ports of equipment at a selected reference rate, considered high data rate such as for network.	*High data rate*	n/a	EPA
	Produces no functional output, but can be switched into another mode with the remote control unit or an internal signal. Has no saved hardware state. For instance, the Game Console has no active network link although may be capable of charging devices in this mode. The lowest power consumption mode which cannot be switched off (influenced) by the user and that may persist for an indefinite time when an appliance is connected to the main electricity supply. Standby mode: a) no battery is present in the charger, or, where the battery is integral to a product, the product is not attached to the charger, b) the charger is connected to mains, and	*Passive standby*	n/a	EPA
	Produces no functional output, but can be switched into another mode with the remote control unit or an internal signal, and with an external signal, and is exchanging/receiving data with/from an external source.	*High activity standby*	n/a	EPA
	Produces no functional output, but can be switched into another mode with the remote control unit or an internal signal, and with an external signal, and is not exchanging/receiving data with/from an external source.	*Low activity standby*	n/a	EPA
	Actively engaged in system maintenance or download updated functionality after waking or in response to user input.	*Updating*	n/a	EPA
Input Resource Type	Resource or fuel consumed by the system. See Resource type for complete list of resources.	Constrained List	n/a	LBNL
Output Resource Type	Resource or fuel produced by the system and used as energy on the premises. See Resource type for complete list of resources.	Constrained List	n/a	LBNL
Equipment Rating	Formalized rating system for a given type of equipment.	Constrained List	n/a	LBNL
	A rating system for equipment sponsored by the U.S. Environmental Protection Agency (EPA).	*ENERGY STAR*	n/a	*LBNL*
	Part of the EPA Energy Star rating system, which distinguishes products that deliver cutting edge energy efficiency and the latest in technological innovation.	*ENERGY STAR Most Efficient*	n/a	*LBNL*
	Federal agencies are required to procure energy-efficient products. The Federal Energy Management Program (FEMP) helps Federal purchasers comply with these requirements by identifying energy- and water-efficient products.	*FEMP Designated*	n/a	LBNL
	The Consortium for Energy Efficiency (CEE) energy efficiency program. Tier 1 meets Energy Star, includes the top 25% of models, is cost-effective for the customer and multiple manufacturers make the product widely available.	*CEE Tier 1*	n/a	*LBNL*
	The Consortium for Energy Efficiency (CEE) energy efficiency program. Tier 2 and 3 exceed Energy Star minimums, are cost-effective for the customer with an incentive, is cost-effective for most market, and three or more manufacturers make the product transformation programs.	*CEE Tier 2*	n/a	*LBNL*

Term	Definition	Data Type	Unit of Measure	Definition Source
	The Consortium for Energy Efficiency (CEE) energy efficiency program. Tier 2 exceeds Energy Star minimums, is cost-effective for the customer with an incentive, and three or more manufacturers make the product, and is cost-effective for most market transformation programs.	*CEE Tier 3*	n/a	*LBNL*
Priority	Order of priority, for example: configuration of equipment, or priority of contact information.	Constrained List	n/a	LBNL
	The primary, or first in order of operation. Could also be the majority in capacity or existence.	*Primary*	n/a	LBNL
	The secondary, or second in order of operation.	*Secondary*	n/a	LBNL
	The tertiary, or third in order of operation.	*Tertiary*	n/a	LBNL
	Reserved as a back-up to be operated if necessary.	*Backup*	n/a	LBNL
	Only operated in states of emergency.	*Emergency*	n/a	LBNL
	Operates constantly to identify exits.	*Exit*	n/a	LBNL
Condition	Description of a component's condition.	Constrained List	n/a	LBNL
	Installed or manufactured recently and never used prior, except for quality assurance.	*New*	n/a	LBNL
	Failing to function normally or satisfactorily.	*Malfunctioning*	n/a	LBNL
	Failing to function at all.	*Nonfunctional*	n/a	LBNL
	Condition is more than sufficient and in almost new condition.	*Excellent*	n/a	LBNL
	Condition is properly sufficient and less worn than expected for time lapsed since installation.	*Good*	n/a	LBNL
	Condition is sufficient and demonstrates normal wear for time lapsed since installation.	*Average*	n/a	LBNL
	Condition is insufficient and/or is worn more than expected for time lapsed since installation.	*Poor*	n/a	LBNL
Make	Equipment identification indicating manufacturer and or high-level category of equipment	String	n/a	LBNL
Model Number	Model or catalogue number that can be used to identify more detailed component or asset characteristics.	String	n/a	LBNL
Serial Number	A unique code assigned for identification of a single unit.	String	n/a	LBNL
Thermal Zone Layout	Type of zoning used for space conditioning	Constrained List	n/a	LBNL
	Zones within a story are defined along exterior walls of similar orientation	*Perimeter*	n/a	LBNL
	Zones within a story are defined along exterior walls of similar orientation, with a central zone	*Perimeter and core*	n/a	LBNL
	Stories are not broken into multiple zones	*Single zone*	n/a	LBNL
Dimensional Terms				
Dimension	A linear measurement in one direction. Can be used to generically describe this measurement, if needed.	Decimal	ft	LBNL
Length	The longest dimension of an object. This can be used to define the length of any building component, such as ductwork or piping, or an opaque surface such as a wall or floor.	Decimal	ft	LBNL
Width	The dimension of an object from one side to the other. This can be used to define the width of any building component, such as the width of a photovoltaic panel or a window. In relation to length, width can be the dimension perpendicular to the length.	Decimal	ft	LBNL
Height	The dimension of an object from the bottom to the top. This can be used to define the height of any building component, such as the height of a wall or window.	Decimal	ft	LBNL
Depth	Dimension of the distance from the front to the back, such as the depth of structural framing in a wall or floor. It can also be the distance from the top to the bottom, such as the depth of a tank or pool of a component or material, such as the depth of the structural framing.	Decimal	ft	LBNL
Perimeter	Length of a line forming the boundary around the premises	Decimal	ft	LBNL
Aspect Ratio	The ratio of width to length, of a premises	Decimal	n/a	LBNL/BEDES-Beta

Term	Definition	Data Type	Unit of Measure	Definition Source
Spacing	Dimension of the distance between two components. Examples include: Framing spacing: the dimension from centerline to centerline of a surface framing material Window spacing: the dimension between windows in a discrete window layout	Decimal	ft	LBNL
Thickness	Dimension of the thickness of a component. Can be used to define overhang thickness, in addition to overhang depth and width.	Decimal	ft	LBNL
Offset	Distance from the edge of a surface to another surface or object. Offset can be used to help describe a building shape, as used in Commercial Asset Score Tool. It can also be used to describe the location of a window in a wall, where offset is used to describe the distance from the edge of al wall to the edge of a window frame	Decimal	ft	LBNL
Coordinate	Qualifier for various dimensional terms to clarify the coordinate direction	Constrained List	n/a	
	X coordinate	*X*	n/a	
	Y coordinate	*Y*	n/a	
	Z coordinate	*Z*	n/a	
Area	The space inside the boundary of a 2 dimensional shape. This can be used with many other terms, including Location, Conditioning Status, Opaque Surface, to characterize the area of particular components.	Decimal	ft2	LBNL
Percentage Of Total Area	Percent of a component to the total area of another component. This can be used to characterize the percentage of Conditioned Floor Area to Gross Floor Area, for example.	Decimal	Percent	LBNL
Volume	The space inside the boundary of a 3 dimensional shape	Decimal	ft3	LBNL
Azimuth	Degrees clockwise from North. For a premises, it is the azimuth of the front facing element. It can also be applied to envelope components, such as walls, windows (fenestration), as well as on-site generation technologies, such as photovoltaic panels. Legal Values: 0 - 360	Decimal	degrees	LBNL
Cardinal Orientation	Orientation of a surface or premises in terms of the attributes of North, South, East and West. Can be applied to the orientation of the front of the building, of a specific surface (wall, roof), window or skylight, or on-site generation technology, such as photovoltaic panels. A diagram for the constrained list choices will be provided when the web site is developed	Constrained List	n/a	LBNL/HPXML
	Lying toward, or facing the north.	*North*	n/a	LBNL
	Lying toward, or facing the northeast.	*Northeast*	n/a	LBNL
	Lying toward, or facing the east.	*East*	n/a	LBNL
	Lying toward, or facing the southeast.	*Southeast*	n/a	LBNL
	Lying toward, or facing the south.	*South*	n/a	LBNL
	Lying toward, or facing the southwest.	*Southwest*	n/a	LBNL
	Lying toward, or facing the west.	*West*	n/a	LBNL
	Lying toward, or facing the northwest.	*Northwest*	n/a	LBNL
Thermal Conductivity	The k-factor, or time rate of steady-state heat flow through unit thickness of unit area of a homogeneous material, induced by a unit temperature gradient in a direction perpendicular to the isothermal planes of that unit. Units of k are in Btu·in/(h·ft2·°F), Btu·ft/(h·ft2·°F), or W/(m·K). Thermal conductivity must be evaluated for a specific mean temperature, thickness, age, and moisture content	Decimal	Btu/h·ft·°F	ASHRAE
Thermal Conductance	The C-factor, or thermal conductivity, is the heat flux through a flat body induced by a unit temperature difference between the surfaces of that body.	Decimal	Btu/h·ft2·°F	ASHRAE

Term	Definition	Data Type	Unit of Measure	Definition Source
R Value	The R-value, also known as thermal resistance, is a quantity determined by the temperature difference, at steady state, between two defined surfaces of a material or construction that induces a unit heat flow rate through unit area (R = ΔT/q). R-value is the reciprocal of thermal conductance. A unit of thermal resistance used for comparing insulating values of different materials, for the specific thickness of the material. The higher the R-value number, a material, the greater its insulating properties and the slower the heat flow through it. This R-value does not include the interior and exterior air film coefficients	Decimal	hr·ft2·°F/Btu	ASHRAE
R Value Per Unit Dimension	The R-value of a material, per inch of thickness	Decimal	(R-value)/in	LBNL
Effective R Value	The R-value of a complete construction including all material layers as well as the interior and exterior air film coefficients.	Decimal	hr·ft2·°F/Btu	LBNL
Thermal Resistance	Thermal resistance, or R-value, the reciprocal of the time rate of heat flow through a unit area induced by a unit temperature difference between two defined surfaces of material or construction under steady-state conditions. Thermal resistance is the reciprocal of the thermal conductance.	Decimal	hr·ft2·°F/Btu	LBNL
U Factor	the thermal transmission in unit time through a unit area of a particular body or assembly, including its boundary films, divided by the difference between the environmental temperatures on either side of the body or assembly. Note that the U-factor for a construction assembly, including fenestration, includes the interior and exterior film coefficients (the boundary films referenced above). For characterization of fenestration products, the U-factor is calculated for the whole product, including the effect of the frame (center of glass, edge of glass, frame). U-factor = 1 / R-value	Decimal	Btu/hr·ft2·°F	LBNL
Density	Mass per unit volume.	Decimal	lb/ft3	LBNL
Specific Heat	Ratio of the quantity of heat required to raise the temperature of a given mass of any substance one degree to the quantity required to raise the temperature of an equal mass of a standard substance one degree (usually water at 59°F (15°C)	Decimal	Btu/lb-°F	LBNL
Solar Absorptance	The fraction of incident radiation in the solar spectrum that is absorbed by the material or surface. Value range: 0-1	Decimal	n/a	LBNL
Thermal Absorptance	The fraction of incident long wavelength infrared radiation that is absorbed by the material or surface. For opaque materials the thermal absorptance value will equal the value of thermal emittance. Value range: 0-1	Decimal	n/a	LBNL
Visible Absorptance	The fraction of incident visible wavelength radiation that is absorbed by the material or surface. Value range: 0-1	Decimal	n/a	LBNL
Emittance	The capacity of a material to emit radiant energy. The ratio of the radiant flux emitted by a physical surface to that emitted by a blackbody at the same temperature and under the same conditions. It can be expressed as 1-(long-wave infrared absorptance) for materials that are not transparent in the long-wave infrared spectrum. Emittance is a surface property; values range from 0.05 for brightly polished metals to 0.95 for flat black paint. The emittance for most materials is 0.9	Decimal	n/a	LBNL
Luminance	The photometric measure of the luminous intensity per unit area of light travelling in a given direction, expressed in candelas per square meter (cd/m2). Luminance refers to the brightness settings of a display or a television.	Decimal	cd/m2	EPA

Term	Definition	Data Type	Unit of Measure	Definition Source
Surface Roughness	A description of the roughness of the exposed surface of a material. This property is used to approximate the effect of the surface condition on the convection of air across the surface. In energy simulation models, it is used to help determine the convection coefficients for a surface.	Constrained List	n/a	LBNL
	Very rough surfaces such as stucco.	*Very rough*	n/a	IBPSA-USA
	Rough surfaces such as brick.	*Rough*	n/a	IBPSA-USA
	Medium rough surface such as concrete.	*Medium rough*	n/a	IBPSA-USA
	Medium smooth surface such as clear pine.	*Medium smooth*	n/a	IBPSA-USA
	Smooth surface such as smooth plaster.	*Smooth*	n/a	IBPSA-USA
	Very smooth surface such as glass.	*Very smooth*	n/a	IBPSA-USA
Insulation Application	A description of the type of insulation and how it is applied.	Constrained list	n/a	LBNL
	Insulation that is made of material that is not cohesive. Examples are cellulose, fiberglass and mineral (or rock) wool. It can be blown into place	*Loose fill*	n/a	DOE
	Insulation that is made of material that is spun into a flexible cohesive block or "batt". There are many types of batt insulation, such as fiberglass, natural materials (cellulose or cotton fiber), plastic fibers, and mineral (or rock) wool.	*Batt*	n/a	DOE
	Insulation that can is semi-liquid and can be sprayed into place. Examples include different types of plastics, such as polyisocyanurate and polyurethane, as well as cementitious materials.	*Spray on*	n/a	DOE
	Insulation that is made of a solid, rigid material. Examples include foam (polystyrene, polyisocyanurate, polyurethane) as well as fibers (fiberglass and mineral wool) that can withstand high temperatures.	*Rigid*	n/a	DOE
	A water heater jacket, or blanket, is made of insulation contained in sheet plastic so that it can be attached to the water heater.	*Insulation jacket*	n/a	LBNL
	Insulation is installed	*Insulated*	n/a	
	Insulation is not installed	*Not insulated*	n/a	
Insulation Continuity	Insulation installation type.	Constrained list	n/a	LBNL
	A continuous layer of insulation that avoids thermal bridging.	*Continuous*	n/a	LBNL
	Insulation installed in surface cavities, possibly with thermal bridging due to breaks such as studs.	*Cavity*	n/a	LBNL
Exposure	Exposure of a material or surface. See the Location term for a complete list of options for this term.	Constrained List	n/a	LBNL
Color	Color of a material or component. Can be applied to opaque surfaces, materials, and so forth.	Constrained List	n/a	LBNL
		Reflective		
	White is the color of milk or fresh snow, due to the reflection of most wavelengths of visible light; the opposite of black.	*White*	n/a	LBNL
	Light shade almost white, off-white, or pale in color.	*Light*	n/a	LBNL
	Medium shade of color, not considered dark or pale.	*Medium*	n/a	LBNL
	Medium dark shade of color, closer to dark than medium.	*Medium dark*	n/a	LBNL
	Black or near black shade of color.	*Dark*	n/a	LBNL
Tilt Description	A descriptive value for tilt, when an exact numeric angle is not known.	Constrained List	n/a	LBNL
	The component has a tilt of zero.	*Flat*	n/a	LBNL
	The component has a non-zero value for tilt. This will be somewhat subjective, and would apply to a non-flat component.	*Sloped*	n/a	LBNL
	A tilt that is more than a tilt represented by a rise of 2 units for a length of 12 units.	*Greater than 2 to 12*	n/a	LBNL
	A tilt that is less than a tilt represented by a rise of 2 units for a length of 12 units.	*Less than 2 to 12*	n/a	LBNL
Tilt Angle	The angle from a horizontal surface; can be applied to an opaque surface, a fenestration unit, a solar panel, etc.	Decimal	degrees	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
Identifications				
Identifier Label	Identifier used in a specific program or dataset. There can be multiple instances	Constrained List	n/a	LBNL/BEDES Beta
	Unique identifier for a given premises. A premises can be any part of a building or	*Premises*	n/a	LBNL/BEDES Beta
	Identifier used to specify a certain project.	*Project*	n/a	
	Used to identify any form of account. Accounts can be for customers,	*Account*	n/a	
	Identifier for a specific bill.	*Bill*	n/a	
	Identifier used to label each vendor.	*Vendor*	n/a	
	Identifier containing relevant meter information.	*Meter*	n/a	
	The well known identifier for the listing. The Listing ID is intended to be the value	*Listing*	n/a	RETS
	Name identifying the premises. This could be the name of the complex, the	*Name*	n/a	LBNL
	A unique ID assigned by EPA's Portfolio Manager program to each property. This	*Portfolio manager property*	n/a	ESPM
	Federal real property ID, required to designate a facility as a federal property in	*Federal real property*	n/a	LBNL/BEDES Beta
	Some systems of parcel identification incorporate a method which utilizes a	*Tax book number*	n/a	RETS
	Some systems of parcel identification incorporate a method which utilizes a	*Tax map number*	n/a	RETS
	A number used to uniquely identify a parcel or lot. This number is typically issued	*Assessor parcel number*	n/a	RETS
	Some systems of parcel identification incorporate a method which utilizes a	*Tax parcel letter*	n/a	RETS
	A type of legal description for land in developed areas where streets or other	*Tax lot*	n/a	RETS
	A type of legal description for land in developed areas where streets or other	*Tax block*	n/a	RETS
	A type of legal description for land in developed areas where streets or other	*Tax tract*	n/a	RETS
	A 14-digit County District School code is the official, unique identification of a	*County district school code*	n/a	
	Project or activity task order	*Task order*	n/a	
	Contract	*Contract*	n/a	
Identifier	The identifying value associated with the Identifier Type. There can be many	String	n/a	LBNL
Premises Level	Level category of the premises with respect to all premises pertaining to a unique	Constrained List	n/a	LBNL
	Principal or overall level.	*Primary*	n/a	LBNL
	A subspace of a primary premises. Examples of components are: HVAC zones,	*Component*	n/a	LBNL
	A space utilized as a supporting element of a larger premises, such as the lobby	*Sub component*	n/a	LBNL
	Site refers to the land on which the premises is built	*Site*	n/a	LBNL
	A campus is comprised of multiple buildings served by a single electric meter or	*Campus*	n/a	LBNL
	A building is a single structure wholly or partially enclosed within exterior walls, or within exterior and abutment walls (party walls), and a roof, affording shelter to persons, animals, or property. A building can be two or more units held in the condominium form of ownership that are governed by the same board of managers	*Building*	n/a	LBNL
	An area is a section within a building that serves a specific activity and could stand alone, such as a restaurant inside a hotel. An area could also be section of a building that has distinctly different equipment densities, occupancies, energy-use patterns, operating characteristics, or HVAC configurations	*Area*	n/a	LBNL
	A space is a section within a building or area that aids the primary activity and could not stand alone, such as a hallway or a closet.	*Space*	n/a	LBNL
	Thermal zone is a space or group of spaces within a building with heating and cooling requirements that are sufficiently similar so that desired conditions (e.g., temperature) can be maintained throughout using a single sensor.	*Thermal zone*	n/a	LBNL
Occupant Information				
Occupancy Classification	Classification main utilization of the premises by building occupants. Can be used to describe a complex, building, or spaces within the building.	Constrained List	n/a	LBNL
	A private area is an area for exclusive use by authorized persons only, and may exist in apartments, gated communities, condominiums, cooperatives and shopping malls.	*Private area*	n/a	RESO
	Manufactured homes are prefabricated somewhere other than the current site. Manufactured homes include premises such as house boats, mobile homes, and trailers.	*Manufactured home*	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
	Housing units created in an existing residential or nonresidential premises.	*Single family*	n/a	LBNL
	Multifamily housing premises of any configuration.	*Multifamily*	n/a	LBNL
	Multifamily units in building premises created in an existing commercial structure including studio unit.	*Multifamily with commercial*	n/a	LBNL
	Premises is a unit within a multi-family structure, such as condominiums and apartments.	*Multifamily individual unit*	n/a	LBNL
	Residential premises.	*Residential*	n/a	LBNL
		Commercial	n/a	
	Health care premises where medication is prepared, dispensed and/or sold.	*Health care pharmacy*	n/a	LBNL
	A commercial live-in premises for special care needs including senior care community and nursing home.	*Health care skilled nursing facility*	n/a	BEDES-Beta/ESPM
	A residential live-in Health care premises providing therapy for substance abuse, mental illness, or other behavioral problems.	*Health care residential treatment center*	n/a	LBNL
	A commercial Health care premises that provides temporary to long-term inpatient services including hospitals.	*Health care inpatient hospital*	n/a	BEDES-Beta/ESPM
	A commercial Health care premises providing outpatient rehabilitation and physical/occupational/speech/respiratory therapy services.	*Health care outpatient rehabilitation*	n/a	BEDES-Beta/ESPM/EIA/CMS
	A commercial Health care premises using diagnostic medical equipment serving as an outpatient diagnostic center.	*Health care diagnostic center*	n/a	LBNL
	Premises that include medical office, urgent care, and outpatient clinics.	*Health care outpatient non diagnostic*	n/a	BEDES-Beta/ESPM
	Premises that include ambulatory surgical center.	*Health care outpatient surgical*	n/a	ESPM
	Premises that provides services for the prevention, diagnosis, treatment, and health care of animal populations. Including dental services and laboratory testing services for animals.	*Health care veterinary*	n/a	ESPM/CENSUS/NAICS
	Premises that is used for the storage of human corpses awaiting identification, or removal for autopsy or disposal by burial, cremation or otherwise.	*Health care morgue or mortuary*	n/a	LBNL
	Premises that host heath care services for the maintenance and improvement of physical and mental health.	*Health care*	n/a	LBNL
	Convenience food store and gas station premises that sells food mart items and automotive fuels. These establishments may provide automotive repair services.	*Gas station*	n/a	BEDES-Beta/ESPM/NAICS
	Convenience food store or food mart premises, excluding gas stations, that are sell a limited line of goods.	*Convenience store*	n/a	BEDES-Beta/ESPM/NAICS
	Supermarkets, grocery stores, gourmet food stores, and food super stores that sell a general line of food as well as general new merchandise.	*Food sales grocery store*	n/a	BEDES-Beta/ESPM/NAICS
	Premises that primarily sells food products and services but may sell other non-food items related to groceries.	*Food sales*	n/a	LBNL
	Laboratory premises that have physical, chemical, and other analytical testing services.	*Laboratory testing*	n/a	BEDES-Beta/ESPM/NAICS
	Laboratory premises providing analytic or diagnostic services generally to the medical profession.	*Laboratory medical*	n/a	LBNL
	A laboratory premises with unspecified function.	*Laboratory*	n/a	LBNL
	A premises adapted or prepared for keeping animals under semi-natural conditions for observation, study, or as pets, such as an aquarium, zoo, pet shop, terrarium, etc.	*Vivarium*	n/a	LBNL
	Administrative and professional office premises that manage other establishments of the company.	*Office*	n/a	LBNL
	Bank office premises that provide trust, fiduciary, and custody services to others including bank trust offices and escrow agencies.	*Bank*	n/a	BEDES-Beta/ESPM/NAICS
	Court premises for public safety including civilian courts, courts of law, and sheriffs' offices conducting court functions only.	*Courthouse*	n/a	BEDES-Beta/ESPM/NAICS
	Premises for criminal and civil law enforcement and other activities related to the preservation of order including fire, police, and ranger stations.	*Public safety station*	n/a	BEDES-Beta/ESPM/NAICS

Term	Definition	Data Type	Unit of Measure	Definition Source
	Short-term detention center premises for the confinement, correction, and rehabilitation of adult and/or juvenile offenders sentenced by a court.	*Public safety detention center*	n/a	BEDES-Beta/NAICS
	Long-term corrections facility premises for the confinement, correction, and rehabilitation of adult and/or juvenile offenders sentenced by a court.	*Public safety correctional facility*	n/a	BEDES-Beta/ESPM/NAICS
	Government or non-government premises for public safety activities such as emergency planning and disaster preparedness centers.	*Public safety*	n/a	BEDES-Beta/NAICS
	Premises with refrigerated warehousing and storage facilities that provide services including blast freezing, tempering, and modified atmosphere storage.	*Warehouse refrigerated*	n/a	BEDES-Beta/ESPM/CAST/NAICS
	Premises with warehousing and storage facilities excluding refrigerated spaces, such as petroleum, lumber, and documents.	*Warehouse unrefrigerated*	n/a	BEDES-Beta/ESPM/CAST/NAICS
	Self-storage providing secure premises where clients can store and retrieve their goods.	*Warehouse self storage*	n/a	BEDES-Beta/ESPM/NAICS
	Premises with warehousing and storage facilities excluding refrigerated spaces such as bulk farm products.	*Warehouse*	n/a	LBNL
	Religious public assembly premises including funeral parlors, churches, monasteries, synagogues, mosques, and temples.	*Assembly religious*	n/a	BEDES-Beta/ESPM/NAICS
	Cultural entertainment premises including museums, libraries, and galleries.	*Assembly cultural entertainment*	n/a	BEDES-Beta/ESPM
	Social entertainment premises include movie theater, non-food-serving venues such as bars and nightclubs, and small social meeting halls such as lounges.	*Assembly social entertainment*	n/a	LBNL
	Premises that offers table games along with other activities, such as arcade games or slot machines. These establishments may provide food and beverage services, but exclude hotel lodging.	*Assembly arcade or casino without lodging*	n/a	ESPM
	Enclosed premises that are leased or rented, including auditoriums, banquet halls, flea market spaces, and conference centers.	*Assembly convention center*	n/a	BEDES-Beta/ESPM/NAICS
	Open or enclosed premises including arenas, stadiums, and race tracks, and performing arts theaters that are operating live events such as fairs, concerts, sporting events, concerts, trade shows, and festivals.	*Assembly stadium*	n/a	BEDES-Beta/ESPM/NAICS
	Indoor or outdoor premises operating a public or nonpublic event.	*Assembly public*	n/a	BEDES-Beta/CAST
	Indoor or outdoor recreation premises for swimming or wave pool for fitness or recreational purposes.	*Recreation pool*	n/a	BEDES-Beta/ESPM/NAICS
	Fitness center premises for active physical fitness conditioning including aerobic dance or exercise centers, or weight training centers.	*Recreation fitness center*	n/a	ESPM/NAICS
	Ice rink premises such as gyms, health clubs, training facilities and ice skating rinks.	*Recreation ice rink*	n/a	ESPM/NAICS
	Indoor sport premises for aerobic dance or exercise centers including handball courts, racquetball courts, or tennis courts, bike park, skateboard park and curling rink.	*Recreation indoor sport*	n/a	ESPM/NAICS
	Recreation premises including roller skating rinks, climbing gym, bowling alleys, basketball courts, ping pong, racquetball, handball, and batting cages.	*Recreation*	n/a	BEDES-Beta/ESPM/NAICS
	Higher education premises including community college, junior college, university, vocational school, technical school, and professional school.	*Education higher*	n/a	BEDES-Beta/ESPM/NAICS
	Secondary education premises including secondary school, junior high school, middle school, and high school. Also includes schools for the academic, technical, vocational, montessori, handicapped, boarding, preparatory, private, finishing, parochial and military.	*Education secondary*	n/a	BEDES-Beta/ESPM/NAICS
	Primary education premises including primary school, elementary school, and kindergarten. Also includes schools for the handicapped, montessori, boarding, preparatory, private, and parochial.	*Education primary*	n/a	BEDES-Beta
	Preschool education premises including preschool or daycare. Also includes schools for the physically disabled and parochial.	*Education preschool or daycare*	n/a	LBNL
	School premises for educational purposes.	*Education*	n/a	BEDES-Beta/ESPM/NAICS
	Fast food service premises including pizza delivery and take-out shops, take-out eating places, fast-food restaurants, and takeout sandwich shops.	*Food service fast*	n/a	Food Service Survey

Term	Definition	Data Type	Unit of Measure	Definition Source
	Food service premises which include full waiter/waitress service including diner, family restaurant, fine dining, pizza parlor, pizzeria, dinner theater, and steakhouse. The order is taken while the patron is seated. Patrons pay after they consume their selections.	*Food service full*	n/a	Food Service Survey
	Establishments typically without waiter/waitress service in which patrons generally order or select items and pay before consuming. Food and drink may be consumed on premises, taken out, or delivered. Examples are: coffee shop, cafe, deli, bakery, bar, and pub.	*Food service limited*	n/a	Food Service Survey
	An establishment other than full-service or limited-service that serves food, either to the general public or to a select group of individuals. Includes hospitals, school cafeterias, and military kitchens.	*Food service institutional*	n/a	Food Service Survey
	Any premises serving food.	*Food service*	n/a	BEDES-Beta/ESPM/CAST
	Lodging premises including student housing, dormitory, residence hall, fraternity, sorority, military barrack, government shelter, and orphanage. Excluding correctional facility and skilled nursing home.	*Lodging institutional*	n/a	BEDES-Beta/ESPM/NAICS
	Lodging premises including hotels and resort.	*Lodging with extended amenities*	n/a	BEDES-Beta/ESPM/NAICS
	Lodging premises including motels, lodges, inns, camps, cabins, and cottages.	*Lodging with limited amenities*	n/a	BEDES-Beta/ESPM/NAICS
	Lodging premises with unconventional or temporary housing type such as a bed and breakfast.	*Lodging*	n/a	BEDES-Beta/CAST/NAICS
	Premises located in one or more buildings comprised of small to large retailers, restaurants, and entertainment establishments located indoor or outdoor.	*Retail mall*	n/a	LBNL
	An open shopping mall premises that has multiple retail buildings and other businesses with sidewalks and large open parking lots.	*Retail strip mall*	n/a	BEDES-Beta/ESPM
	A shopping mall premises located in one or more buildings of retailers with interconnecting walkways enabling visitors to walk inside from unit to unit.	*Retail enclosed mall*	n/a	BEDES-Beta/ESPM
	Individual retail store within a mall or stand-alone that does not sell groceries, includes auto dealerships.	*Retail dry goods retail*	n/a	BEDES-Beta/ESPM/CAST
	Retailer supplying a wide range of products including groceries.	*Retail hypermarket*	n/a	BEDES-Beta/ESPM
	Premises include retailing merchandise such as furniture and home furnishings stores, electronics and appliance stores, food and beverage stores, health and personal care stores, clothing and clothing accessories stores, sporting goods, hobby, book and music stores, and office supplies, stationery and gift stores. Excludes malls.	*Retail*	n/a	BEDES-Beta
	Premises for mail services that include collection, pick-up, and delivery operations of letters and small parcels.	*Service postal*	n/a	BEDES-Beta/ESPM/NAICS
	Premises for repair services of automotive, appliances, and equipment.	*Service repair*	n/a	LBNL
	Dry cleaning services and laundering services, including coin-operated, that provide cleaning services on the premises.	*Service laundry or dry cleaning*	n/a	NAICS
	A workshop or studio used by an artist, photographer, sculptor, performer, etc. This can include studios used for music and television recording, dance practice, yoga and aerobics, etc.	*Service studio*	n/a	LBNL
	Premises with beauty services including barber shops, hair stylist shops, facial salons, nail salon, hairdressing salon, cosmetology salon, and other personal care services.	*Service beauty and health*	n/a	NAICS
	Premises with services for the production of paper products, tailoring, and flower arrangements.	*Service production and assembly*	n/a	LBNL
	These establishments may provide general services on the premises.	*Service*	n/a	BEDES-Beta/ESPM
	A terminal premises where freight and passengers either departs, arrives, or is handled in the transportation process using facilities and equipment to accommodate the traffic.	*Transportation terminal*	n/a	LBNL
	A central plant is the energy center of a campus, producing and distributing primary utilities from the central location.	*Central plant*	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
	Wastewater Treatment Plant refers to facilities designed to treat municipal wastewater. This classification is intended for primary, secondary, and advanced treatment facilities with or without nutrient removal. Treatment processes may include biological, chemical, and physical treatment. This classification does not apply to drinking water treatment and distribution facilities.	*Water treatment wastewater*	n/a	ESPM
	Drinking Water Treatment and Distribution refers to premises designed to pump and distribute drinking water through a network of pipes. Depending on the water source (groundwater, surface water, purchased water), a water utility may or may not contain a treatment process. This classification applies to any and all water sources and any and all levels of treatment.	*Water treatment drinking water and distribution*	n/a	ESPM
	Premises with operating water treatment plants including pumping stations, aqueducts, and/or distribution mains.	*Water treatment*	n/a	EPA
	A premises with a facility designed to produce electric energy from another form of energy such as fossil fuel, geothermal, and solar.	*Energy generation plant*	n/a	OSHA
	A premises with a manufacturing production facility of merchandise using labor, machines, chemical and biological processing, or formulation that transforms raw materials into finished goods at large scales.	*Industrial manufacturing plant*	n/a	LBNL
	A premises providing services for the public such as electricity, natural gas, water, sewage, and telecommunications.	*Utility*	n/a	CPUC
	Industrial premises including food processing, manufacturing, high tech, metal processing, and pulp and paper firms. Premises may have fixed pieces of equipment, buildings or complexes used to produce goods as part of any process or system such as voltage optimization, water and wastewater systems, transport processing or other activity involving farm products off-farm.	*Industrial*	n/a	LBNL
	Premises accommodating dairy farms, cattle ranch, and farms.	*Agricultural estate*	n/a	LBNL
	A commercial premises includes non-manufacturing business establishments including hotels, restaurants, wholesale businesses, retail stores, warehouses, storage facilities, and health, social and educational institutions.	*Mixed use commercial*	n/a	LBNL
	Enclosed, partially enclosed, or open parking premises including attached garage, underground parking, uncovered driveways or lots, and covered carports.	*Parking*	n/a	ASHRAE
	A space located below the pitched roof of a residential house or other building.	*Attic*	n/a	LBNL
	Finished, partially-finished, or unfinished.	*Basement*	n/a	LBNL
	A dining room is a room in a residential house for consuming food.	*Dining area*	n/a	LBNL
	A living room is a room in a residential house for relaxing and socializing.	*Living area*	n/a	LBNL
	A sleeping area is a room where people sleep such as a bedroom.	*Sleeping area*	n/a	LBNL
	A laundry area is a room or area where clothes are washed and might include a washing machine and clothes dryer.	*Laundry area*	n/a	LBNL
	A lodging area that is not common to all guests or occupants. For example guest rooms in a hotel, or apartment units in a multifamily complex.	*Lodging area*	n/a	LBNL
	A dressing area is a room or area designated for changing one's clothes in a semi-public situation including locker rooms, walk-in closets, changing rooms and dressing rooms in clothing retailers.	*Dressing area*	n/a	LBNL
	A bathroom is a room containing one, sometimes two toilet fixtures, and a bath and/or shower.	*Bathroom*		
	A restroom is a room or small building containing one or more toilets and/or urinals. Public restrooms might exist as handicapped, unisex and male and/or female restrooms.	*Restroom*	n/a	LBNL
	An auditorium is a large room that enables an audience to hear and watch performances at venues such as theatres.	*Auditorium*	n/a	LBNL
	A classroom is a room for learning purposes in all types of educational institution premises including public and private schools, corporations, and religious and humanitarian organizations.	*Classroom*	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
	A day room, common room, or communal room is a shared lounge area for daytime recreation often in residence hall premises including universities, colleges, military bases, hospitals, rest homes, hostels, and even minimum-security prisons. It could be connected to private rooms and could include a bathroom.	*Day room*	n/a	LBNL
	A room for sports, recreation or playing.	*Sport play area*	n/a	LBNL
	A stage is a designated space for the performance of productions, such as music and theater. A stage may consist of raised or un-raised platforms that serve as a focal point for an audience.	*Stage*	n/a	LBNL
	A spectator area is a space where the audience may observe, sitting or standing, such as bleachers, guest seating at a theater, and auditorium seating area.	*Spectator area*	n/a	LBNL
	An office work area is a room or area where administrative work is performed.	*Office work area*	n/a	LBNL
	A non-office work area is a shared area for administrative work and job duties such as the sales floor of a retailer, and the auto repair room in a repair shop.	*Non office work area*	n/a	LBNL
	A common area is an area for use by more than one person, and often exist in apartments, gated communities, condominiums, cooperatives and shopping malls.	*Common area*	n/a	LBNL
	A reception area is a space for hospitality after a main event such as a wedding or graduation. It might include food, drinks, and entertainment.	*Reception area*	n/a	LBNL
	A waiting area is a space where people sit or stand until an event begins and often exist at a hospital.	*Waiting area*	n/a	LBNL
	A transportation waiting area is a space where people wait until an arrival or departure of a particular mode of transportation, and can exist at an airport such a cell phone lot.	*Transportation waiting area*	n/a	LBNL
	A lobby, foyer or entrance hall is an area often located at the entrance of a building for socializing and greeting.	*Lobby*	n/a	LBNL
	A conference room is a room provided for an event such as a conference and meeting. They might exist at large hotels, arenas, convention centers, and hospitals.	*Conference room*	n/a	LBNL
	A computer lab is for computer use and might have printers and scanners that are often located in premises such as libraries, schools, government buildings, laboratories, community centers, companies, and research centers.	*Computer lab*	n/a	LBNL
	A data center is a place that houses computer systems and backup power supply, data communication connections, environmental controls, and security devices such as telecommunications and storage systems.	*Data center*	n/a	LBNL
	A printing room is an area where printing takes place, such as the development of film.	*Printing room*	n/a	LBNL
	A media center is place for researching, viewing and producing a wide range of media.	*Media center*	n/a	LBNL
	A telephone data entry is a place where services include data entry from telephone directories.	*Telephone data entry*	n/a	LBNL
	A darkroom is an area that can be made dark for the processing of light-sensitive photographic materials including photographic film and photographic paper.	*Darkroom*	n/a	LBNL
	A courtroom is a space where a judge holds court hearings.	*Courtroom*	n/a	LBNL
	A kitchen is an area for cooking and food preparation, and might include a stove, a sink, a refrigerator, a microwave oven, a dishwasher and other electric appliances.	*Kitchen*	n/a	LBNL
	A kitchenette is a smaller area than a kitchen for a small refrigerator, a microwave oven, hotplate, and/or a sink often found in motel and hotel rooms, small apartments, college dormitories or office buildings.	*Kitchenette*	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
	Refrigeration is a process in which work is done to move heat from one location to another. The work of heat transport is traditionally driven by mechanical work, but can also be driven by heat, magnetism, electricity, laser, or other means. Refrigeration has many applications, including, but not limited to: household refrigerators, industrial freezers, cryogenics, and air conditioning. Heat pumps may use the heat output of the refrigeration process, and also may be designed to be reversible, but are otherwise similar to refrigeration units.	*Refrigerated storage*	n/a	LBNL
	A bar is a counter across which alcoholic drinks or refreshments are served, the bar premises include the bar itself, bar seating, and the back-bar where refreshments are prepared.	*Bar*	n/a	LBNL
	The dance floor is clear of all furniture so patrons may have room to dance or perform and is usually lit and conditioned differently than the rest of the space.	*Dance floor*	n/a	LBNL
	A security room houses safety and security equipment as well as personnel.	*Security room*	n/a	LBNL
	Shipping and receiving premises include loading or unloading docks and processing counters.	*Shipping and receiving*	n/a	LBNL
	The mechanical room is dedicated to the mechanical equipment and its associated electrical equipment.	*Mechanical room*	n/a	LBNL
	Chemical storage rooms follow chemical storage guidelines to protect building occupants from exposure to chemicals and to maintain chemicals in proper storage conditions.	*Chemical storage room*	n/a	LBNL
	Non-chemical storage rooms are pantries, closets, etc.	*Non chemical storage room*	n/a	LBNL
	Janitorial closets are for storage of janitorial supplies and can also including waste and recycling rooms.	*Janitorial closet*	n/a	LBNL
		Recycle center		
	A vault is a chamber used for storage of precious property.	*Vault*	n/a	LBNL
	A corridor is a long passage in a building from which doors lead into rooms.	*Corridor*	n/a	LBNL
	A deck is a structure of planks or plates, approximately horizontal, extending out from the exterior of the building and is open to the weather.	*Deck*	n/a	LBNL
	A courtyard is an unroofed area that is completely or mostly enclosed by the walls of a the surrounding structure.	*Courtyard*	n/a	LBNL
	An atrium is a large open space located within a building, extending several stories high and having a glazed roof.	Atrium	n/a	LBNL
	Housing premises provided by public agency.	Public housing	n/a	
NAICS Code	North American Industry Classification System code.	String	n/a	BEDES-Beta
Ownership Intention	A list of the type(s) of possible or best uses of the premises. Probable use gives a good indication of what the best use or potential use of the property could be.	Constrained List	n/a	BEDES-Beta
	The premises is a primary place of residence or business.	*Primary*	n/a	LBNL
	The premises is only occupied during vacation periods.	*Vacation*	n/a	LBNL
	The premises was purchased as an investment, which can be a long-term endeavor, such as an apartment building, or an intended short-term investment in the case of flipping (where a property is bought, remodeled or renovated, and sold at a profit).	*Investment*	n/a	LBNL
	The premises is available for or being rented.	*Rental*	n/a	LBNL
	The premises will be occupied during the years of retirement.	*Retirement*	n/a	LBNL
	A cooperative, or co-op, is legally owned and shared by all occupants in the premises.	Cooperative	n/a	LBNL
Occupant Type	Type of occupants who are permanently resident in a premises.	Constrained List	n/a	BEDES-Beta
		Owner	n/a	
	Occupant who occupies land or property rented from a landlord	*Tenant*	n/a	
		Owner and renter	n/a	
	A family consisting of two parents and children.	*Family household*	n/a	BEDES-Beta
	A married couple with no children,	*Married couple no children*	n/a	BEDES-Beta
	A male parent with children and no spouse.	*Male householder no spouse*	n/a	BEDES-Beta
	A female parent with children and no spouse.	*Female householder no spouse*	n/a	BEDES-Beta
	Persons under the age of 18.	*Children*		

Term	Definition	Data Type	Unit of Measure	Definition Source
	A household of people living together like a family but not in legal relationships or related to each other.	*Cooperative household*	n/a	BEDES-Beta
	A nonfamily household consists of a householder living alone (a one-person household) or where the householder shares the home exclusively with people to whom he/she is not related.	*Nonfamily household*	n/a	US Census
	One adult male who has never-married, is widowed, or divorced, and living alone.	*Single male*	n/a	US Census
	One adult female who has never-married, is widowed, or divorced, and living alone.	*Single female*	n/a	US Census
	Occupants are exclusively students and associated staff.	*Student community*	n/a	BEDES-Beta
	Occupants are exclusively military personnel and associated staff.	*Military community*	n/a	BEDES-Beta
	Occupants are seniors aged 55 or older who do not require health-related care.	*Independent seniors community*	n/a	BEDES-Beta
	Occupants have special accessibility needs that are met by the design of the premises.	*Special accessibility needs community*	n/a	BEDES-Beta
	Occupants participate in subsidized housing, a government sponsored economic assistance program aimed towards alleviating housing costs and expenses for people in need with low to moderate incomes.	*Government subsidized community*	n/a	BEDES-Beta
	Occupants participate in a group-based approach to to long-term psychotherapy and rehabilitation.	*Therapeutic community*	n/a	BEDES-Beta
	Occupants do not belong to a specific classification.	*No specific occupant type*	n/a	BEDES-Beta
	Occupants are employees of an organization seeking profit from business services.	*For profit organization*	n/a	BEDES-Beta
	Occupants are members of a religion-supporting organization.	*Religious organization*	n/a	BEDES-Beta
	Occupants are members or employees of an organization seeking to provide a benefit to the public at no profit to the organization.	*Non profit organization*	n/a	BEDES-Beta
	Occupants are members or employees of a government-sponsored organization.	*Government organization*	n/a	BEDES-Beta
	Occupants are members or employees of the federal government.	*Federal government*	n/a	BEDES-Beta
	Occupants are members or employees of state government.	*State government*	n/a	BEDES-Beta
	Occupants are members or employees of local government.	*Local government*	n/a	BEDES-Beta
	The premises is meant to provide shelter to property rather than people.	*Property*	n/a	LBNL
	The premises is meant to provide shelter to animals rather than people.	*Animals*	n/a	LBNL
Occupant Income Range	Annual income of the household occupants	Constrained List	n/a	BEDES-Beta
	Lowest fifth, or the bottom 20% of the population income distribution.	*Lowest fifth*	n/a	BEDES-Beta
	Second fifth, or the income between 20% and 40% of the population income distribution.	*Second fifth*	n/a	BEDES-Beta
	Middle fifth, or the income between 40% and 60% of the population income distribution.	*Middle fifth*	n/a	BEDES-Beta
	Fourth fifth, or the income between 60% and 80% of the population income distribution.	*Fourth fifth*	n/a	BEDES-Beta
	Highest fifth, or the top 20% of the population income distribution.	*Highest fifth*	n/a	BEDES-Beta
	The top 5% of the income distribution.	*Top 5 percent*	n/a	BEDES-Beta
Highest Level Of Occupant Education	Highest education level of the household occupants.	Constrained List	n/a	BEDES-Beta
	Occupant received no amount of high school education for grades 9-12.	*No high school*	n/a	BEDES-Beta
	Occupant received a partial high school education, grades 9-12, but not enough to to receive a high school diploma or equivalent.	*Some high school*	n/a	BEDES-Beta
	Occupant completed a high school education, grades 9-12, and received a high school diploma or equivalent certificate.	*High school graduate*	n/a	BEDES-Beta
	Occupant received some college education beyond high school, but did not complete a degree.	*Some college*	n/a	BEDES-Beta
	Occupant completed a training through a vocational or technical program, and/or received an Associate's degree.	*Vocational technical associates degree*	n/a	BEDES-Beta
	Occupant completed an undergraduate college education and received a Bachelor's degree.	*Bachelor degree*	n/a	BEDES-Beta

Term	Definition	Data Type	Unit of Measure	Definition Source
	Occupant received some post-graduate education but did not complete a graduate degree.	*Some postgraduate*	n/a	BEDES-Beta
	Occupant completed a postgraduate program and received a Master's degree.	*Masters degree*	n/a	BEDES-Beta
	Occupant completed a professional degree, which follows education for a particular profession by emphasizing skills and practical analysis over theory and research	*Professional degree*	n/a	BEDES-Beta
	Occupant completed a graduate program and received a doctoral degree, or PhD.	*Doctoral degree*	n/a	BEDES-Beta
Occupant Quantity Type	Type of quantitative measure for capturing occupant information about the premises. The value is captured by the Quantity term.	Constrained List	n/a	
	Average number of occupants during the peak occupancy, including employees/residents and customers/guests.	*Peak total occupants*	n/a	
	Number of people over the age of 18 residing in the premises at least 50% of the time.	*Adults*	n/a	
	Number of people under the age of 18 residing in the premises at least 50% of the time.	*Children*	n/a	
	Average number of residents at any one time.	*Average residents*	n/a	ENERGY STAR
	Total number of workers present during the primary shift. This is not a total count of workers, but rather a count of workers who are present at the same time. This number may include employees, sub-contractors who are on-site regularly, and volunteers who perform regular on-site tasks. This number should not include visitors to the buildings such as clients, customers, or patients.	*Workers on main shift*	n/a	
	Full time equivalent (FTE) workers is the total number of hours worked by all workers in a week divided by the standard hours worked by one full time worker in a week. Workers may include employees of the property, sub-contractors who are on-site regularly, and volunteers who perform regular on-site tasks. Workers should not include visitors to the property such as clients, customers, or patients.	*Full time equivalent workers*	n/a	
	Part time workers	*Part time workers*	n/a	
	Cumulative number of hours per day worked by all salaried employees (e.g., managers) on average over a 12 month period	*Average daily salaried labor hours*	n/a	
	Number of students registered in the educational facility.	*Registered students*	n/a	
		Staffed beds	n/a	
	Number of beds for which a health care facility has a license to operate.	*Licensed beds*	n/a	
	Seating capacity of a restaurant, theater, classroom, etc.	*Capacity*	n/a	
	A percentage reflecting the occupancy level of the property. The occupancy is measured as the percentage of the property that is occupied and operational. For example, the average annual occupancy should be based on the number of rooms filled in a hotel.	*Capacity percentage*	n/a	
Occupied Status	The condition of the premises relative to being occupied by people.	Constrained List	n/a	LBNL
	Occupied by the primary occupant type for this premises: people, property, or animals.	*Occupied*	n/a	LBNL
	Not occupied by the primary occupant type for this premises.	*Vacant*	n/a	LBNL
Occupant Activity Level	The activity level that drives the amount of internal gains due to occupants.	Constrained List	n/a	ASHRAE
	Corresponds to typical office/retail work. Sensible load 250 Btu/hr, Latent load 200 Btu/hr.	*Low*	n/a	
	Corresponds to heavier factory work or gymnasiums. Sensible load 580 Btu/hr, latent load 870 Btu/hr.	*High*	n/a	
Construction Characteristics				
Construction Status	Indicates whether the premises is in design or in existing operation.	Constrained List	n/a	LBNL/AIA
	Project goals and execution framework are established and big ideas are explored. Certification goals are set. Benchmarking and certification targets are set. Cand high-level comparative analysis can be used to establish energy performance targets, and to identify energy, greenhouse gas, and water saving strategies.	*Conceptual design*	n/a	LBNL/AIA

Term	Definition	Data Type	Unit of Measure	Definition Source
	Conceptual design is refined to illustrate scales and relationships between project components. Preliminary drawings for the site, building plan, elevations, and interior sections are developed to establish design intent. Project execution roadmap is developed, which includes budget, early challenges and opportunities and mitigating strategies. Comparative, early stage energy and loads analysis is used to identify relevant energy-efficiency measures and inform the design.	*Schematic design*	n/a	LBNL/AIA
	Drawings for the site, building plans and elevations are further developed, along with drawings for building appearance, typical construction detail, and selection and specification of major building materials. Preliminary specifications for mechanical and electrical systems and their layouts is developed. Detailed energy analysis and energy modeling are used to evaluate envelope alternatives, mechanical systems types and initial sizing, and operational strategies.	*Design development*	n/a	LBNL/AIA
	Mechanical, electrical, plumbing, fire protection and other building systems are integrated into the architectural framework. Specifications for the performance, durability, and "quality" of all construction materials and equipment are written. Detailed drawings for all site and building elements including systems are developed in preparation for construction bids. Detailed energy analysis is used to finalize the mechanical system configuration, equipment sizing and controls, and to calculate predicted building energy intensity for code compliance and certification purposes.	*Construction documents*	n/a	LBNL/AIA
	Construction proceeds based on the detailed construction plan. Addendums and modifications are developed as on-site challenges arise and are mitigated. Building systems are commissioned in preparation for occupancy. Energy analysis can be used to assist commissioning and evaluate potential mitigation alternatives.	*Construction administration*	n/a	LBNL/AIA
	Construction is completed and the premises has been commissioned and evaluated as satisfactory. The premises is ready for occupancy.	*Completed*	n/a	
	Construction is complete and the building is occupied. Actual operational performance is tracked and can be used to benchmark and retro-commission the building. Energy analysis can be used to assist commissioning, fault-detection and diagnosis, and in building control.	*Occupancy*	n/a	LBNL/AIA
Construction Status Date	Date when the construction status first applied.	Date Format from Metadata	n/a	
Floor Area Qualifier	Floor area can be defined and described in many different ways for different purposes. This type field allows multiple types of floor area definitions to exist in the same dataset.	Constrained List	n/a	LBNL
	The sum of the floor areas of all the spaces within the premises with no deductions for floor penetrations other than atria. it is measured from the exterior faces of exterior walls or from the centerline of walls separating buildings but it excludes covered walkways, open-roofed over areas, porches and similar spaces, pipe trenches, exterior terraces or steps, roof overhangs, parking garages, surface parking, and similar features.	*Gross*	n/a	ASHRAE 105-2007 Standard Methods of Determining, Expressing, and Comparing Building Energy Performance and Greenhouse Gas Emissions
	Gross floor area, excluding the area occupied by walls and partitions, the circulation area (where people walk), and the mechanical area (where there is mechanical equipment), i.e., gross floor area reduced by the area for structural components.	*Net*	n/a	BEDES-Beta
	The total horizontal area of the vertical span of the premises.	*Footprint*	n/a	LBNL/BEDES-Beta
	Floor area that is being rented or is for rent.	*Rentable*	n/a	BEDES-Beta
	Floor area usable for some specific purpose	*Usable*	n/a	
	Floor area that is sellable	*Sellable*	n/a	
Finished Status	The condition of the premises relative to the amount of work that has been done to the components and surfaces.	Constrained List	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	To be considered finished, the premises must meet three of the following criteria: be heated, have finished walls, have a finished ceiling (no exposed floor joists), and have a finished floor (painted concrete floors don't count).	*Finished*	n/a	LBNL
	At least one, but not all of the criteria for a finished premises apply: be heated, have finished walls, have a finished ceiling (no exposed floor joists), and have a finished floor (painted concrete floors don't count).	*Partially finished*	n/a	LBNL
	The premises does not meet any of the criteria to be considered finished: be heated, have finished walls, have a finished ceiling (no exposed floor joists), and have a finished floor (painted concrete floors don't count).	*Unfinished*	n/a	LBNL
Lighting Status	Description of the how much of the premises is illuminated by daylight during the day.	Constrained List	n/a	LBNL
	Over 50% of the premises is daylit.	*Substantial daylighting*	n/a	LBNL
	The perimeter (15' to 30' into the space from the facade) is daylit.	*Perimeter daylighting*	n/a	LBNL
	Portions of the premises are daylit, but it is less than 50% of the total premises area.	*Partial daylighting*	n/a	LBNL
	Primary lighting source is artificial.	*Artificial lighting*	n/a	LBNL
Premises Enclosure	Classification of the enclosure of the premises.	Constrained List	n/a	LBNL
	Premises is completely enclosed by walls, including windows that can be shut, and a roof.	*Enclosed*	n/a	LBNL
	Premises is not completely enclosed but has a roof and no walls, or only partial walls.	*Non enclosed*	n/a	LBNL
	Premises does not have a roof but may have some walls or partial walls.	*Open*	n/a	LBNL
Height Distribution	Description of height variations in the premises.	Constrained List	n/a	LBNL
	The premises has sections with different numbers of floors.	*Multiple heights*	n/a	LBNL
	The premises has variable height due to grade or roof tilt.	*Variable height*	n/a	LBNL
	The premises has the same number of floors in all sections.	*Uniform height*	n/a	LBNL
Spatial Unit Type	Unit type within the premises.	Constrained List	n/a	LBNL
	Land properties are often sold with multiple land lots.	*Lot*	n/a	
	Designated parking spaces drawn on parking premises.	*Parking space*	n/a	LBNL
	Individual units in multifamily housing that are rented or sold separately.	*Apartment unit*	n/a	LBNL
	Individual business operating in the premises.	*Business*	n/a	LBNL
	Individual guest rooms available for occupation. Rooms that have double connecting doors are counted should still be considered separate units.	*Guest room*	n/a	LBNL
	Individual stations on the premises, such as workstations in a manufacturer, cashier stations in a retail store, etc.	*Station*	n/a	LBNL
	A building is a single structure wholly or partially enclosed within exterior walls, or within exterior and abutment walls (party walls), and a roof, affording shelter to persons, animals, or property. A building can be two or more units held in the condominium form of ownership that are governed by the same board of managers.	*Building*	n/a	LBNL
	An area is a section within a building that serves a specific activity and could stand alone, such as a restaurant inside a hotel. An area could also be section of a building that has distinctly different equipment densities, occupancies, energy-use patterns, operating characteristics, or HVAC configurations.	*Area*	n/a	LBNL
	Thermal zone is a space or group of spaces within a building with heating and cooling requirements that are sufficiently similar so that desired conditions (e.g., temperature) can be maintained throughout using a single sensor.	*Thermal zone*	n/a	LBNL
	Stories or floors made up of spaces that are all on the same level.	*Floor*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Rooms refers to subdivisions of a housing unit. Whole rooms are rooms such as living rooms, dining rooms, bedrooms, kitchens, lodgers' rooms, finished basements or attic rooms, recreation rooms, and permanently enclosed sun porches that are used year round. Rooms used for offices by a person living in the unit are included. Not considered to be rooms are bathrooms, halls, foyers or vestibules, balconies, closets, alcoves, pantries, strip or pullman kitchens, laundry or furnace rooms, unfinished attics or basements, open porches, and unfinished space used for storage. A partially divided room, such as a dinette next to a kitchen or a living room, is considered a separate room only if there is a partition from floor to ceiling------but not if the partition consists solely of shelves or cabinets. If a room is used by occupants of more than one unit, the room is	*Room*	n/a	
	Bedrooms are rooms that are intended for sleeping, even if not presently used for sleeping. The number of bedrooms are those that would be listed as descriptive of the apartment of house if it were on the market for sale or rent. A one-room efficiency or studio apartment has no bedrooms.	*Bedroom*	n/a	
		Restroom	n/a	
	Generic unit type	*Unit*	n/a	
Water Fixture Type	A water fixture is an exchangeable device which can be connected to a plumbing system to deliver and drain water.	Constrained List	n/a	
	Toilet fixtures including latrines, urinals, and bidets.	*Toilet*	n/a	
	Bath fixtures including showers and tubs.	*Bath*	n/a	
		Sink	n/a	
	Drinking fountain fixture	*Drinking fountain*	n/a	
	Landscape watering fixture	*Landscape*	n/a	
	Hydroponic loop fixture	*Hydroponic loop*	n/a	
Floor Height Measurement	The method for measuring each floor level, or story, in a premises.	Constrained List	n/a	
	Floor height is measured from the top of the floor to the surface of the ceiling.	*Floor to ceiling height*	n/a	
	Floor height is measured from the top of the floor to the top of the floor above.	*Floor to floor height*	n/a	
Assessment Program				
Assessment Program	Program which issues energy labels, ratings, or sustainability certifications.	Constrained List	n/a	BEDES-Beta
		ENERGY STAR	n/a	
	EPA ENERGY STAR Certified Homes is a set of optional construction practices and technologies (above minimum code requirements) that builders can follow to upgrade a new home's energy efficiency beyond minimum code requirements. Guidelines are outlined in the "National Performance Path" or the "National Prescriptive Path." This whole-house label differs from the ENERGY STAR products label. To achieve the ENERGY STAR Certified Homes label, a home's energy efficiency must be verified by a third-party organization.	*ENERGY STAR Certified Homes*	n/a	RESO
	Leadership in Energy & Environmental Design (LEED) is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification.	*LEED*	n/a	
	Buildings Performance Institute BPI- 2101 Standard Requirements for a Certificate of Completion for Whole-House Energy Efficiency Upgrades specifies a standard way of describing the improvements made to an existing home through a home energy upgrade (HEU) and provides one or more measures of a home's performance. Measures of performance may include a HERS rating, a Home Energy Score, an indication of projected or actual energy consumption, or other systems. Certificates are provided by a local energy efficiency program sponsor.	*Home Energy Upgrade Certificate of Energy Efficiency Performance*	n/a	
	Buildings Performance Institute BPI- 2101 Standard Requirements for a Certificate of Completion for Whole-House Energy Efficiency Upgrades specifies a standard way of describing the improvements made to an existing home through a home energy upgrade (HEU). Certificates are provided by a local energy efficiency program sponsor.	*Home Energy Upgrade Certificate of Energy Efficiency Improvements*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Local programs verify homes designed for ultra-low energy use. Note: Consult the local building or efficiency community for information on construction and remodeling programs with significant market share or growing scale. See Certification Type for detailed list of programs.	*Passive House*	n/a	BEDES-Beta
	The Living Building Challenge(TM) is a building certification program, advocacy tool and philosophy that defines the most advanced measure of sustainability in the built environment possible today.	*Living Building Challenge*	n/a	RESO
	Green Globes is a green building rating and certification tool, developed by ECD Energy and Environment Canada. It is licensed for use by BOMA Canada and the Green Building Initiative in the United States. The certification level is based on the building rating. The certification also includes an on-site visit by a third-party assessor. It has been characterized as an alternative to LEED.	*Green Globes*	n/a	
	DOE Challenge Home program is a voluntary set of building guidelines designed to be at least 40-50% more energy efficient than a typical new home. The program builds upon the building science requirements of the ENERGY STAR Certified Homes Version 3. DOE Challenge Homes are verified by a third-party organization and must receive a HERS Index Rating. Since 2008, the DOE Builders Challenge program has resulted in over 14,000 highly efficient homes.	*Challenge Home*	n/a	
	EPA WaterSense is a set of optional construction practices and technologies (above minimum code requirements) that builders can follow to ensure a home uses less water while still providing the same level of comfort and convenience, which results in the certification and labeling of the home. WaterSense also applies to specific plumbing fixtures and should not be confused with the whole-house label defined here.	*WaterSense*	n/a	BEDES-Beta
	EPA Indoor airPLUS is a set of optional construction practices and technologies builders can follow to reduce indoor air pollutants and improve the indoor air quality in a new home beyond minimum code requirements, and results in an airPLUS label. It is only available to homes that first meet ENERGY STAR Certified Homes certification.	*Indoor airPLUS*	n/a	BEDES-Beta
	National Green Building Standard certification program based on the ICC 700 National Green Building Standard residential rating system, developed by the National Association of Home Builders (NAHB) and the International Code Council (ICC) approved by ANSI as an American National Standard.	*NGBS ICC 700*	n/a	BEDES-Beta
	The Capital Markets Partnership (CMP) Green Value Score focuses solely on the financially tangible, asset-based attributes that underlie sustainability-related real estate initiatives; more specifically, energy/water efficiency, indoor environmental quality and location-based attributes that have a direct impact on an asset's net cash flow, liability exposure, and the asset's resultant market value. The CMP Green Value Score is defined in CMP's consensus based Green Building Underwriting Standards.	*CMP Green Value Score*	n/a	
	The HERS (Home Energy Rating System) Index is the nationally recognized scoring system for measuring a home's performance. To calculate a home's HERS Index Score, a certified RESNET home energy rater will do a home energy rating and compare the data against a reference home (a design-modeled home of the same size and shape as the actual home), so that the HERS Index Score is always relative to the size, shape, and type of the house. The lower the number the more energy efficient the home.	*RESNET HERS*	n/a	RESO

Term	Definition	Data Type	Unit of Measure	Definition Source
	The Home Energy Score, managed by the US DOE, is a national system that allows homes to receive an energy efficiency rating, similar to the MPG rating available for cars. The Home Energy Score uses a 10-point scale to reflect how much energy a home is expected to use under standard operating conditions. Homes that are expected to use the least amount of energy (and are considered the most energy efficient) score a 10, and homes that are expected to use the most amount of energy (and are considered the least energy efficient) score a 1. The Home Energy Score uses a standard calculation method and takes into account the home's structure and envelope (walls, windows, foundation) and its heating, cooling, and hot water systems. Only Qualified Assessors who pass a DOE exam are allowed to provide the Home Energy Score.	*Home Energy Score*	n/a	RESO
	Building Energy Quotient (bEQ) is a building energy rating program that provides information on a building's energy use.	*ASHRAE Building EQ*	n/a	
	The Commercial Building Energy Asset Score is a national standard for a voluntary energy rating system evaluating the physical characteristics of a building and its overall energy efficiency. The Asset Scoring Tool will generate an Asset Score and system evaluation for the building envelope and mechanical and electrical systems.	*Commercial Building Energy Asset Score*	n/a	
	Statement of Energy Performance (SEP)	*Statement of Energy Performance*	n/a	
Assessment Recognition	Different Rating Programs within a Certification, if applicable.	Constrained List	n/a	
	USGBC's rating system, LEED certification for neighborhood development practices. Applies to new land development projects or redevelopment projects containing residential uses, nonresidential uses, or a mix. Projects can be at any stage of the development process, from conceptual planning to construction; includes Plan and Built Project.	*LEED Certification Neighborhood Development*	n/a	
		LEED Certification for Homes	n/a	BEDES-Beta
	Addresses design and construction activities for both new buildings and major renovations of existing buildings. This includes major HVAC improvements, significant building envelope modifications and major interior rehabilitation.	*LEED Certification for New Construction & Major Renovation*	n/a	BEDES-Beta
	For projects where the developer controls the design and construction of the entire mechanical, electrical, plumbing, and fire protection system—called the core and shell—but not the design and construction of the tenant fit-out.	*LEED Certification for Core and Shell Development*	n/a	BEDES-Beta
	For interior spaces dedicated to functions other than retail or hospitality.	*LEED Certification for Commercial Interiors*	n/a	BEDES-Beta
	Applies to existing buildings that are undergoing improvement work or little to no construction.	*LEED Certification For Existing Buildings Operations and Management*	n/a	BEDES-Beta
	The ICC 700 National Green Building Standard™ (NGBS) provides practices for the design, construction, and certification of green multifamily residential buildings.	*NGBS ICC 700 Multifamily Certification*	n/a	Home Innovation Research Labs
	The ICC 700 National Green Building Standard™ (NGBS) provides practices for the renovation and remodeling of green single-family homes and multifamily buildings.	*NGBS ICC 700 Remodeling Certification*	n/a	Home Innovation Research Labs
	The ICC 700 National Green Building Standard (NGBS) provides practices for the design, construction, and certification of new green single-family homes.	*NGBS ICC 700 Single Family Certification*	n/a	Home Innovation Research Labs
	The ICC 700 National Green Building Standard™ (NGBS) provides practices for the design, planning, construction, and certification of land development.	*NGBS ICC 700 Land Development Certification*	n/a	Home Innovation Research Labs
	Passive House Institute US. Super-insulated homes that have met certification requirements demonstrating minimal or no heating and cooling system.	*PHIUS+*	n/a	PHIUS
	The PHIUS+ Certification program is the leading passive building certification program in North America. It's the only passive building certification that combines a thorough passive house design verification protocol with a stringent Quality Assurance and Quality Control (QA/QC) program performed on site by highly skilled and specialized PHIUS+ Raters.	*PHIUS+ Retro*	n/a	PHIUS
	California certification for passive homes.	*Passive House California*	n/a	BEDES-Beta

Term	Definition	Data Type	Unit of Measure	Definition Source
	New York certification for passive homes.	*New York Passive House*	n/a	BEDES-Beta
	Oregon and Washington state certification for passive homes.	*Passive House NW*	n/a	BEDES-Beta
Assessment Program Organization	The name of the body or group providing the verification or certification. More than one can apply to a premises.	Constrained List	n/a	
	U.S. Environmental Protection Agency	*EPA*	n/a	RESO
	U.S. Department of Energy	*DOE*	n/a	RESO
	U.S. Green Building Council	*USGBC*	n/a	RESO
	National Association of Home Builders	*NAHB*		
	Home Innovation Research Labs (formerly the NAHB Research Center) is a subsidiary of the National Association of Home Builders (NAHB). It is an accredited third-party certification agency for the NGBS certification program.	*Home Innovation Research Labs*	n/a	RESO
		State		
		City		
		Regional		
	An organization that supports the California state utility program Energy Upgrade California	*Build It Green California*	n/a	BEDES-Beta
	Seattle city utility program	*Built Green Seattle*	n/a	BEDES-Beta
	Portland, Oregon city utility program	*Earth Advantage Portland OR*	n/a	BEDES-Beta
	Southeast region utility program	*Earthcraft Southeast*	n/a	BEDES-Beta
	Southwest and Southeast program utility program	*Environments for Living*	n/a	BEDES-Beta
	Texas state utility program	*Greenbuilt Texas*	n/a	BEDES-Beta
	DOE program sponsored locally across approximately 35 states	*Home Performance with Energy Star*	n/a	BEDES-Beta
	DOE program with local partners across the US	*Home Energy Score*	n/a	BEDES-Beta
Assessment Recognition Type	Type of recognition awarded through assessment program.	Constrained List	n/a	
		Score	n/a	
		Rating	n/a	
		Certification	n/a	
		Award	n/a	
		Label	n/a	
		Participant	n/a	
	A DOE Zero Energy Ready Home is a high performance home which is so energy efficient, that a renewable energy system can offset all or most of its annual energy consumption.	*Zero Energy Ready Home*	n/a	DOE
Assessment Value	Value from certifications that produce a numeric metric, such as Energy Star Score, Home Energy Rating System (HERS) Index Score, Home Energy Score	Decimal	n/a	BEDES-Beta
Assessment Level	Value from certification programs that produce a descriptive (rather than numeric) rating, such as LEED or NGBS.	Constrained List	n/a	
	NGBS level for Multifamily, Single-Family and Remodeling certifications	*Bronze*	n/a	
	NGBS level for Multifamily, Single-Family and Remodeling certifications	*Silver*	n/a	
	NGBS level for Multifamily, Single-Family and Remodeling certifications	*Gold*	n/a	
	NGBS level for Multifamily, Single-Family and Remodeling certifications	*Emerald*	n/a	
	Level of LEED rated at 40-49 points	*Certified*	n/a	
	Level of LEED rated at 50-59 points	*Bronze*	n/a	
	Level of LEED rated at 60-79 points	*Silver*	n/a	
	Level of LEED rated at 40-49 points	*Gold*	n/a	
	Level of LEED rated at 80+ points	*Platinum*	n/a	
	Level of NGBS Land Development	*One Star*	n/a	
	Level of NGBS Land Development	*Two Star*	n/a	
	Level of NGBS Land Development	*Three Star*	n/a	
	Level of NGBS Land Development	*Four Star*	n/a	
Assessment Year	Year the assessment qualifications for recognition were documented.	Year Format from Metadata	n/a	BEDES-Beta
Assessment Version	Version of the assessment documentation, such as "2.0"	String	n/a	LBNL/HPXML

Term	Definition	Data Type	Unit of Measure	Definition Source
Assessment Program URL	A link to the specific rating or scoring details for the premises directly from and hosted by the sponsoring body of the program. Typically provides thorough details; for example, which points were achieved and how, or in the case of a score what specifically was tested and the results.	String	n/a	RESO
Assessment Eligibility	Eligibility of a premises for assessment recognition.	Constrained List	n/a	BEDES-Beta
	Eligible for an assessment recognition, such as an ENERGY STAR label.	*Eligible*	n/a	
	Not eligible for assessment program recognition.	*Not eligible*	n/a	
Assessment Recognition Status	Status of recognition for an assessment program.	Constrained List	n/a	BEDES-Beta
		Eligible	n/a	
		Not yet started	n/a	
	A test assessment has been performed, or test application submitted, to test the process, but will not yield an official result.	*Test*	n/a	
		Started	n/a	
		Submitted	n/a	
	The first assessment or application approval stage.	*Initial stage*	n/a	
	Stage to review quality assurance of work performed or application materials.	*Quality assurance*	n/a	
		Under review	n/a	ENERGY STAR
	There is an application under review that has been escalated to a subject matter expert.	*Escalated to expert*	n/a	ENERGY STAR
	Organization has asked applicant questions about the application.	*Questions for applicant*	n/a	ENERGY STAR
	Organization has required a revised application.	*Revised application required*	n/a	ENERGY STAR
	The application data has been corrected.	*Corrected*	n/a	
		Pending receipt	n/a	ENERGY STAR
		Pending decision	n/a	ENERGY STAR
	The application has no outstanding technical questions, however approval is on hold until the premises is eligible.	*On hold*	n/a	ENERGY STAR
	The final assessment or application approval stage.	*Final stage*	n/a	
	The application has been approved.	*Approved*	n/a	ENERGY STAR
	Recognition award or notification has been sent to approved premises.	*Notified*	n/a	ENERGY STAR
		Published	n/a	
		Rejected	n/a	
		Expired	n/a	ENERGY STAR
Assessment Recognition Status Date	Date when assessment recognition status first applied.	Date Format from Metadata	n/a	
Assessment Compliance Target Date	Date a premises is expected to achieve assessment recognition, including in the appropriate cases, third party verification	Date Format from Metadata	n/a	LBNL/ESPM
Assessment Tool	Tools that provide a performance ranking based on a peer group of similar buildings.	Constrained List	n/a	
		Portfolio Manager	n/a	
		Buildings Performance Database Tool	n/a	
		EnergyIQ	n/a	
		Labs21	n/a	
		Fabs21	n/a	
Benchmark Type	The type of benchmark being used	Constrained List	n/a	
	ENERGY STAR Portfolio Manager® is an online tool that can be used to measure	*Portfolio Manager*		
	The Commercial Buildings Energy Consumption Survey (CBECS) is a national sample survey that collects information on the stock of U.S. commercial buildings.	*CBECS*		
		Code Minimum		
		Standard Practice		
Benchmark Percentile	Assessed percentile standing for the premises relative to benchmarking peer group.	Decimal	Percent	
Benchmark Peer Group	The group of buildings that the premises in question is being compared against.	String	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
Federal Sustainability Checklist Completion Percentage	Percentage of the Federal High Performance sustainability Checklist that has been completed for federal building in Portfolio Manager.	Decimal	Percent	LBNL/BEDES-Beta
National Median Reference Property Type	The National Median is the median reference point for the premises based on the Commercial Building Energy Consumption Survey (CBECS).	String	n/a	ESPM
Tax Information				
Tax Annual Amount	The annual property tax amount as of the last assessment made by the taxing authority.	Decimal	$	
Tax Year	The year in with the last assessment of the property value/tax was made.	Year Format from Metadata	n/a	
Tax Assessed Value	The property value as of the last assessment made by the taxing authority.	Decimal	$	
Tax Exemptions	A list of tax exemptions as they relate to the property.	String	n/a	
Tax Other Assessment Amount	Any other annual taxes, not including the tax reported in the Tax Annual Amount field, as of the last assessment made by the taxing authority.	Decimal	$	
Tax Status Current	The current tax status of the mobile home in cases where the land or space is included in the sale.	String	n/a	
~~**Most Recent Sale Date**~~	~~Date of most recent real estate transaction.~~	~~Date Format from Metadata~~	~~date~~	
Hazard Zone Information				
Radon Zone	The EPA Radon Zone Number. Legal values: 1, 2, 3	Integer	n/a	
Termite Zone	Zone in the United States which designates the probability of a particular location being susceptible to termite infestations. From the IECC "Termite Infestation Probability Map".	Constrained List	n/a	
		None to slight	n/a	
		Slight to moderate	n/a	
		Moderate to heavy	n/a	
		Very heavy	n/a	
Hurricane Zone	Designation of the premises relative to a Hurricane Zone.	Constrained List	n/a	
	Property is in an identified hurricane zone.	*Hurricane zone*	n/a	
	The premises is in a locally designated hurricane zone	*Local*	n/a	
Flood Zone	If the property is in a flood zone, what is the source of the zone designation.	Constrained List	n/a	
	The premises is in a FEMA flood zone	*FEMA*	n/a	
	The premises is in a locally designated flood zone	*Local*	n/a	
Earthquake Zone	If the property is in an earthquake zone, what is the source of the zone designation.	Constrained List	n/a	
	The premises is shown as being in a significant earthquake area/zone on the USGS National Seismic Hazard Maps	*USGS*	n/a	
	The premises is shows as being in a significant earthquake area/zone on a local seismic hazard map	*Local*	n/a	
Climate				
Climate Zone Type	The climate zone type, based on the organization defining it. Many different organizations have implemented different climate zone definitions based on their needs. The list below represents the current list. This list can be added to over time based on the collaborative BEDES development process. The options are:	Constrained List	n/a	LBNL
	Climate zone map published by the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE).	*ASHRAE*	n/a	
	Climate zone map published by the Environmental Protection Agency (EPA) for the ENERGY STAR programs.	*ENERGY STAR*	n/a	
	Climate zone map published by the California Energy Commission (CEC) to be used to show compliance with the Title 24 building energy efficiency standards.	*California Title 24*	n/a	
	Climate zone map for the United States published in the International Energy Conservation Code.	*IECC*	n/a	
	A simplified version of the IECC climate zone map, developed at the National Renewable Energy Laboratory (NREL) to be used for the Building America program.	*Building America*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Climate zone map based on climate divisions developed by the National Oceanic and Atmospheric Administration (NOAA). Each NOAA climate division is placed into one of the five CBECS climate zones based on its 30-year average heating degree-days (HDD) and cooling degree-days (CDD).	*CBECS*	n/a	
	A simplified version of the IECC climate zone map, developed at the National Renewable Energy Laboratory (NREL) to be used for the Building America program.	*DOE*	n/a	
Climate Zone	Based on the Climate Zone Type term, this is the climate zone designation. For example, if the Climate Zone Type is ASHRAE, and the climate zone for this site fell into the Hot - Humid zone, this term would have the value of "2A".	Constrained List	n/a	LBNL
	California Title 24 representative city of Arcata. IECC Zone. CBECS zone.	*1*	n/a	
	ASHRAE. Very hot and humid. 9000 < CDD50F	*1A*	n/a	
	ASHRAE. Very hot and dry. 9000 < CDD50F	*1B*	n/a	
	California Title 24 representative city of Santa Rosa. IECC Zone. CBECS zone.	*2*	n/a	
	ASHRAE. Hot and humid. 6300 < CDD50F <= 90000	*2A*	n/a	
	ASHRAE. Hot and dry. 6300 < CDD50F <= 90000	*2B*	n/a	
	California Title 24 representative city of Oakland. IECC Zone. CBECS zone.	*3*	n/a	
	ASHRAE. Warm and humid. 4500 < CDD50F <= 6300	*3A*	n/a	
	ASHRAE. Warm and dry. 4500 < CDD50F <= 6300	*3B*	n/a	
	ASHRAE. Warm marine. CDD50F <= 4500 and HDD65F <= 3600	*3C*	n/a	
	California Title 24 representative city of Sunnyvale. CBECS zone.	*4*	n/a	
	ASHRAE. Mixed and humid. CDD50F <= 4500 and 3600 <HDD65F <= 5400	*4A*	n/a	
	ASHRAE. Mixed and dry. CDD50F <= 4500 and 3600 <HDD65F <= 5400	*4B*	n/a	
	ASHRAE. Mixed marine. 3600 <HDD65F <= 5400	*4C*	n/a	
	IECC Zone	*4 except marine*	n/a	
	IECC Zone	*4 marine*	n/a	
	California Title 24 representative city of Santa Marina. IECC Zone. CBECS zone.	*5*	n/a	
	ASHRAE. Cool and humid. 5400 < HDD65F <= 7200	*5A*	n/a	
	ASHRAE. Cool and dry. 5400 < HDD65F <= 7200	*5B*	n/a	
	ASHRAE. Cool marine. 5400 < HDD65F <= 7200	*5C*	n/a	
	California Title 24 representative city of Los Angeles. IECC Zone	*6*	n/a	
	ASHRAE. Cold and humid. 7200 < HDD65F <= 9000	*6A*	n/a	
	ASHRAE. Cold and dry. 7200 < HDD65F <= 9000	*6B*	n/a	
	ASHRAE. Very cold. 9000 < HDD65F <= 12600. California Title 24 representative city of San Diego. IECC Zone	*7*	n/a	
	ASHRAE. Subarctic. 12600 < HDD65F. California Title 24 representative city of El Toro. IECC Zone.	*8*	n/a	
	California Title 24 representative city of Pasadena.	*9*	n/a	
	California Title 24 representative city of Riverside.	*10*	n/a	
	California Title 24 representative city of Red Bluff.	*11*	n/a	
	California Title 24 representative city of Sacramento.	*12*	n/a	
	California Title 24 representative city of Fresno.	*13*	n/a	
	California Title 24 representative city of China Lake.	*14*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	California Title 24 representative city of El Centro.	*15*	n/a	
	California Title 24 representative city of Mount Shasta.	*16*	n/a	
	Energy Star zone.	*Northern*	n/a	
	Energy Star zone.	*North Central*	n/a	
	Energy Star zone.	*South Central*	n/a	
	Energy Star zone.	*Southern*	n/a	
	Building America or DOE zone.	*Subarctic*	n/a	
	Building America or DOE zone.	*Marine*	n/a	
	Building America or DOE zone.	*Hot dry*	n/a	
	Building America or DOE zone.	*Mixed dry*	n/a	
	Building America or DOE zone.	*Hot humid*	n/a	
	Building America or DOE zone.	*Mixed humid*	n/a	
	Building America or DOE zone.	*Cold*	n/a	
	Building America or DOE zone.	*Very cold*	n/a	
IECC Year	For Climate Zone Type = IECC, the year of the IECC used for that climate zone definition.	Year Format from Metadata	n/a	LBNL
Weather Station Name	The name of the weather station associated with this premises, which could be used for simulations, weather normalization, anomaly resolution, etc. For simulations, this is usually the name of the weather file, but the name is also in the header of the data file (TMY, IWEC), such as USA_CO_Denver Intl AP	String	n/a	LBNL/NREL
Weather Data Station ID	For an actual weather station, this is the ID assigned by NOAA. For hourly energy simulations, this is the six digit code associated with the hourly weather data, generally found in the name of the weather data file, as well as in the header of the data file.	String	n/a	LBNL/NREL
Weather Station Category	Describes the type of weather station used to specify the site's weather.	Constrained List	n/a	LBNL/NREL
	Federal Aviation Administration	*FAA*	n/a	
	International Civil Aviation Organization	*ICAO*	n/a	
	National Weather Service	*NWS*	n/a	
	Weather Bureau Army Navy	*WBAN*	n/a	
	World Meteorological Organization	*WMO*	n/a	
Weather Data Type	For hourly energy simulations, the type of data used in the hourly weather data. This information is generally found in the name of the weather data file, as well as in the header of the data file. In the United States, the normal type of data is Typical Meteorological Year (TMY), which represent a year of typical climatic conditions for a location. The data set is composed of 12 months of typical meteorological data concatenated to form a single year with a complete data set for primary measurements. The monthly data sets contain actual meteorological measurements and modeled solar values	Constrained List	n/a	LBNL/NREL
	The original Typical Meteorological Year (TMY) data was developed at Sandia National Laboratory in 1978 and represents data from 1948 - 1980.	*TMY*	n/a	
	TMY2 was completed in March 1994 by the National Renewable Energy Laboratory (NREL), contains data for 239 locations, and represents weather data from 1961-1990.	*TMY2*	n/a	
	TMY3 was developed by NREL, contains data for 1020 locations, and represents weather data from 1992-2005.	*TMY3*	n/a	
	The International Weather for Energy Calculation (IWEC), developed by ASHRAE to represent typical weather data for building energy analysis for 227 locations outside the United States and Canada. This weather data is derived from up to 18 years of DATSAV3 hourly weather data originally archived at the National Climatic Data Center. The weather data is supplemented by solar radiations estimated on an hourly basis from earth-sun geometry and hourly weather elements, particularly cloud amount information	*IWEC*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Canadian Weather for Energy Calculations (CWEC); 80 files containing hourly weather observations representing an artificial one-year period specifically designed for building energy calculations; developed by Numerical Logic in collaboration with Environment Canada and the National Research Council of Canada	*CWEC*	n/a	
	California weather data for the 16 California climate zones used to demonstrate compliance with Title 24 with approved building energy simulation programs.	*CZRV2*	n/a	
	Weather data accumulated from on site measurement	*On site measurement*	n/a	BuildingSync
	Weather data directly from weather station	*Weather station*	n/a	BuildingSync
Weather Metric	Metric related to weather.	Constrained List	n/a	
	Cooling degree days are calculated as the sum of the differences between daily average temperatures and the base temperature, calculated at the ASHRAE base temperature of 65F. Use the Interval Frequency term to characterize whether the HDD calculation is for annual or monthly intervals	*Cooling degree days*	n/a	LBNL/ASHRAE
	Heating degree days are calculated as the sum of the differences between daily average temperatures and the base temperature, calculated at the ASHRAE base temperature of 50F. Use the Interval Frequency term to characterize whether the HDD calculation is for annual or monthly intervals	*Heating degree days*	n/a	LBNL/ASHRAE
	Humidity ratio can be expressed as the ratio between the actual mass of water vapor present in moist air - to the mass of the dry air.	*Humidity ratio*	n/a	
	Relative humidity can be expressed by partial vapor and air pressure, density of the vapor and air, or by the actual mass of the vapor and air.	*Relative humidity*	n/a	
	The radiation component that strikes a horizontal plane from the sky	Diffuse horizontal radiation	W	
	The amount of solar radiation from the direction of the sun	Direct normal radiation	W	
	The sum of direct and diffuse solar radiation striking a horizontal plane	Global horizontal radiation	W	
	The air temperature measured by a dry temperature sensor or thermometer.	Dry bulb temperature	n/a	
	Indicated by a psychrometer when the bulb of one thermometer is covered with a water-saturated wick over which air is caused to flow at approximately 900 ft/min (4.5 m/s) to reach an equilibrium temperature of water evaporating into air, when the heat of vaporization is supplied by the sensible heat of the air.	Wet bulb temperature	n/a	
	Wind speed for the site at a height of 10 meters	Wind speed	n/a	
Weather Metric Value	Value for the weather metric.	Decimal	TBD	
Elevation	The elevation (distance above sea level) at the site.	Decimal	ft	LBNL
Longitude	Distance measured in degrees east or west from an imaginary line (called the prime meridian) that goes from the North Pole to the South Pole and that passes through Greenwich, England.	Decimal	degrees	LBNL
Latitude	Distance north or south of the equator measured in degrees up to 90 degrees.	Decimal	degrees	LBNL
Site Type	Description of surroundings at the site, from the following list:	Constrained List	n/a	LBNL/EPLUS
	A rural area is a geographic area that is located outside cities and towns, often referred to as the countryside.	*Rural*	n/a	
	A suburb is a residential area or a mixed use area, either existing as part of a city or urban area or as a separate residential community within commuting distance of a city.	*Suburban*	n/a	
	An urban area is a location characterized by high human population density and vast human-built features in comparison to the areas surrounding it. Urban areas may be cities, towns or conurbations, but the term is not commonly extended to rural settlements such as villages and hamlets.	*Urban*	n/a	
Shelter Class ID	Local wind shelter class ID.	Integer	n/a	
Ground Reflectance	Reflectivity of the ground. Legal values: 0-1	Decimal	n/a	LBNL/EPLUS
NREL Wind CLASS	Wind power density (WPD) is a calculation of the mean annual power available per square meter of swept area of a turbine. Classes are defined by NREL. Class specifics can be found at http://www.nrel.gov/gis/wind_detail.html	Constrained List	n/a	LBNL/NREL
	At 10 m: WPD: 0-100 W/m^2; Speed: 0-4.4 m/s At 50 m: WPD: 0-200 W/m^2; Speed: 0-5.6 m/s	*1*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	At 10 m: WPD: 100-150 W/m^2; Speed: 4.4-5.1 m/s At 50 m: WPD: 200-300 W/m^2; Speed: 5.6-6.4 m/s	*2*	n/a	
	At 10 m: WPD: 150-200 W/m^2; Speed: 5.1-5.6 m/s At 50 m: WPD: 300-400 W/m^2; Speed: 6.4-7.0 m/s	*3*	n/a	
	At 10 m: WPD: 200-250 W/m^2; Speed: 5.6-6.0 m/s At 50 m: WPD: 400-500 W/m^2; Speed: 7.0-7.5 m/s	*4*	n/a	
	At 10 m: WPD: 250-300 W/m^2; Speed: 6.0-6.4 m/s At 50 m: WPD: 500-600 W/m^2; Speed: 7.5-8.0 m/s	*5*	n/a	
	At 10 m: WPD: 300-400 W/m^2; Speed: 6.4-7.0 m/s At 50 m: WPD: 600-800 W/m^2; Speed: 8.0-8.8 m/s	*6*	n/a	
	At 10 m: WPD: 400-1000 W/m^2; Speed: 7.0-9.4 m/s At 50 m: WPD: 800-2000 W/m^2; Speed: 8.8-11.9 m/s	*7*	n/a	
Class Height	Vertical extrapolation of wind speed based on the 1/7 power law	Constrained List	n/a	
		10 meters	n/a	
		50 meters	n/a	
Location Characteristics				
Energy Metered Premises	Designation of what areas within the premises are covered by energy meters.	Constrained List	n/a	
		Total consumption for the whole building	n/a	
		Total consumption for landlord areas only	n/a	
		Total consumption for tenant areas only	n/a	
		Total consumption for common areas only	n/a	
		Tenant heating	n/a	
		Tenant cooling	n/a	
		Tenant hot water	n/a	
		Tenant electric plug load	n/a	
		Common area heating	n/a	
		Common area cooling	n/a	
		Common area hot water	n/a	
		Common area electric load	n/a	
Water Metered Premises	Designation of what areas within the premises are covered by water meters.	Constrained List	n/a	
		Total consumption for the whole building	n/a	
		Total consumption for tenant areas only	n/a	
		Total consumption for common areas only	n/a	
Distance To Public Transportation	Distance from premises to the nearest public transportation.	Decimal	n/a	RESO
Type Of Public Transportation	If the Distance to Public Transportation term is used, this term can be used to describe in more detail the type of public transportation .	Constrained List	n/a	HPXML
		Bus	n/a	
		Train	n/a	
		Subway	n/a	
		Light rail	n/a	
Distance To Freeway	Distance from property to the nearest freeway.	Decimal	n/a	RESO

Term	Definition	Data Type	Unit of Measure	Definition Source
Walking Score	A walkability index based on the time to walk from a property to nearby essentials such as grocery stores, schools, churches, etc. See www.walkscore.com for more information and requirements for using WalkScore.	Integer	n/a	RESO
Walking Score Source	The source used to generate the walking score. One example is Walk Score http://www.walkscore.com/	String	n/a	RESO
Builder Model	The builders model name or number for the property.	String	n/a	RESO
Presence Of Buried Lines	Indication of whether the site contains buried utility lines.	String	n/a	LBNL/IEP
Presence Of Septic Tanks And Leach Fields	Indication of whether the site contains a septic tank or leach field.	String	n/a	LBNL/IEP
Tractor Trencher Accessible	Indication of whether the site allows access for a tractor or trenching equipment.	String	n/a	LBNL/IEP
eGRID Region Code	The eGRID (Emissions and Generation Resource Database) region code associated with the data being described.	Constrained List	n/a	BEDES-Beta
	ASCC Alaska Grid / Alaska Power Grid	*AKGD*	n/a	
	ASCC Miscellaneous / Alaska Power Grid	*AKMS*	n/a	
	WECC Southwest / Western Power Grid	*AZNM*	n/a	
	WECC California / Western Power Grid	*CAMX*	n/a	
	ERCOT all / ERCOT Power Grid	*ERCT*	n/a	
	FRCC All / Eastern Power Grid	*FRCC*	n/a	
	HICC Miscellaneous / Hawaii Power Grid	*HIMS*	n/a	
	HICC Oahu / Hawaii Power Grid	*HIOA*	n/a	
	MRO East / Eastern Power Grid	*MORE*	n/a	
	MRO West / Eastern Power Grid	*MROW*	n/a	
	NPCC New England / Eastern Power Grid	*NEWE*	n/a	
	WECC Northwest / Western Power Grid	*NWPP*	n/a	
	NPCC NYC / Westchester / Eastern Power Grid	*NYCW*	n/a	
	NPCC Long Island / Eastern Power Grid	*NYLI*	n/a	
	NPCC Upstate NY / Eastern Power Grid	*NYUP*	n/a	
	RFC East / Eastern Power Grid	*RFCE*	n/a	
	RFC Michigan / Eastern Power Grid	*RFCM*	n/a	
	RFC West / Eastern Power Grid	*RFCW*	n/a	
	WECC Rockies / Western Power Grid	*RMPA*	n/a	
	SPP North / Eastern Power Grid	*SPNO*	n/a	
	SPP South / Eastern Power Grid	*SPSO*	n/a	
	SERC Mississippi Valley / Eastern Power Grid	*SRMV*	n/a	
	SERC Midwest / Eastern Power Grid	*SRMW*	n/a	
	SERC South / Eastern Power Grid	*SRSO*	n/a	
	SERC Tennessee Valley / Eastern Power Grid	*SRTV*	n/a	
	SWERC Virginia / Carolina / Eastern Power Grid	*SRVC*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
Contact Label	Characterization of the contact.	Constrained List	n/a	
	Board or Association of Realtors	*Association of Realtors*	n/a	RESO
	Contact for an auditor.	*Auditor*	n/a	
	Generic term for business contact	*Business*	n/a	
	Contact informatio regarding the physical premises itself.	*Premises*	n/a	
	Contact information for the occupant or resident of the premises.	*Occupant*	n/a	
	Agency managing this premises. Example: the Federal agency, required to	*Agency*	n/a	
	Contact information for the owner of the premises.	*Owner*	n/a	
	Contact information for the customer acting on behalf of the premises.	*Customer*	n/a	
	California Proposition 39 customer agreement	*Customer agreement*	n/a	
	Administrator of customer accounts.	*Administrator*	n/a	
	An individual qualified to perform an assessment of a premises.	*Qualified assessor*	n/a	
	Contributor of original information. Example: the original Portfolio Manager	*Contributor*	n/a	
	Property management company.	*Property management company*	n/a	
	Property manager.	*Property manager*	n/a	
	Real Estate agents are people who have passed a state exam and received a	*Real estate agent*	n/a	
	Operator of the premises. The operator is in charge of managing the energy use of	*Operator*	n/a	
	Energy auditor.	*Energy auditor*	n/a	
	Energy modeler.	*Energy modeler*	n/a	
	Contractor.	*Contractor*	n/a	
	Subcontractor	*Subcontractor*		
	Project or measure implementer.	*Implementer*	n/a	
	Financier	*Financier*	n/a	
	Commissioning agent.	*Commissioning agent*	n/a	
	M&V agent	*MV agent*	n/a	
	Evaluator	*Evaluator*	n/a	
	Builder.	*Builder*	n/a	
	Service provider	*Service*	n/a	
	Billing department	*Billing*	n/a	
	The architect of record for the premises.	*Architect*	n/a	
	The mechanical engineer of record for the premises.	*Mechanical engineer*	n/a	
	The energy consultant of record for the premises.	*Energy consultant*	n/a	
	The ABS Service and Product Provider associated with a Portfolio Manager Facility.	*Service and product provider*	n/a	
	Also known as the "AHJ". The city, county or other authority with jurisdiction over building permits and inspections.	*Authority having jurisdiction*	n/a	
	An organization that maintains the infrastructure for a public service (often also providing a service using that infrastructure).	*Utility*	n/a	
	Individual power plant to which the premises is directly connected.	*Power plant*	n/a	
	The company responsible for maintaining the utility lines and the electric distribution to the property. Note that the EDU is not the just “the utility company.” In some states the energy markets are deregulated. This means that a property may contract with Company A to provide the power supply (energy from the power plant), while Company B will continue to provide the electric distribution (Company B is the EDU)	*Electric distribution utility*	n/a	ESPM
	Energy savings/service company	*ESCO*	n/a	
	Project or process facilitator	*Facilitator*	n/a	
	Facility manager	*Facility manager*	n/a	
	Trainer	*Trainer*	n/a	
	The electrical engineer of record for the premises.	*Electrical engineer*	n/a	
	The controls engineer of record for the premises.	*Controls engineer*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Lending institution or company	*Lender*	n/a	SEE Action
	Institution with primary responsibility for collecting and tracking a loan borrower payments.	*Servicer*	n/a	SEE Action
	Institution with primary responsibility for processing a loan application.	*Originator*	n/a	SEE Action
Company Name	Company name associated with the contact, if applicable.	String	n/a	
Full Name	The full name, including first, middle, and last names.	String	n/a	
Contact ID	Identification number associated with the contact.	String	n/a	
Contact Name	Name of the contact when not full name or company name	String	n/a	
Contact URL	Uniform Resource Locator (URL) of the contact	String	n/a	
Contact Title	The title or position of the contact within their organization.	String	n/a	RESO
Address Label		Work	n/a	
		Home	n/a	
		Mailing	n/a	
Address Line 1	This address represents a complete street address, including street number, street name, prefixes, suffixes, modifiers, and unit number.	String	n/a	
Address Line 2	Information other than a prefix or suffix for the street portion of a postal address.	String	n/a	
Address Number Prefix	The portion of the complete address number which precedes the Address Number itself.	String	n/a	FGDC
Address Number	The numeric identifier for a land parcel, house, building, or other location along a thoroughfare or within a community.	Integer	n/a	FGDC
Address Number Suffix	The portion of the complete address number which follows the Address Number itself. In some areas the street number may contain non-numeric characters. This field can also contain extensions and modifiers to the street number, such as "1/2" or "-B". This street number field should not include Prefixes, Direction or Suffixes.	String	n/a	FGDC
Street Name Pre Modifier	A word or phrase in a complete street name that precedes and modifies the Street Name, but is separated from it by a Street Name Pre Type or a Street Name Pre Directional or both; or is placed outside the Street Name so that the Street Name can be used in creating a sorted (alphabetical or alphanumeric) list of street names.	String	n/a	FGDC
Street Name Pre Directional	A word preceding the street name that indicates the directional taken by the thoroughfare. Refer to Cardinal Direction for constrained list. In the examples "North Lane" and "South Carolina Avenue" the directional words are part of the Street Name, not the Street Name Predirectional.	Constrained List	n/a	FGDC
Street Name Pre Type	A word or phrase that precedes the Street Name and identifies a type of thoroughfare in a complete street name. Refer to Street Name Post Type for a complete list of pre types. For example, "Highway 101" has a Street Name Pre Type = "Highway" and a Street Name = "101". In addition, a pre type can include further details, such as "County Road 88" where the Street Name Pre Type = "County Road" and the Street Name = "88".	String	n/a	FGDC
Address Separator Element	A symbol, word, or phrase used as a separator between components of a complex element or class. The separator is required for intersection addresses and for two number address ranges, and it may be used in constructing a complete address name. Example separator elements are: "and", "at", "@", "&", "-", "/". Can also include prepositional phrases like in "Avenue of the Americas", the Address Separator Element = "of the".	String	n/a	FGDC
Street Name	The portion of the complete street name that identifies the particular thoroughfare (as opposed to the Street Name Pre Modifier, Street Name Post Modifier, Street Name Pre Directional, Street Name Post Directional, Street Name Pre Type, Street Name Post Type, and Separator Element (if any) in the complete street name.)	String	n/a	FGDC
Street Name Post Type	The suffix portion of a street address.	Constrained List	n/a	FGDC
	Commonly used street suffix or abbreviations: Allee, Ally, Aly	*Alley*	n/a	USPS
	Commonly used street suffix or abbreviations: Annex, Annx, Anx	*Annex*	n/a	USPS
	Commonly used street suffix or abbreviations: Arc	*Arcade*	n/a	USPS

Term	Definition	Data Type	Unit of Measure	Definition Source
	Commonly used street suffix or abbreviations: Av, Ave, Aven, Avenu, Avn, Avnue	*Avenue*	n/a	USPS
	Commonly used street suffix or abbreviations: Bayoo	*Bayou*	n/a	USPS
	Commonly used street suffix or abbreviations: Bch	*Beach*	n/a	USPS
	Commonly used street suffix or abbreviations: Bnd	*Bend*	n/a	USPS
	Commonly used street suffix or abbreviations: Blf, Bluf	*Bluff*	n/a	USPS
	Commonly used street suffix or abbreviations: Blfs, Blufs	*Bluffs*	n/a	USPS
	Commonly used street suffix or abbreviations: Bot, Btm, Bottm	*Bottom*	n/a	USPS
	Commonly used street suffix or abbreviations: Blvd, Boul, Boulv	*Boulevard*	n/a	USPS
	Commonly used street suffix or abbreviations: Br, Brnch	*Branch*	n/a	USPS
	Commonly used street suffix or abbreviations: Brdge, Brg	*Bridge*	n/a	USPS
	Commonly used street suffix or abbreviations: Brk	*Brook*	n/a	USPS
	Commonly used street suffix or abbreviations: Brks	*Brooks*	n/a	USPS
	Commonly used street suffix or abbreviations: Bg	*Burg*	n/a	USPS
	Commonly used street suffix or abbreviations: Bgs	*Burgs*	n/a	USPS
	Commonly used street suffix or abbreviations: Byp, Bypa, Bypas, Byps	*Bypass*	n/a	USPS
	Commonly used street suffix or abbreviations: Cp, Cmp	*Camp*	n/a	USPS
	Commonly used street suffix or abbreviations: Canyn, Cnyn	*Canyon*	n/a	USPS
	Commonly used street suffix or abbreviations: Cpe	*Cape*	n/a	USPS
	Commonly used street suffix or abbreviations: Causwa, Cswy	*Causeway*	n/a	USPS
	Commonly used street suffix or abbreviations: Cen, Cent, Centr, Centre, Cnter, Cntr, Ctr	*Center*	n/a	USPS
	Commonly used street suffix or abbreviations: Ctrs	*Centers*	n/a	USPS
	Commonly used street suffix or abbreviations: Cir, Circ, Circl, Crcl, Crcle	*Circle*	n/a	USPS
	Commonly used street suffix or abbreviations: Cirs	*Circles*	n/a	USPS
	Commonly used street suffix or abbreviations: Clf	*Cliff*	n/a	USPS
	Commonly used street suffix or abbreviations: Clfs	*Club*	n/a	USPS
	Commonly used street suffix or abbreviations: Clb	*Common*	n/a	USPS
	Commonly used street suffix or abbreviations: Cmn	*Commons*	n/a	USPS
	Commonly used street suffix or abbreviations: Cor	*Corner*	n/a	USPS
	Commonly used street suffix or abbreviations: Cors	*Corners*	n/a	USPS
	Commonly used street suffix or abbreviations: Crse	*Course*	n/a	USPS
	Commonly used street suffix or abbreviations: Ct	*Court*	n/a	USPS
	Commonly used street suffix or abbreviations: Cts	*Courts*	n/a	USPS
	Commonly used street suffix or abbreviations: Cv	*Cove*	n/a	USPS
	Commonly used street suffix or abbreviations: Cvs	*Coves*	n/a	USPS
	Commonly used street suffix or abbreviations: Crk	*Creek*	n/a	USPS
	Commonly used street suffix or abbreviations: Cres, Crsent, Crsnt	*Crescent*	n/a	USPS
	Commonly used street suffix or abbreviations: Crst	*Crest*	n/a	USPS
	Commonly used street suffix or abbreviations: Crssng, Xing	*Crossing*	n/a	USPS
	Commonly used street suffix or abbreviations: Xrd	*Crossroad*	n/a	USPS
	Commonly used street suffix or abbreviations: Xrds	*Crossroads*	n/a	USPS
	Commonly used street suffix or abbreviations: Curv	*Curve*	n/a	USPS
	Commonly used street suffix or abbreviations: Dl	*Dale*	n/a	USPS
	Commonly used street suffix or abbreviations: Dm	*Dam*	n/a	USPS
	Commonly used street suffix or abbreviations: Div, Dv, Dvd	*Divide*	n/a	USPS
	Commonly used street suffix or abbreviations: Dr, Driv, Drv	*Drive*	n/a	USPS
	Commonly used street suffix or abbreviations: Drs	*Drives*	n/a	USPS
	Commonly used street suffix or abbreviations: Est	*Estate*	n/a	USPS
	Commonly used street suffix or abbreviations: Ests	*Estates*	n/a	USPS
	Commonly used street suffix or abbreviations: Exp, Expr, Express, Expw, Expy	*Expressway*	n/a	USPS
	Commonly used street suffix or abbreviations: Ext, Extn, Extnsn	*Extension*	n/a	USPS
	Commonly used street suffix or abbreviations: Exts	*Extensions*	n/a	USPS
	Commonly used street suffix or abbreviations: Fl	*Fall*	n/a	USPS

Term	Definition	Data Type	Unit of Measure	Definition Source
	Commonly used street suffix or abbreviations: Fls	*Falls*	n/a	USPS
	Commonly used street suffix or abbreviations: Frry, Fry	*Ferry*	n/a	USPS
	Commonly used street suffix or abbreviations: Fld	*Field*	n/a	USPS
	Commonly used street suffix or abbreviations: Flds	*Fields*	n/a	USPS
	Commonly used street suffix or abbreviations: Flt	*Flat*	n/a	USPS
	Commonly used street suffix or abbreviations: Flts	*Flats*	n/a	USPS
	Commonly used street suffix or abbreviations: Frd	*Ford*	n/a	USPS
	Commonly used street suffix or abbreviations: Frds	*Fords*	n/a	USPS
	Commonly used street suffix or abbreviations: Forests, Frst	*Forest*	n/a	USPS
	Commonly used street suffix or abbreviations: Forg, Frg	*Forge*	n/a	USPS
	Commonly used street suffix or abbreviations: Frgs	*Forges*	n/a	USPS
	Commonly used street suffix or abbreviations: Frk	*Fork*	n/a	USPS
	Commonly used street suffix or abbreviations: Frks	*Forks*	n/a	USPS
	Commonly used street suffix or abbreviations: Frt, Ft	*Fort*	n/a	USPS
	Commonly used street suffix or abbreviations: Freewy, Frway, Frwy, Fwy	*Freeway*	n/a	USPS
	Commonly used street suffix or abbreviations: Gardn, Gdn, Grden, Grdn	*Garden*	n/a	USPS
	Commonly used street suffix or abbreviations: Gdns, Grdns	*Gardens*	n/a	USPS
	Commonly used street suffix or abbreviations: Gatewy, Gatway, Gtway, Gtwy	*Gateway*	n/a	USPS
	Commonly used street suffix or abbreviations: Gln	*Glen*	n/a	USPS
	Commonly used street suffix or abbreviations: Glns	*Glens*	n/a	USPS
	Commonly used street suffix or abbreviations: Grn	*Green*	n/a	USPS
	Commonly used street suffix or abbreviations: Grns	*Greens*	n/a	USPS
	Commonly used street suffix or abbreviations: Grov, Grv	*Grove*	n/a	USPS
	Commonly used street suffix or abbreviations: Grvs	*Groves*	n/a	USPS
	Commonly used street suffix or abbreviations: Harb, Harbr, Hbr, Hrbor	*Harbor*	n/a	USPS
	Commonly used street suffix or abbreviations: Hbrs	*Harbors*	n/a	USPS
	Commonly used street suffix or abbreviations: Hvn	*Haven*	n/a	USPS
	Commonly used street suffix or abbreviations: Ht, Hts	*Heights*	n/a	USPS
	Commonly used street suffix or abbreviations: Highwy, Hiway, Hiwy, Hway, Hwy	*Highway*	n/a	USPS
	Commonly used street suffix or abbreviations: Hl	*Hill*	n/a	USPS
	Commonly used street suffix or abbreviations: Hls	*Hills*	n/a	USPS
	Commonly used street suffix or abbreviations: Hllw, Hollows, Holw, Holws	*Hollow*	n/a	USPS
	Commonly used street suffix or abbreviations: Inlt	*Inlet*	n/a	USPS
	Commonly used street suffix or abbreviations: Is, Islnd	*Island*	n/a	USPS
	Commonly used street suffix or abbreviations: Islnds, Iss	*Islands*	n/a	USPS
	Commonly used street suffix or abbreviations: Isles	*Isle*	n/a	USPS
	Commonly used street suffix or abbreviations: Jct, Jction, Jctn, Junctn, Juncton	*Junction*	n/a	USPS
	Commonly used street suffix or abbreviations: Jctns, Jcts	*Junctions*	n/a	USPS
	Commonly used street suffix or abbreviations: Ky	*Key*	n/a	USPS
	Commonly used street suffix or abbreviations: Kys	*Keys*	n/a	USPS
	Commonly used street suffix or abbreviations: Knl, Knol	*Knoll*	n/a	USPS
	Commonly used street suffix or abbreviations: Knls, Knolls	*Knolls*	n/a	USPS
	Commonly used street suffix or abbreviations: Lk	*Lake*	n/a	USPS
	Commonly used street suffix or abbreviations: Lks	*Lakes*	n/a	USPS
	Commonly used street suffix or abbreviations: Lnd	*Land*	n/a	USPS
	Commonly used street suffix or abbreviations: Lndg, Lndng	*Landing*	n/a	USPS
	Commonly used street suffix or abbreviations: Ln	*Lane*	n/a	USPS
	Commonly used street suffix or abbreviations: Lgt	*Light*	n/a	USPS
	Commonly used street suffix or abbreviations: Lgts	*Lights*	n/a	USPS
	Commonly used street suffix or abbreviations: Lf	*Loaf*	n/a	USPS
	Commonly used street suffix or abbreviations: Lck	*Lock*	n/a	USPS
	Commonly used street suffix or abbreviations: Lcks	*Locks*	n/a	USPS
	Commonly used street suffix or abbreviations: Ldg, Ldge, Lodg	*Lodge*	n/a	USPS

Term	Definition	Data Type	Unit of Measure	Definition Source
	Commonly used street suffix or abbreviations: Loops	*Loop*	n/a	USPS
	Commonly used street suffix or abbreviations: Mal	*Mall*	n/a	USPS
	Commonly used street suffix or abbreviations: Mnr	*Manor*	n/a	USPS
	Commonly used street suffix or abbreviations: Mnrs	*Manors*	n/a	USPS
	Commonly used street suffix or abbreviations: Mdw	*Meadow*	n/a	USPS
	Commonly used street suffix or abbreviations: Mdws	*Meadows*	n/a	USPS
	Commonly used street suffix or abbreviations: Mws	*Mews*	n/a	USPS
	Commonly used street suffix or abbreviations: Ml	*Mill*	n/a	USPS
	Commonly used street suffix or abbreviations: Mls	*Mills*	n/a	USPS
	Commonly used street suffix or abbreviations: Missn, Msn, Mssn	*Mission*	n/a	USPS
	Commonly used street suffix or abbreviations: Mtwy	*Motorway*	n/a	USPS
	Commonly used street suffix or abbreviations: Mnt, Mt	*Mount*	n/a	USPS
	Commonly used street suffix or abbreviations: Mntain, Mntn, Mountin, Mtin, Mtn	*Mountain*	n/a	USPS
	Commonly used street suffix or abbreviations: Mntns	*Mountains*	n/a	USPS
	Commonly used street suffix or abbreviations: Nck	*Neck*	n/a	USPS
	Commonly used street suffix or abbreviations: Orch, Orchrd	*Orchard*	n/a	USPS
	Commonly used street suffix or abbreviations: Ovl	*Oval*	n/a	USPS
	Commonly used street suffix or abbreviations: Opas	*Overpass*	n/a	USPS
	Commonly used street suffix or abbreviations: Prk	*Park*	n/a	USPS
	Commonly used street suffix or abbreviations: Prks	*Parks*	n/a	USPS
	Commonly used street suffix or abbreviations: Parkwy, Pkway, Pkwy, Pky	*Parkway*	n/a	USPS
	Commonly used street suffix or abbreviations: Pkwys	*Parkways*	n/a	USPS
	Commonly used street suffix or abbreviations: Pass	*Pass*	n/a	USPS
	Commonly used street suffix or abbreviations: Psge	*Passage*	n/a	USPS
	Commonly used street suffix or abbreviations: Paths	*Path*	n/a	USPS
	Commonly used street suffix or abbreviations: Pikes	*Pike*	n/a	USPS
	Commonly used street suffix or abbreviations: Pne	*Pine*	n/a	USPS
	Commonly used street suffix or abbreviations: Pnes	*Pines*	n/a	USPS
	Commonly used street suffix or abbreviations: Pl	*Place*	n/a	USPS
	Commonly used street suffix or abbreviations: Pln	*Plain*	n/a	USPS
	Commonly used street suffix or abbreviations: Plns	*Plains*	n/a	USPS
	Commonly used street suffix or abbreviations: Plz, Plza	*Plaza*	n/a	USPS
	Commonly used street suffix or abbreviations: Pt	*Point*	n/a	USPS
	Commonly used street suffix or abbreviations: Pts	*Points*	n/a	USPS
	Commonly used street suffix or abbreviations: Prt	*Port*	n/a	USPS
	Commonly used street suffix or abbreviations: Prts	*Ports*	n/a	USPS
	Commonly used street suffix or abbreviations: Pr, Prr	*Prairie*	n/a	USPS
	Commonly used street suffix or abbreviations: Rad, Radiel, Radl	*Radial*	n/a	USPS
	Commonly used street suffix or abbreviations: Ramp	*Ramp*	n/a	USPS
	Commonly used street suffix or abbreviations: Ranches, Rnch, Rnchs	*Ranch*	n/a	USPS
	Commonly used street suffix or abbreviations: Rpd	*Rapid*	n/a	USPS
	Commonly used street suffix or abbreviations: Rpds	*Rapids*	n/a	USPS
	Commonly used street suffix or abbreviations: Rst	*Rest*	n/a	USPS
	Commonly used street suffix or abbreviations: Rdg, Rdge	*Ridge*	n/a	USPS
	Commonly used street suffix or abbreviations: Rdgs	*Ridges*	n/a	USPS
	Commonly used street suffix or abbreviations: Riv, Rvr, Rivr	*River*	n/a	USPS
	Commonly used street suffix or abbreviations: Rd	*Road*	n/a	USPS
	Commonly used street suffix or abbreviations: Rds	*Roads*	n/a	USPS
	Commonly used street suffix or abbreviations: Rte	*Route*	n/a	USPS
	Commonly used street suffix or abbreviations: Row	*Row*	n/a	USPS
	Commonly used street suffix or abbreviations: Rue	*Rue*	n/a	USPS
	Commonly used street suffix or abbreviations: Run	*Run*	n/a	USPS
	Commonly used street suffix or abbreviations: Shl	*Shoal*	n/a	USPS

Term	Definition	Data Type	Unit of Measure	Definition Source
	Commonly used street suffix or abbreviations: Shls	*Shoals*	n/a	USPS
	Commonly used street suffix or abbreviations: Shoar, Shr	*Shore*	n/a	USPS
	Commonly used street suffix or abbreviations: Shoars, Shrs	*Shores*	n/a	USPS
	Commonly used street suffix or abbreviations: Skwy	*Skyway*	n/a	USPS
	Commonly used street suffix or abbreviations: Spg, Sprng	*Spring*	n/a	USPS
	Commonly used street suffix or abbreviations: Spgs, Spngs, Sprngs	*Springs*	n/a	USPS
	Commonly used street suffix or abbreviations: Spur	*Spur*	n/a	USPS
	Commonly used street suffix or abbreviations: Spurs	*Spurs*	n/a	USPS
	Commonly used street suffix or abbreviations: Sq, Sqr, Sqre, Squ	*Square*	n/a	USPS
	Commonly used street suffix or abbreviations: Sqrs, Sqs	*Squares*	n/a	USPS
	Commonly used street suffix or abbreviations: Sta, Statn, Stn	*Station*	n/a	USPS
	Commonly used street suffix or abbreviations: Stra, Strav, Straven, Stravn, Strvn, Strvnue	*Stravenue*	n/a	USPS
	Commonly used street suffix or abbreviations: Steme, Strm	*Stream*	n/a	USPS
	Commonly used street suffix or abbreviations: Strt, St, Str	*Street*	n/a	USPS
	Commonly used street suffix or abbreviations: Sts	*Streets*	n/a	USPS
	Commonly used street suffix or abbreviations: Smt, Sumit, Sumitt	*Summit*	n/a	USPS
	Commonly used street suffix or abbreviations: Ter, Terr	*Terrace*	n/a	USPS
	Commonly used street suffix or abbreviations: Trwy	*Throughway*	n/a	USPS
	Commonly used street suffix or abbreviations: Traces, Trce	*Trace*	n/a	USPS
	Commonly used street suffix or abbreviations: Tracks, Trak, Trk, Trks	*Track*	n/a	USPS
	Commonly used street suffix or abbreviations: Trfy	*Trafficway*	n/a	USPS
	Commonly used street suffix or abbreviations: Trails, Trl, Trls	*Trail*	n/a	USPS
	Commonly used street suffix or abbreviations: Trlr, Trlrs	*Trailer*	n/a	USPS
	Commonly used street suffix or abbreviations: Tunel, Tunl, Tunls, Tunnels, Tunnl	*Tunnel*	n/a	USPS
	Commonly used street suffix or abbreviations: Tpke, Trnpk, Turnpk	*Turnpike*	n/a	USPS
	Commonly used street suffix or abbreviations: Upas	*Underpass*	n/a	USPS
	Commonly used street suffix or abbreviations: Un	*Union*	n/a	USPS
	Commonly used street suffix or abbreviations: Uns	*Unions*	n/a	USPS
	Commonly used street suffix or abbreviations: Vally, Vlly, Vly	*Valley*	n/a	USPS
	Commonly used street suffix or abbreviations: Vlys	*Valleys*	n/a	USPS
	Commonly used street suffix or abbreviations: Vdct, Via, Viadct	*Viaduct*	n/a	USPS
	Commonly used street suffix or abbreviations: Vw	*View*	n/a	USPS
	Commonly used street suffix or abbreviations: Vws	*Views*	n/a	USPS
	Commonly used street suffix or abbreviations: Vill, Villag, Villg, Villiage, Vlg	*Village*	n/a	USPS
	Commonly used street suffix or abbreviations: Vlgs	*Villages*	n/a	USPS
	Commonly used street suffix or abbreviations: Vl	*Ville*	n/a	USPS
	Commonly used street suffix or abbreviations: Vis, Vist, Vst, Vsta	*Vista*	n/a	USPS
	Commonly used street suffix or abbreviations: Wk, Wlk	*Walk*	n/a	USPS
	Commonly used street suffix or abbreviations: Wlks	*Walks*	n/a	USPS
	Commonly used street suffix or abbreviations: Wall	*Wall*	n/a	USPS
	Commonly used street suffix or abbreviations: Wy	*Way*	n/a	USPS
	Commonly used street suffix or abbreviations: Wys	*Ways*	n/a	USPS
	Commonly used street suffix or abbreviations: Wl	*Well*	n/a	USPS
	Commonly used street suffix or abbreviations: Wls	*Wells*	n/a	USPS
Street Name Post Directional	The direction indicator that follows the street name. Refer to Cardinal Direction for constrained list.	Constrained List	n/a	FGDC
Street Name Post Modifier	A word or phrase in a complete street name that follows and modifies the Street Name, but is separated from it by a Street Name Post Type or a Street Name Post Directional or both. For example, in "East End Avenue Extension" the Street Name Post Modifier is "Extension"	String	n/a	FGDC
Cross Street	Nearest cross street of location	String	n/a	RESO

Term	Definition	Data Type	Unit of Measure	Definition Source
Corner Of	A directional word describing a corner formed by the intersection of two thoroughfares. For example "Northwest corner of Scott Street and North Walnut Street, Stillwater, OK" has "Northwest" as the Corner Of. Refer to Cardinal Direction for constrained list.	Constrained List	n/a	FGDC
Subaddress Type	The type of subaddress to which the associated Subaddress Identifier applies.	Constrained List	n/a	FGDC
	Common unit abbreviation: Apt	*Apartment*	n/a	USPS
	Common unit abbreviation: Bsmt	*Basement*	n/a	USPS
		Berth	n/a	
		Block	n/a	
	Common unit abbreviation: Bldg	*Building*	n/a	USPS
		Corridor	n/a	
		Cubicle	n/a	
	Common unit abbreviation: Dept	*Department*	n/a	USPS
	Common unit abbreviation: Fl. Can also be Level or Story	*Floor*	n/a	USPS
	Common unit abbreviation: Frnt	*Front*	n/a	USPS
	Common unit abbreviation: Hngr	*Hanger*	n/a	USPS
	Common unit abbreviation: Key	*Key*	n/a	USPS
	Common unit abbreviation: Lbby	*Lobby*	n/a	USPS
	Common unit abbreviation: Lot	*Lot*	n/a	USPS
	Common unit abbreviation: Lowr	*Lower*	n/a	USPS
	Common unit abbreviation: Ofc	*Office*	n/a	USPS
	Common unit abbreviation: Ph	*Penthouse*	n/a	USPS
	Common unit abbreviation: Pier	*Pier*	n/a	USPS
		PO Box	n/a	USPS
	Common unit abbreviation: Rear	*Rear*	n/a	USPS
	Common unit abbreviation: Rm	*Room*	n/a	USPS
		Seat	n/a	
	Common unit abbreviation: Side	*Side*	n/a	USPS
	Common unit abbreviation: Slip	*Slip*	n/a	USPS
	Common unit abbreviation: Spc	*Space*	n/a	USPS
	Common unit abbreviation: Stop	*Stop*	n/a	USPS
	Common unit abbreviation: Ste	*Suite*	n/a	USPS
		Terminal	n/a	
		Tower	n/a	
	Common unit abbreviation: Trlr	*Trailer*	n/a	USPS
	Common unit abbreviation: Unit	*Unit*	n/a	USPS
	Common unit abbreviation: Uppr	*Upper*	n/a	USPS
		Wing	n/a	FGDC
Subaddress Identifier	The letters, numbers, words, or combination thereof used to distinguish different subaddresses of the same type when several occur within the same feature. For example, in subaddress "Building 4", the Subaddress Identifier = "4". Subaddress Identifier can also be parts of a building, for example "Penthouse" or "Mezzanine".	String	n/a	
City	The city for the Address associated with this contact.	String	n/a	
County	The county for the address associated with this contact.	String	n/a	
State	The state for the address associated with this contact.	Constrained List	n/a	USPS
	Armed Forces Americas (except Canada)	*AA*	n/a	
	Armed Forces Europe, the Middle East, and Canada	*AE*	n/a	
	Alabama	*AL*	n/a	
	Alaska	*AK*	n/a	
	Armed Forces Pacific	*AP*	n/a	
	American Samoa	*AS*	n/a	
	Arizona	*AZ*	n/a	
	Arkansas	*AR*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	California	*CA*	n/a	
	Colorado	*CO*	n/a	
	Connecticut	*CT*	n/a	
	Delaware	*DE*	n/a	
	District of Columbia	*DC*	n/a	
	Federated States of Micronesia	*FM*	n/a	
	Florida	*FL*	n/a	
	Georgia	*GA*	n/a	
	Guam	*GU*	n/a	
	Hawaii	*HI*	n/a	
	Idaho	*ID*	n/a	
	Illinois	*IL*	n/a	
	Indiana	*IN*	n/a	
	Iowa	*IA*	n/a	
	Kansas	*KS*	n/a	
	Kentucky	*KY*	n/a	
	Louisiana	*LA*	n/a	
	Maine	*ME*	n/a	
	Marshall Islands	*MH*	n/a	
	Maryland	*MD*	n/a	
	Massachusetts	*MA*	n/a	
	Michigan	*MI*	n/a	
	Minnesota	*MN*	n/a	
	Mississippi	*MS*	n/a	
	Missouri	*MO*	n/a	
	Montana	*MT*	n/a	
	Nebraska	*NE*	n/a	
	Nevada	*NV*	n/a	
	New Hampshire	*NH*	n/a	
	New Jersey	*NJ*	n/a	
	New Mexico	*NM*	n/a	
	New York	*NY*	n/a	
	North Carolina	*NC*	n/a	
	North Dakota	*ND*	n/a	
	Northern Mariana Islands	*MP*	n/a	
	Ohio	*OH*	n/a	
	Oklahoma	*OK*	n/a	
	Oregon	*OR*	n/a	
	Palau	*PW*	n/a	
	Pennsylvania	*PA*	n/a	
	Puerto Rico	*PR*	n/a	
	Rhode Island	*RI*	n/a	
	South Carolina	*SC*	n/a	
	South Dakota	*SD*	n/a	
	Tennessee	*TN*	n/a	
	Texas	*TX*	n/a	
	Utah	*UT*	n/a	
	Vermont	*VT*	n/a	
	Virgin Islands	*VI*	n/a	
	Virginia	*VA*	n/a	
	Washington	*WA*	n/a	
	West Virginia	*WV*	n/a	
	Wisconsin	*WI*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Wyoming	*WY*	n/a	
ZIP Code	A system of 5-digit codes that identifies the individual Post Office or metropolitan area delivery station associated with an address.	String	n/a	FGDC
ZIP Plus 4	A 4-digit extension of the 5-digit ZIP Code (preceded by a hyphen) that, in conjunction with the ZIP Code, identifies a specific range of USPS delivery addresses.	String	n/a	FGDC
Country Name	The name of the country in which the address is located.	String	n/a	FGDC
MapURL	URL referencing an online mapping service that indicates the location.	String	n/a	
Federal Department Or Region	Federal department/region. This is required to designate a facility as a federal property in Portfolio Manager.	String	n/a	
Telephone Number Label	The type of telephone number, to distinguish between multiple instances of Telephone Number.	Constrained List	n/a	
	Phone number where contact can be reached during daytime, or regular work hours.	*Day*	n/a	
	Phone number where contact can be reached during evening, or after regular work hours.	*Evening*	n/a	
	Phone number of contact's personal mobile phone.	*Mobile*	n/a	
	Phone number of contact's work.	*Work*	n/a	
		Home		
		Personal		
		Direct		
		Fax		
		Pager		
Telephone Number	Telephone number associated with the contact. Format: Country code (area code) NNN-NNNN.	String	n/a	
Telephone Extension	Extension number ot reach the contact.	String		
Email Address Label	The type of email address, to distinguish between multiple instances of Email Address.	Constrained List	n/a	
	Email address used for personal communication.	*Personal*	n/a	
	Email address used for work-related communication.	*Work*	n/a	
Email Address	Electronic mail address with common format: email@serviceprovider.suffix	String	n/a	
Credential	The type of credential held by the person described by the Role term.	Constrained List	n/a	
		Professional Engineer (PE)	n/a	
		Certified Energy Manager (CEM)	n/a	
		Building Operator Certification (BOC)	n/a	
		Building Performance Institute (BPI) Certification	n/a	
		Building Performance Institute: Building Analyst (BA)	n/a	
		Building Performance Institute: Advanced Home Energy Professional (HEP)	n/a	
		Building Performance Institute: Advanced Home Energy Professional - Energy Auditor (HEP-EA)	n/a	
		Building Performance Institute: Advanced Home Energy Professional - Quality Control Inspector (HEP-QCI)	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		Building Performance Institute: Advanced Home Energy Professional - Retrofit Installer (HEP-RI)	n/a	
		Building Performance Institute: Advanced Home Energy Professional - Crew Leader (HEP-CL)	n/a	
		Building Performance Institute: Multifamily Building Analyst	n/a	
		Residential Energy Services Network (RESNET) Certification	n/a	
		Residential Energy Services Network (RESNET) - Home Partner	n/a	
		Registered Architect (RA)	n/a	
		Refrigerating System Operating Engineer	n/a	
		High Pressure Boiler Operating Engineer	n/a	
		Certified Commissioning Professional (CCP)	n/a	
		Associate Commissioning Professional (ACP)	n/a	
		Existing Building Commissioning Professional (EBCP)	n/a	
		Commissioning Process Management Professional (CPMP)	n/a	
		Accredited Commissioning Process Authority Professional (CxAP)	n/a	
		NYSERDA FlexTech Consultant	n/a	
		Certified Energy Manager (CEM)	n/a	
		Certified Energy Auditor (CEA)	n/a	
		High-Performance Building Design Professional (HBDP)	n/a	
Credential Number	ID number for the credential held.	String	n/a	
Credential State	State in which the credential is issued. Use the state abbreviations used by the United States Postal Service, which can be found at this web site: https://www.usps.com/send/official-abbreviations.htm	Constrained List	n/a	
Years of Experience	Number of years of experience of the person being described by the Role term.	Integer	Years	
Ownership	The type of organization, association, or business, that owns the premises.	Constrained List	n/a	
		Property management company	n/a	
		Corporation partnership LLC	n/a	
		Religious organization	n/a	
		Individual	n/a	
		Franchise	n/a	
	An organization seeking profit from business services owns the premises.	*For profit organization*	n/a	
	An organization seeking to provide a benefit to the public at no profit to the organization owns the premises.	*Non profit organization*	n/a	
		Other non government	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	A government-sponsored organization owns the premises.	*Government*	n/a	
	The federal government owns the premises.	*Federal government*	n/a	
	The state government owns the premises.	*State government*	n/a	
	The local government owns the premises.	*Local government*	n/a	
Ownership Status	Ownership status of the premises or equipment with respect to the contact.	Constrained List	n/a	
		Owned	n/a	
		Mortgaged	n/a	
		Leased	n/a	
		Rented	n/a	
		Occupied without payment of rent	n/a	
		Owner occupied	n/a	
Customer Relation To Property Owner	If the project customer is not the owner of the premises, what is the relationship to the owner. This is required for CSI incentive application.	String	n/a	
Percent Occupied By Owner	Percent of gross floor area that is occupied by the owner.	Decimal	Percent	
Account Status	The status of customer's account or application. Example: the building profile submission process for Portfolio Manager.	Constrained List	n/a	
		Draft	n/a	
		Received	n/a	
		Under review	n/a	
		On hold	n/a	
		Reviewed and approved	n/a	
		Reviewed and not approved	n/a	
		Active	n/a	
		Inactive	n/a	
		Closed	n/a	
		Canceled	n/a	
Utility Services	Energy services offered by the utility, please see Energy Resources and Water Resources for a complete list of constrained list options.	Constrained List	n/a	LBNL
Authorization	Designated if third party has been granted authorization.	Constrained List	n/a	
		Authorized	n/a	
		Unauthorized	n/a	
Authorization Date	Date the authorization was granted.	Date Format from Metadata	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
Measure Classification				
Reporting Level	level or boundary of reporting metrics for this record.	Constrained List	n/a	
	A package is a collection of measures	*Package*	n/a	
	A single energy conservation measure.	*Measure*	n/a	
Project Name	Name of the project.	String	n/a	ePB
Action Category	Action associated with this project or measure.	Constrained List	n/a	BuildingSync
	Building commissioning (Cx) is the process of verifying, in new construction, all	*Commissioning*	n/a	
		Replacement	n/a	
		Modification	n/a	
		Addition	n/a	
		Removal	n/a	
		Program	n/a	
		Measure	n/a	
		Project	n/a	
		Retrofit	n/a	
	A behavioral intervention refers to the education, training, or motivating activity	*Behavioral intervention*	n/a	
		Major remodel	n/a	
	Retrocommissioning is a process that seeks to improve how building equipment	*Retrocommissioning*	n/a	
	An audit is an assessment of the energy needs and efficiency of a premises.	*Audit*	n/a	
		MV		
		Test		
	Energy conservation measure	*ECM*	n/a	
	Training	*Training*	n/a	
Application Scale	Scale at which the project or measure is applied, such as an individual system,	Constrained List	n/a	BuildingSync
		Individual system	n/a	
		Multiple systems	n/a	
		Individual premises	n/a	
		Multiple premises	n/a	
		Entire facility	n/a	
		Entire site	n/a	
Technology Category	Authorized technology category as defined by the Federal Energy Management Program. Categories are inclusive of systems defined.	Constrained List	n/a	CTS
		Boiler plant improvements	n/a	
		Chiller plant improvements	n/a	
	A software system to automate building controls, also known as an Energy Management Control Systems (EMCS).	*Building automation systems*	n/a	
		Heating ventilating and air conditioning	n/a	
		Lighting improvements	n/a	
		Building envelope modifications	n/a	
		Chilled water hot water and steam distribution systems	n/a	
		Electric motors and drives	n/a	
		Refrigeration	n/a	
		Distributed generation	n/a	
		Renewable energy systems	n/a	
	Energy or utility distribution system equipment.	*Energy distribution systems*	n/a	
		Water and sewer conservation systems	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		Electrical peak shaving or load shifting	n/a	
		Energy cost reduction through rate adjustments	n/a	
		Energy related process improvements	n/a	
		Advanced metering systems	n/a	
		Plug load reductions	n/a	
Scope	Percentage of the premises affected by the measure that's either proposed, implemented or evaluated	Decimal	Percent	CTS, ePB
Quantity Affected	Quantity of devices or equipment affected by the measure- e.g, number of lighting fixtures replaced, tons of chiller replaced, number of VAV boxes installed.	Integer	n/a	ePB
Implementation Status	Implementation status of measure or a project	Constrained List	n/a	AUC
		Accepted	n/a	
		Expected	n/a	
		Proposed	n/a	
		Evaluated	n/a	
		Selected	n/a	
		Recommended	n/a	
		Initiated	n/a	
		Discarded	n/a	
	Currently being implemented.	*In Progress*	n/a	
	The implementation work has been completed.	*Completed*	n/a	
		MV	n/a	
	Measure or project has been implemented and monitored and verified results to be satisfactory.	*Verified*	n/a	
	Measure was implemented but final results were unsatisfactory or completion expectation was not achieved.	*Unsatisfactory*	n/a	
Implementation Status Date	Date at which the associated status went into effect.	Date Format from Metadata	n/a	
Discard Reason	Reason why the proposed mesure was dicarded.	Constrained List	n/a	
		Long payback	n/a	
		Requires permit	n/a	
Cost & Financials				
Cost Attribution	Type of Costs to implement or maintain the project or measure. This may include several different costs.	Constrained List	n/a	LBNL
	The cost of financing for projects or measures that are funded over time through loans or alternative financing mechanisms	*Financing*	n/a	
		First	n/a	
		Recurring	n/a	
	Measurement and verification costs are costs to evaluate the performance of a project or a measure	*MV*	n/a	
	Commissioning costs are costs to ensure that the installed measure or project is performing as per the design intent.	*Commissioning*	n/a	
	Costs that remains more or less unchanged irrespective of the size of the measure or a project	*Fixed*	n/a	
	Costs of material needed to implement the measure or project	*Material*	n/a	
		General	n/a	
	Costs of labor to implement the measure or project	*Labor*	n/a	
	Costs incurred to operate the piece of equipment installed as part of the measure or project	*Operating*	n/a	
		Permits and licenses	n/a	
	Taxes incurred as part of implementing the measure or a project	*Taxes*	n/a	
	Estimated cost of replacing the measure at the end of its useful life, in current year dollars.	*Capital replacement*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Costs to maintain the equipment that has been installed as part of the measure or a project	*Maintenance*	n/a	
	Principal repaid periodically as part of debt service payment	*Principal repayment*	n/a	
	Interest payment incurred periodically as part of debt service payment	*Interest payment*	n/a	
	Cost for ~~repair and~~ replacing the equipment	*Replacement*	n/a	
	Costs for managing and administrating the implementation of the project	*Management and administration*	n/a	
	Costs for insuring the equipment or system	*Insurance*	n/a	
	Generally applied to energy or construction projects procured by the Federal government. The mark-up, usually a set percentage of the project implementation cost, is added to the project price to cover non-project-specific overheads such as general administration and marketing.	*Markup*	n/a	
	A different manifestation of markup, to cover non-project specific overheads	*Margin*	n/a	
	Profit incurred by the project as part of implementing the measure or project. ESPC projects specify that ESCO's disclose that information as part of the itemized costs.	*Profit*	n/a	
	Total costs to implement the measure or project	*Total*	n/a	
	The net cost of disposing material or equipment that is being replaced or removed. In some cases the salvage value may exceed disposal costs, resulting in a negative value.	*Disposal and salvage costs*	n/a	
	Cost of installation activity	*Installation*	n/a	
	Cost of implementation activity	*Implementation*	n/a	
Cost	Cost to related the project or measure. Must be associated with "Cost Attribution" and "Interval Period", if necessary.	Decimal	n/a	CTS, ePB
Cost Intensity	Cost per square foot of affected space.	Decimal	$/ft2	ENERGY STAR
Labor Hours	Total number of hours needed to complete a task, each of which represents the labor of one person in one hour.	Decimal	hours	BEDES Beta, HPXML
Contracting Method	Contracting method for financing capital improvements, which allows cost reductions to fund energy upgrades.	Constrained List	n/a	
	Under a guaranteed savings contract the contractor guarantees a certain level of energy savings and in this way shields the client from any performance risk.	*Guaranteed savings*	n/a	
	Under a shared savings contract the cost savings are split for a pre-determined length of time in accordance with a pre-arranged percentage: there is no 'standard' split as this depends on the cost of the project, the length of the contract and the risks taken by the contractor and the consumer.	*Shared savings*	n/a	
	Under a build-own-operate-transfer (BOOT) model the contract may involve a contractor designing, building, financing, owning and operating the equipment for a defined period of time and then transferring this ownership across to the client.	*Build own operate transfer*	n/a	
	Under a chauffage contract the contractor takes over complete responsibility for the provision to the client of an agreed set of energy services (e.g. space heat, lighting, motive power, etc.).	*Chauffage*	n/a	
	Under a 'first out' contract the contractor is paid 100% of the energy savings until the project costs – including the contractor's profit – are fully paid. The exact duration of the contract will actually depend on the level of savings achieved: the greater the savings, the shorter the contract.	*First out*	n/a	
	Under a fee for service contract the owner of the asset (lessor – the contractor) owns the equipment and essentially rents it to the lessee for a fixed monthly fee.	*Fee for service*	n/a	
	Power purchase agreements, or PPAs, are contracts in which the public entity buys the electricity generated by a renewable energy system from the project owner.	*Power purchase agreement*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	A net metering credit purchase agreement, or NMA, is designed to reduce electricity costs for the public entity while providing consistent energy payments to the project owner over the term of the contract, which helps finance and support renewable energy installations.	*Net metering credit purchase agreement*	n/a	
	In-house assessment and installation does not require any third party contracts, as all work is performed by local personnel.	*In house*	n/a	
Funding Source	Source of funding to implement the measure or a project	Constrained List	n/a	ePB
	Funds derived from public sources.	*Appropriated funds*	n/a	
	Funds from operation and maintenance budgets	*Operating funds*	n/a	
	Funds obtained through loans either directly or through contracting mechanisms	*Loan*	n/a	
	Funds raised through issuing a bond	*Bond*	n/a	
	A sum of money given by an organization for a specific purpose.	*Grant*	n/a	
	Funding obtained through utility or state tax credits to implement the measure or project	*Tax credits*	n/a	
	Funding obtained through incentives to implement the measure or project	*Incentive*	n/a	
	Public purpose programs administered by utilities, state agencies, or other third parties and paid for by utility ratepayers, typically through a non-by-passable system benefits charge instituted as part of restructuring legislation or rules	*Energy efficiency and renewable energy program incentive*	n/a	
	These are programs that provide incentives to curtail demand during peak energy usage periods in response to system reliability or market conditions. Agencies can participate in state and utility incentive programs in order to reduce their energy usage and control their energy costs.	*Demand response or load management program incentive*	n/a	
	Financed using internal funds	*Self financed*	n/a	ICP
	Financed through lease arrangement	*Lease*	n/a	ICP
	An Energy Services Agreement (ESA) is a financial vehicle for funding energy efficiency where services are provided and/or equipment is installed and owned and operated by a vendor who then sells the saved power to the customer.	*Energy services agreement*	n/a	ICP
	Property assessed clean energy (PACE) is a means of financing energy efficiency upgrades or renewable energy installations. In areas with PACE legislation in place, governments offer a specific bond to investors or in the case of the open-market model, private lenders provide financing to the building owners to put towards an energy retrofit. The loans are repaid over the selected term via an annual assessment on their property tax bill.	*PACE*	n/a	ICP
Funding Amount	Value associated with a funding source	Decimal	$	CTS
Periodically Recurring Costs	Costs to operate the project or measure or equipment or system and can associated with any of the Type of Implementation or Recurring Costs. This term can be used in conjunction with "Interval Frequency" defined in resource consumption and generation section	Decimal	$	
Cost Period	Length of study period: The study period begins with the base date, the date to which all cash flows are discounted. The study period includes any planning/construction/implementation period and the service or occupancy period. The study period has to be the same for all alternatives considered	TimeDuration	n/a	BuildingSync
Cost Effectiveness Screening Method	Method for calculating cost-effectiveness for measures or project	Constrained List	n/a	BEDES Beta
	The length of time required for an investment to pay for itself.	*Simple payback*	n/a	
	A measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. ROI is the ratio of the benefit (return) of an investment to the cost of the investment	*Return on investment*	n/a	
	Measure of cost effectiveness used to validate this project. Value in $ entered directly.	*Life cycle cost*	n/a	
	Net Present Value (NPV) of a measure or a project	*Net present value*	n/a	
	Internal rate of return (IRR) of a measure or a project	*Internal rate of return*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	The Levelized cost of energy (LCOE) is the total cost of installing and operating a project expressed in dollars per kilowatt-hour of electricity generated by the system over its life. Can be calculated with System Advisor Model, similar software, or through a simplified calculation at http://www.nrel.gov/analysis/tech_lcoe.html	*Levelized cost of energy*	n/a	HPXML
	SIR is a dimensionless measure of performance that expresses the ratio of savings to costs where the numerator of the ratio contains the operation-related savings and the denominator contains the increase in investment-related costs	Savings to investment ratio	n/a	ICP
	The modified internal rate of return (MIRR) formula adds up the negative cash flows after discounting them to time zero using the external cost of capital, adds up the positive cash flows including the proceeds of reinvestment at the external reinvestment rate to the final period, and then works out what rate of return would cause the magnitude of the discounted negative cash flows at time zero to be equivalent to the future value of the positive cash flows at the final time period.	Modified internal rate of return	n/a	ICP
Cost Effectiveness Value	Metric for evaluating the cost-effectiveness of measures or project	Decimal	Dependent on Qualifier	
Discount Factor	Discount factor applied to calculate present values of future cash flows	Decimal	Percent	BuildingSync
Escalation Rate	Assumed increase in resource or other costs	Decimal	Percent	BuildingSync
Interest Rate	Interest rate for borrowed funds	Decimal	Percent	ePB
Capitalization Rate	The capitalization rate is the rate of return on a real estate investment property based on the income that the property is expected to generate.	Decimal	Percent	ICP
FICO Score	The “classic” or “generic" FICO (Fair Isaac Corporation) credit score of the borrower, as measured by one of the three national credit bureaus (Experian, Equifax, and Trans Union).	Integer	n/a	SEE Action
Income	Gross income of the borrower(s). Use Interval Frequency to qualify (e.g., Annual, Month, etc.)	Decimal	$	SEE Action
Debt Obligation	Total of all debt obligations for the borrower(s), including housing-related and non-housing-related debt. Use Interval Frequency to qualify (e.g., Annual, Month, etc.)	Decimal	$	SEE Action
Origination Channel	The original point of contact for a loan borrower.	Constrained List	n/a	SEE Action
		Contractor	n/a	SEE Action
		Community organization	n/a	SEE Action
		Lender	n/a	SEE Action
		Program administrator	n/a	SEE Action
Loan Amount	An amount of a borrowed loan. Can be characterized using Loan Label.	Decimal	$	SEE Action
Loan Label	Loan characterization qualifier	Constrained List	n/a	SEE Action
	The amount of a loan borrowed, or the part of the amount borrowed which remains unpaid (excluding interest).	*Principal*		SEE Action
	Start of loan	*Original*		SEE Action
	Balance of loan	*Balance*		SEE Action
	Loan proceeds sent by the lender	*Funded*		SEE Action
	Early loan prepayment	*Early repayment*		SEE Action
	End of scheduled loan period	*Maturity*		SEE Action
Loan Repayment Status	The status of the borrower’s repayment obligations at any given time.	Constrained List	n/a	SEE Action
		Current		
		Delinquent		
		Prepaid		
		Charged off		
Loan Security	The collateral pledged, if any, to the lender to secure a loan.	Constrained List	n/a	SEE Action
		Equipment		
		Property senior to mortgage		
		Property junior to mortgage		
Charged Off Reason	The basis for charging off a loan.	Constrained List	n/a	SEE Action

Term	Definition	Data Type	Unit of Measure	Definition Source
		Job loss		
		Health complications		
		Equipment failure		
		Foreclosure		
Baseline & Savings				
Savings Attribution	Type of savings associated with a measure or project. Complete constrained list options include constrained lists from Energy Resource and Water Resource.	Constrained List	n/a	LBNL
	Savings due to reduction in operating and maintenance costs because a piece of equipment or system has been replaced.	*Operation and maintenance*	n/a	
	An Energy Savings Certificate (ESC), also known as an Energy Efficiency Credit (EEC), white certificate or white tag, is an instrument issued by an authorized body guaranteeing that a specified amount of energy savings has been achieved. Each certificate is a unique and traceable commodity carrying a property right over a certain amount of additional energy savings and guaranteeing that the benefit of these savings has not been accounted for elsewhere.	*Energy savings certificates*	n/a	
	Savings due to reduction of repair, and replacement activities by existing staff. This allows staff to focus on other activities. The planned expenditures for repair parts and materials are annually recurring energy-related cost savings that can support contractor payments, but there are no personnel cost savings because the agency site's staffing level remains the same.	*Repair and replacement*	n/a	
	Savings due to sale of Renewable Energy Certificates (RECs), also known as Green tags, Renewable Energy Credits, Renewable Electricity Certificates, or Tradable Renewable Certificates (TRCs). RECs are tradable, non-tangible energy commodities in the United States that represent proof that 1 megawatt-hour (MWh) of electricity was generated from an eligible renewable energy resource (renewable electricity).	*Renewable energy credits*	n/a	
	Total savings not including energy or natural resources.	*Total non resource*	n/a	
Cost Savings	Cost savings associated with a measure or project. This term can also further explained by using a relevant entry from the term Interval Frequency.	Single	$	LBNL
Cost Savings Intensity	Cost savings associated with a measure or project divided by the floor area affected.	Decimal	$/ft2	
Resource Savings	Energy or water resource savings that can be realized from a measure or a project. This term can also further explained by using a relevant entry from the term Interval Frequency.	Decimal	Dependent on Qualifier	LBNL
Resource Savings Intensity	Resource savings per square foot.	Decimal	Dependent on Qualifier	
IPMVP Option	Recommended approach for verification of energy savings for this measure, based on IPMVP	Constrained List	n/a	ePB, BuildingSync
	Option (A) Retrofit Isolation: Key Parameter Measurement -- Savings are determined by field measurement of the key performance parameter(s) which define the energy use of the energy conservation measure (ECM) affected system(s) and/or the success of the project. Parameters not selected for field measurement are estimated. Estimates can be based on historical data, manufacturer's specifications, or engineering judgment. Documentation of the source or justification of the estimated parameter is required.	*Option A*	n/a	IPMVP
	Option (B) Retrofit Isolation: All Parameter Measurement -- Savings are determined by field measurement of all key performance parameters which define the energy use of the ECM-affected system.	*Option B*	n/a	```
	Option (C) Whole Facility -- Savings are determined by measuring energy use at the whole facility or sub-facility level. This approach is likely to require a regression analysis or similar to account for independent variables such as outdoor air temperature, for example.	*Option C*	n/a	IPMVP

Term	Definition	Data Type	Unit of Measure	Definition Source
	Option (D) Calibrated Simulation -- Savings are determined through simulation of the energy use of the whole facility, or of a sub-facility. Simulation routines are demonstrated to adequately model actual energy performance measured in the facility. This Option usually requires considerable skill in calibrated simulation.	*Option D*	n/a	IPMVP
Number Of Permits Replaced	Number of permits replaced as part of measure.	Integer	n/a	BEDES Beta
Number Of Staff Members Trained	Number of staff members trained as part of measure.	Integer	n/a	BEDES Beta
Work Performed By	Entity who performed the work.	Constrained List	n/a	BEDES Beta
		Retro commissioning team	n/a	
		Building staff	n/a	
		Outside contractor	n/a	
Audit Exemption	Conditions under which the building is exempt from a mandated audit.	String	n/a	BEDES Beta
Retro Commissioning Exemption	Conditions under which the building is exempt from a mandated retro-commissioning.	String	n/a	BEDES Beta
Compliance Status	Status of compliance for ordinances requiring benchmarking or audit.	Constrained List	n/a	BEDES Beta
		Complied early	n/a	
		Complied	n/a	
		Exempted	n/a	
		In violation	n/a	
Compliance Status Date	Date when the associated compliance status changed.	Date Format from Metadata	n/a	
ASHRAE Audit Level	Energy audit level as defined in ASHRAE Procedures for Commercial Building En	Constrained LIst	n/a	LBNL
		Level 1	n/a	LBNL
		Level 2	n/a	LBNL
		Level 3	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
Sustainable Practice		Constrained List		
		Conserving methods		
		Regionally sourced materials		
		Recycled materials		
		Recyclable materials		
		Renewable materials		
		Salvaged materials		
	Passive solar design—also known as climatic design—involves using a building's	*Passive solar design*		DOE
Dimensions				
Vertical Surroundings	Attachments to the outermost vertical surfaces of the premises. ~~This can be used~~	Constrained List	n/a	LBNL/BEDES Beta 2.4
	Single family, detached premises are stand-alone structures with outside walls that	*Stand alone*	n/a	LBNL/BEDES Beta 2.4
	Single-family, attached residential premises are units that are attached only by	*Attached*	n/a	
		Attached on one side	n/a	LBNL/BEDES Beta 2.4
		Attached on two sides	n/a	LBNL/BEDES Beta 2.4
		Attached on three sides	n/a	LBNL/BEDES Beta 2.4
		Within a premises	n/a	LBNL
Horizontal Surroundings	Attachments to the outermost horizontal surfaces of the premises. ~~Illustrations for~~	Constrained List	n/a	LBNL/BEDES Beta 2.4
		Stand alone	n/a	LBNL
		Attached from above	n/a	LBNL/BEDES Beta 2.4
		Attached from below	n/a	LBNL/BEDES Beta 2.4
		Attached from above and	n/a	LBNL/BEDES Beta 2.4
Floor Level	The floor level that the premises is accessed from. If the premises is more than	Integer	n/a	LBNL
Footprint Shape	General shape of the premises outlined by the exterior walls. Illustrations will be	Constrained List	n/a	BEDES Beta 2.4
		Rectangular	n/a	BEDES Beta 2.4
		Square	n/a	BEDES Beta 2.4
		Circular	n/a	BEDES Beta 2.4
		Courtyard	n/a	LBNL/CAST
		L shaped	n/a	BEDES Beta 2.4
		U shaped	n/a	BEDES Beta 2.4
		H Shaped	n/a	CAST
		V Shaped	n/a	BEDES Beta 2.4
		T Shape	n/a	BEDES Beta 2.4
Surface				
Opaque Surface	A description of the type of opaque surface being described for a premises. This can be used when a detailed description is needed for a detailed energy analysis. This term can be repeated as many times as needed to completely define the premises. The Location term can be added to the constrained list elements in order to make explicit what the surface is next to. For example, the Location list element "Exterior" could be added to Wall to define a field of "Exterior Wall"	Constrained list	n/a	LBNL
	A vertical (generally) construction in a premises that creates the enclosed space. Use the Location term if needed to distinguish between Interior and Exterior walls.	*Wall*	n/a	LBNL/CEC
	A finished construction under the roof or adjacent floor	*Ceiling*	n/a	LBNL
	Makes up the top exterior boundary of the premises envelope. It is generally horizontal or sloped less than 60 degrees from horizontal. Represents the complete roof construction.	*Roof*	n/a	LBNL/CEC
	The base construction of the roof.	*Roof deck*	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
	A terrace is a level paved area or platform next to a building, such as a patio or veranda.	*Terrace*	n/a	BEDES Beta
	A horizontal (generally) construction in a premises that creates the base/bottom of an enclosed space. Use the Location term if needed to distinguish between Interior and Exterior floors.	*Floor*	n/a	
	A construction element that supports the structure of the premises. In general it is made of masonry or concrete.	*Foundation wall*	n/a	
	A surface component that is operable and separates two spaces in a premises.	*Door*	n/a	
Construction Method	The general description of the main structural construction method used for an Opaque Surface.	Constrained list	n/a	LBNL
	Masonry a structure built from individual units laid in and bound together by mortar. The common materials of masonry construction are brick, stone, marble, granite, travertine, limestone, cast stone, concrete block, glass block, stucco, tile, and cob.	*Masonry*	n/a	LBNL/CAST
	Structural brick is a hollow clay brick product.	*Structural brick*	n/a	LBNL/HPXML
	Stone is the hard, solid, nonmetallic mineral matter of which rock is made.	*Stone*	n/a	LBNL/HPXML
	A concrete masonry unit (CMU) – also called concrete brick, concrete block, cement block, besser block, breeze block and cinder block – is a large rectangular brick used in construction.	*Concrete masonry unit*	n/a	LBNL/HPXML
		Concrete solid	n/a	LBNL/HPXML
		Concrete lightweight	n/a	LBNL/BEDES Beta
		Concrete panels	n/a	LBNL/BEDES Beta
		Concrete poured	n/a	LBNL/BEDES Beta
		Concrete load bearing	n/a	LBNL/BEDES Beta
		Concrete insulated forms	n/a	LBNL/BEDES Beta
		Concrete aerated	n/a	LBNL/BEDES Beta
		Steel frame	n/a	LBNL/HPXML/CAST
		Wood frame	n/a	LBNL/CAST
		Double wood frame	n/a	LBNL/HPXML
	A structural insulated panel (or structural insulating panel), SIP, are a composite building material. They consist of an insulating layer of rigid core sandwiched between two layers of structural board.	*Structural insulated panel*	n/a	LBNL/HPXML
		Log solid wood	n/a	LBNL/HPXML
	Straw bale construction uses baled straw from wheat, oats, barley, rye, rice and others in walls covered by earthen or lime stucco	*Straw bale*	n/a	LBNL/HPXML
	Built-up means it is made by fastening several layers or sections one on top of the other	*Built up*	n/a	LBNL/BEDES Beta
	A cool roof reduces roof temperature with a high solar reflectance (or albedo) material that helps to reflect sunlight and heat away from a building.	*Cool roof*	n/a	EPA
	A green roof or living roof is a roof of a building that is partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane.	*Green roof*	n/a	LBNL/BEDES Beta
	A blue roof is a roof design that is explicitly intended to store water, typically rainfall.	*Blue roof*	n/a	
Finish	The final material applied to a surface, either interior or exterior. Some structural components don't have an exterior finish, such as unfinished poured concrete	Constrained list	n/a	
	Wood finish materials can include wood siding or wood paneling.	*Wood*	n/a	
	Masonite is a type of hardboard made of steam-cooked and pressure-molded wood fibres. This product is also known as Quartrboard, Isorel, hernit, karlit, torex or treetex.	*Masonite*		
	Stone finish materials can include slate, granite, flagstone, limestone, etc.	*Stone*	n/a	
	Tile finish materials can be made from ceramic, glass, plastic	*Tile*	n/a	
	Brick finish materials can include brick veneer, as well as full dimension brick.	*Brick*	n/a	
	Masonry finish materials can include plaster, adobe.	*Masonry*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Concrete finishes can be smooth or textured.	*Concrete*	n/a	
	Fiber cement is a composite material made of sand, cement and cellulose fibers.	*Fiber cement*		
		Metal	n/a	
		Metal panel	n/a	LBNL/BEDES Beta
	Standing seam metal panels are generally used for wall and roof finishes.	*Metal panel standing seam*	n/a	LBNL/IEP
		Sheet metal	n/a	LBNL/BEDES Beta
	Exterior Insulation and Finish System, a nonload bearing, exterior wall cladding system that consists of an insulation board attached either adhesively or mechanically, or both, to the substrate; an integrally reinforced base coat; and a textured protective finish coat. - See more at: http://www.eima.com/about-eifs.shtml	*EIFS*	n/a	IBC/ASTM
	Shingles, used for example as a finish for a roof or wall, that have some type of asphalt-saturated base material (such as felt) and have an asphalt layer covered with ceramic granules applied to one or both sides.	*Shingles asphalt*	n/a	LBNL
	Shingles, used for example as a finish for a roof or wall, that are made of a combination of different materials. They can include a variation on the traditional asphalt shingle where the felt layer is replaced by fiberglass. Recycled plastics can also be used for the backing and top layer of the shingle. Some versions will include recycled resins and plastics which mimic stone and wood.	*Shingles composition*	n/a	LBNL/IEP
	Shingles, used for example as a finish for a roof or wall, made entirely of wood. Wood shingles are sawn.	*Shingles wood*	n/a	LBNL
	Shingles, used for example as a finish for a roof or wall, made from a combination of cement and asbestos. Due to the dangerous nature of asbestos, it was banned in 1989 as a building material and as a result this type of shingle is only found on older buildings.	*Shingles asbestos*	n/a	LBNL
	Shingles, applied as a finish to a wall or roof surface, made of slate or tile (ceramic, concrete)	*Shingles slate or tile*	n/a	LBNL/IEP
		Shingles		
	Shakes, applied as a finish to a wall or roof surface, made entirely of wood. Wood shakes are split (as opposed to wood shingles that are sawn).	*Shakes wood*	n/a	LBNL
	Finish material usually associated with a floor surface	*Carpet*	n/a	LBNL
	Finish material usually associated with a floor surface	*Linoleum*	n/a	LBNL
	Finish material composed primarily of asphalt or fiberglass	*Asphalt or fiberglass*	n/a	LBNL
	Finish material composed primarily of synthetic materials such as plastic or rubber.	*Plastic rubber synthetic sheeting*	n/a	LBNL
Material	Material used in the construction of an opaque surface.	Constrained list	n/a	LBNL
	Material made primarily from trees, such as dimension lumber and plywood (which has synthetic glues in addition to the wood component).	*Wood*	n/a	LBNL
		Steel	n/a	
		Concrete	n/a	
		Brick	n/a	
		Masonry	n/a	
		Fiberglass	n/a	
	Plant-fiber based material	*Cellulose*	n/a	LBNL
	Expanded Polystyrene	*EPS*	n/a	LBNL
	Extruded Polystyrene	*XPS*	n/a	LBNL
	Material made from molten rock. Also called Mineral Wool	*Rock wool*	n/a	LBNL/BEDES Beta
	Fiberglass blown-in insulation material	*Insulsafe*	n/a	LBNL/BEDES Beta
	Material made from recycled cotton products such as denim. It can be used for insulation.	*Recycled cotton*	n/a	LBNL/BEDES Beta
	Material, which can be used for insulation, made from isocyanate.	*ISOCY*	n/a	LBNL/BEDES Beta
	Spray-in-place polyurethane foam insulation material	*Icynene*	n/a	LBNL/BEDES Beta
		Closed cell		
		Vermiculite		

Term	Definition	Data Type	Unit of Measure	Definition Source
Material Qualifier	A description of how the material is applied.	Constrained list	n/a	LBNL
	The material is used to create an insulation layer	*Insulation*	n/a	LBNL
	The material used to create the structural integrity in an opaque surface. In many cases the framing material is not continuous across the construction.	*Framing*	n/a	LBNL
	The material used in a construction layer, that is not Framing or Insulation	*Construction layer*	n/a	LBNL
Framing Factor	Fraction of the surface that is composed of structural framing material.	decimal	n/a	LBNL
Opaque Surface Component		Constrained list	n/a	HPXML
		Home garage connection	n/a	
		Rim joist	n/a	
		Baseboards	n/a	
		Fenestration	n/a	
		Plumbing penetration	n/a	
		HVAC register	n/a	
		Interior sheathing voids	n/a	
		Cantilevers	n/a	
Air Infiltration Description	Description of the infiltration characteristics for an opaque surface, fenestration unit, a thermal zone.	Constrained list	n/a	LBNL
	Very low infiltration rate. The Passive House standard for air infiltration rate is <= 0.5 ACH at 50 pascals, which means the premises is virtually air tight. Infiltration levels this low usually require mechanical ventilation (with a heat exchange) to provide adequate interior air quality	*Very tight*	n/a	LBNL
	Low infiltration rate. The 2012 IECC code requires between 3 and 5 ACH (air changes per hour) @ 50 pascals pressure for new construction (depending on the climate zone). The ENERGY STAR Certified Homes program requires between 3 and 6 ACH depending on the climate zone	*Tight*	n/a	LBNL
	Average infiltration rate.	*Average*	n/a	LBNL
	High infiltration rate, many places in the premises where outside air can come into the conditioned space.	*Leaky*	n/a	LBNL
	Very high infiltration rate.	*Very leaky*	n/a	LBNL
Air Infiltration Test	Type of air infiltration test performed on the premises	Constrained list	n/a	LBNL
		Blower door	n/a	LBNL
		Tracer gas	n/a	LBNL
		Checklist	n/a	LBNL
Air Infiltration Blower Door Test	Type of blower door test	Constrained list	n/a	LBNL
		Pressurization	n/a	LBNL
		Depressurization	n/a	LBNL
		Conducted	n/a	
		Not conducted	n/a	
Air Infiltration Value	The measured value from the Air Infiltration test.	decimal	n/a	LBNL
Air Infiltration Value Units	The units of measure for the Air Infiltration Value field.	Constrained list	n/a	LBNL
		CFM	n/a	
	Cubic feet per minute at 25 Pascals (Pa)	*CFM25*	n/a	LBNL
	Cubic feet per minute at 50 Pascals (Pa)	*CFM50*	n/a	LBNL
	Cubic feet per minute at 75 Pascals (Pa)	*CFM75*	n/a	LBNL
	Cubic feet per minute at natural air leakage rate	*CFMnatural*	n/a	LBNL
		ACH	n/a	
	Air changes per hour at 50 Pascals (Pa) pressure	*ACH50*	n/a	LBNL
	Air changes per hour at natural air leakage rate	*ACHnatural*	n/a	LBNL
	Total area of all the gaps and cracks in a premises which contribute to infiltration. It is usually calculated in the U.S. in in2 at 4 pascals	*Effective Leakage Area*	n/a	LBNL
Radiant Barrier	Type of radiant barrier in the construction	Constrained List	n/a	LBNL
		Foil backed material	n/a	LBNL
		No radiant barrier	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
Radiant Barrier Installation		Constrained List	n/a	HPXML
	Radiant barrier is installed on top of the roof rafters (or trusses) before the roof decking is applied.	*Top side of truss under sheathing*	n/a	
	Radiant barrier is installed on the bottom chord.	*Below bottom chord*	n/a	
	Radiant barrier is installed on the attic floor, over ceiling insulation.	*Attic floor*	n/a	
Plumbing Penetration Sealing	Type of plumbing penetration sealing	Constrained List	n/a	LBNL
	Metal or plastic flashing attached to the area where plumbing fixtures penetrate a surface.	*Flashing*	n/a	LBNL
	Specially manufactured fittings for different types of plumbing installations that penetrate surfaces.	*Fitting*	n/a	LBNL
Doors				
Door Construction	Type of door construction.	Constrained List	n/a	BEDES Beta
		Solid wood	n/a	BEDES Beta
		Hollow wood	n/a	BEDES Beta
		Uninsulated metal	n/a	BEDES Beta
		Insulated metal	n/a	BEDES Beta
		Glass	n/a	BEDES Beta
Fenestration				
Fenestration	A premises component that contains of some type of transparent or translucent glazing material, as well as some type of framing or sash material. The Location term can be added to this term if there is a need to differentiate between interior and exterior fenestration products, or in any other way describe the location of the product.	Constrained List	n/a	LBNL
	Typically a vertical fenestration component.	*Window*	n/a	LBNL
	Openings in the building envelope of the premises for customers to order, pay, and/or receive a good or service without parking or exiting their car.	*Drive through window*	n/a	Food Service Survey
	Typically a horizontal or sloped fenestration component.	*Skylight*	n/a	LBNL
	A door that has a glazed component in it.	*Door*	n/a	LBNL
	An external non-load bearing wall that consists of any combination of framing materials, fixed glazing, opaque glazing, operable windows, or other in-fill materials.	*Curtain wall*	n/a	NFRC
	A type of fenestration that does not usually fill the entire wall surface, compared to a curtain wall which does take the place of an opaque wall system. Window walls are also referred to as ribbon windows.	*Window wall*	n/a	LBNL
	A non-operable device primarily designed to transmit daylight from a roof surface to an interior ceiling surface via a tubular conduit.	*Tubular skylight*	n/a	NFRC
	The transparent or translucent component of fenestration	*Glazing*	n/a	
	Fenestration shading device or system	*Shading*	n/a	
Fenestration Glazing Type	Type of glazing material in the fenestration product.	Constrained List	n/a	LBNL
	Specular glass that has the following values: Tvis ≥ 0.85, Tsol ≥ 0.69, Emiss ≥ 0.83, ≤ 0.85, Thick ≥ 1 mm	*Clear uncoated*	n/a	LBNL
	Specular glass that has the following values: Tsol ≥ 0.5, Emiss ≤ 0.30 , Thick ≥ 1 mm	*Low e*	n/a	LBNL
	Specular glass that has the following values: Emiss ≥ 0.83, ≤ 0.85, Thick ≥ 1 mm	*Tinted*	n/a	LBNL
	Specular glass that has the following values: Emiss ≤ 0.30 , Thick ≥ 1 mm	*Tinted plus low e*	n/a	LBNL
	Specular glass that has the following values: Tvis < 0.30, Rsol > 0.135, Emiss < 0.80, Thick ≥ 1 mm	*Reflective*	n/a	LBNL
	Specular glass that has the following values: Tvis < 0.20, Tsol < 0.20, Rsol > 0.135, Emiss < 0.80, Thick ≥ 1 mm	*Reflective on tint*	n/a	LBNL
	Specular glass that has the following values: Emiss ≥ 0.83, ≤ 0.85, Tvis/Tsol ≥ 1.5, Thick ≥ 1 mm	*High performance tint*	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
	Specular glass that has the following values: Tsol < 0.50, Emiss ≤ 0.30 , Thick ≥ 1 mm	*Sunbelt low e low SHGC*	n/a	LBNL
	A film that is suspended between two glass layers that has the following properties: Thick < 0.5 mm	*Suspended film*	n/a	LBNL
	Glazing material is made of some form of plastic. See the Diffusing term to characterize the material if it is not specular (clear).	*Plastic*	n/a	LBNL
Glazing Diffusing Description	If the Fenestration Glass Type is diffusing (the material is not clear and causes light coming through it to be scattered), type of diffusing surface	Constrained List	n/a	LBNL
		Translucent	n/a	LBNL
	The fenestration glass type is etched.	*Etched*	n/a	LBNL
	The fenestration glass type has a fritted coating	*Fritted*	n/a	LBNL
	The fenestration glass type is not diffusing	*Not diffusing*	n/a	LBNL
Fenestration Gas Fill	For a sealed glazing system (commonly called an Insulated Glass Unit (IGU), the gas that is found between the panes of glass.	Constrained List	n/a	LBNL
	A insulated glass unit (IGU) filled with 100% air	*Air*	n/a	LBNL
	A insulated glass unit (IGU) filled with a mixture of Argon and Air (usually 90% argon)	*Argon*	n/a	LBNL
	A insulated glass unit (IGU) filled with a mixture of Krypton and Air (usually 90% Krypton)	*Krypton*	n/a	LBNL
Fenestration Glass Layer Description	A description of the number of layers of glass in a fenestration glazing system.	Constrained List	n/a	LBNL
	A fenestration glazing system composed of one layer of glass.	*Single pane*	n/a	LBNL/BEDES Beta
	A fenestration glazing system composed of two layers of glass, with a spacer to separate the layers and sealants to hermetically seal the system.	*Double pane*	n/a	LBNL/BEDES Beta
	A fenestration glazing system composed of three layers of glass, with spaces between the layers and sealants to hermetically seal the system.	*Triple pane*	n/a	LBNL/BEDES Beta
	A fenestration glazing system composed of more than one layer of glass, with spaces between the layers and sealants to hermetically seal the system. Select this option when it is not possible to determine the exact number of glass layers in the system.	*Multi layered*	n/a	LBNL/BEDES Beta
	A fenestration system composed of a single layer of glass, with another system, called a "storm window" or "storm panel", composed of one or more layers, on either the inside or the outside of the original single glazed system. Storm panels and storm windows are added to the first fenestration system in order to increase the total insulation value of the combined system, as well as to control infiltration	*Single paned with storm panel*	n/a	LBNL/BEDES Beta
Fenestration Number Of Glass Layers	The number of layers in a fenestration insulated glass unit (IGU).	Integer	n/a	LBNL/BEDES Beta
Fenestration Frame Material	The construction and material used in the frame of the fenestration product. Some frames are made of combinations of materials. This characterization also include whether an aluminum frame has a thermal break as part of the construction	Constrained List	n/a	LBNL/BEDES Beta
	A fenestration framing system composed of aluminum, when it cannot be determined whether or not there is a thermal break in the framing system.	*Aluminum uncategorized*	n/a	LBNL/BEDES Beta
	A fenestration framing system composed of aluminum, but without any low conductance material in the system that would prevent thermal bridging, so that heat can flow unrestricted through the highly conductive aluminum material from the outside to the inside of the frame.	*Aluminum no thermal break*	n/a	LBNL/BEDES Beta
	A fenestration framing system composed of aluminum, which is a highly conductive material, that has one of more elements of low conductance material which reduce the flow of heat through the frame.	*Aluminum Thermal break*	n/a	LBNL/BEDES Beta
	A fenestration framing system composed of more than one material, such as wood on the interior of the frame and fiberglass or aluminum on the outside of the frame.	*Clad*	n/a	LBNL/BEDES Beta

Term	Definition	Data Type	Unit of Measure	Definition Source
	A fenestration framing system composed of a blend of different materials. The most common type is a resin based blend of wood and plastic.	*Composite*	n/a	LBNL/BEDES Beta
	A fenestration framing system composed of fiberglass	*Fiberglass*	n/a	LBNL/BEDES Beta
	A fenestration framing system composed entirely of steel.	*Steel*	n/a	LBNL/BEDES Beta
	A fenestration framing system composed entirely of vinyl.	*Vinyl*	n/a	LBNL/BEDES Beta
	A fenestration framing system composed entirely of wood.	*Wood*	n/a	LBNL/BEDES Beta
Solar Heat Gain Coefficient	The ratio of the solar heat gain entering the space through the fenestration product to the incident solar radiation. Solar heat gain includes directly transmitted solar heat and that portion of the absorbed solar radiation which is then reradiated, conducted, or convected into the space. Legal values: 0-1.	Decimal	Percent	NFRC 200-2014
Visible Transmittance	The fraction of radiation in the visible solar spectrum (0.4 to 0.7 micrometers) that passes through a material. Legal values: 0-1.	Decimal	Percent	LBNL
Fenestration Operation	Characterization of whether a fenestration product can be opened.	Constrained List	n/a	LBNL/BEDES Beta
	Fenestration products that can be opened and closed as desired by the occupant to provide better control of office space conditions.	*Operable*	n/a	LBNL/BEDES Beta
	Fenestration products that are fixed shut and cannot be opened by premises occupants.	*Non operable*	n/a	LBNL/BEDES Beta
Window To Wall Ratio	Ratio of total window area to total wall area, where the total wall area is calculated using the floor to floor height, rather than the floor to ceiling height.	Decimal	n/a	LBNL/BEDES Beta
Fenestration Layout	The pattern of distribution of the fenestration system on the wall.	Constrained List	n/a	LBNL/CAST
	Fenestration systems that do not have a break between them across the wall. Systems such as window walls and curtain walls would have a "Continuous" layout.	*Continuous*	n/a	LBNL/CAST
	Fenestration systems that have a section of wall between them. This type of layout is sometimes referred to as "punched opening".	*Discrete*	n/a	LBNL/CAST
Sill Height	Distance from the floor to the lower horizontal surface at the window opening.	Decimal	ft	LBNL/CAST
Number Of Fenestration Units	Number of windows, skylights, glass doors, etc associated with a surface, a zone, a premises, etc.	Integer	n/a	LBNL/CAST
Shading System	A system that can be added to a fenestration system which blocks or redirects some amount of the solar radiation coming through the fenestration system. A shading system can be located on the inside or outside of a fenestration system, and it can also be added between the glass (or plastic) layers of a glazing system. The location can be specified using the Location term.	Constrained List	n/a	LBNL/BEDES Beta
	A horizontal element of a premises that projects out perpendicularly from the face of a premises.	*Overhang*	n/a	LBNL/BEDES Beta
	A vertical element of a premises that projects perpendicularly from the face of a premises.	*Fin*	n/a	LBNL/BEDES Beta
	An horizontal element of a premises that projects perpendicularly from the face of a premises, but which generally has a tilt. Awnings are generally added to a premises' basic structure and can be made of many materials such as fabric, plastic, and wood.	*Awning*	n/a	LBNL/BEDES Beta
	A shading system that is generally made of some type of mesh or woven material, so that a significant amount of solar radiation is blocked.	*Solar screen*	n/a	LBNL/BEDES Beta
	A film that used to reduce solar gain that can be applied to the interior or exterior of a fenestration product.	*Solar film*	n/a	LBNL/BEDES Beta
	A shading system that can be applied to the exterior of a fenestration system made of fixed or adjustable horizontal or vertical elements.	*Louver*	n/a	LBNL
	A shading system that can be applied to the exterior, interior or between the glazing layers of a fenestration system, composed of adjustable horizontal elements.	*Blind*	n/a	LBNL
	A shading system generally made of some sort of mesh, woven, or felted material.	*Curtain*	n/a	LBNL
	Roller shades, honeycomb shades	*Shade*	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
	A shading system that is generally made of some sort of mesh or woven material.	*Screen*	n/a	LBNL
		Deciduous foliage	n/a	
		Evergreen foliage	n/a	
		Neighboring building	n/a	
	A horizontal surface placed inside or both inside and outside a window to reflect light deeper into a space and shade light adjacent to the window	*Light shelf*	n/a	BuildingSync
Percent Vision Glazing	The percent of the glass portion of an exterior window, relative to the wall area, that permits views to the exterior or interior. Vision glazing must allow a clear image of the exterior and must not be obstructed by frits, fibers, patterned glazing, or added tints that distort color balance. (USGBC)	Decimal	Percent	LBNL/BEDES Beta
Percent Skylight Area	The percent of the skylight area relative to the roof area.	Decimal	Percent	LBNL/BEDES Beta
Percent Of Fenestration Area Shaded	The percent of the fenestration area that is shaded by exterior objects such as trees or other premises'.	Decimal	Percent	LBNL/BEDES Beta
Percent Glazing	The percentage of an opaque surface or door that is glazed	Decimal	Percent	BuildingSync
Weatherstrip Status	Whether a premises or feature, such as a door or window, is weatherstripped.	Constrained List	n/a	LBNL/BEDES Beta
	Weatherstripping is the process of sealing openings such as doors, windows, and trunks from the elements.	*Weatherstripped*	n/a	LBNL
	There is no weatherstripping on the premises components.	*Not weatherstripped*	n/a	LBNL
Weatherstrip Description	Whether a component is weatherstripped or not. This can apply to doors, windows, as well as system components such as refrigeration doors.	Constrained List	n/a	LBNL
	Weatherstripping material type is unknown.	*Generic*	n/a	LBNL
	Open or closed cell foam, or EPDM rubber	*Foam*	n/a	LBNL
	Weatherstripping material made from felt	*Felt*	n/a	LBNL
	A manufactured products made of a combination of materials such as plastic and metal to fill the space between the bottom of the door and the threshold.	*Sweep*	n/a	LBNL
	A tubular material made of rubber, vinyl or silicone.	*Tubular*	n/a	LBNL
	Durable plastic or metal strip folded into a V shape that springs open to bridge gaps	*Tension seal*	n/a	LBNL
Fenestration Certification	Type of certification for a fenestration product.	Constrained List	n/a	LBNL/HPXML
	Fenestration rating label from the National Fenestration Rating Council (NFRC)	*NFRC certification*	n/a	LBNL/HPXML
	Fenestration rating that meets the ENERGY STAR rating criteria	*ENERGY STAR*	n/a	LBNL/HPXML
	Fenestration rating produced by a third-party certification body.	*Third party certification*	n/a	LBNL/HPXML
Moveable Insulation	Indication of whether or not a fenestration product has moveable insulation. This type of insulation can be applied when needed, such as on a hot summer day or a cold winter night, and removed when it is not needed.	Constrained List	n/a	LBNL/HES-SF
		Moveable insulation present	n/a	LBNL/HES-SF
		Moveable insulation not present	n/a	LBNL/HES-SF
Foundation				
Foundation Perimeter Insulation	Is the foundation perimeter insulated.	Constrained List	n/a	LBNL/BEDES Beta
		Insulated	n/a	LBNL/BEDES Beta
		Not insulated	n/a	LBNL/BEDES Beta
Foundation Height	Height of the premises foundation. The Location term can be used to further refine this definition, such as Foundation Height Above Grade or Foundation Height Below Grade.	Decimal	ft	LBNL/BEDES Beta
Foundation Ground Coupling	Use the Location term to describe how the perimeter is coupled to the ground, for example, via a Basement or Crawlspace	Constrained List	n/a	LBNL/BEDES Beta
Foundation Component		Constrained List	n/a	
		Access point	n/a	
		Plumbing penetration	n/a	
		Wiring penetration	n/a	
		Service penetration	n/a	
		Chimney or flue chase	n/a	
	Mechanical chases can be large openings between the basement and the living space to allow ducts, pipes and wire bunches to pass through.	*Mechanical chase*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	The rim, or band, joist refers to the area where the floor joist sits on the exterior wall plates.	*Rim joist*	n/a	
		Fenestration	n/a	
		Cantilever	n/a	
Thermal Boundary Installation		Constrained List	n/a	
		Foundation wall	n/a	
		Frame floor	n/a	
Roof & Ceiling				
Ceiling Configuration	Description of the type of ceiling in the premises.	Constrained List	n/a	LBNL
	A construction that does not have space, other than for framing, between the ceiling structural framing and the roof structural framing. This means that, in general, the ceiling form follows the roof form.	*Cathedral*	n/a	LBNL/BEDES Beta
	A construction that has a space between the ceiling structural framing and the roof structural framing.	*Attic*	n/a	LBNL
	A construction that has a non-structural ceiling suspended below the structural system. The space created can contain wiring, piping, and ductwork.	*Drop*	n/a	LBNL/BEDES Beta
	The space between two floors, or between a suspended ceiling and the floor above, that is used to distribute conditioned air from the premises HVAC system to the premises spaces.	*Plenum above*	n/a	LBNL
Attic Venting	Description of how the attic is vented. Use the Conditioning Status term for a full list that can be applied to this term.	Constrained List	n/a	LBNL/HPXML
Attic Access Location	Description of where the attic is located, generally thought of as what type of space (conditioned or not) it is next to. Use the Conditioning Status term for a full list that can be applied to this term.	Constrained List	n/a	LBNL/BEDES Beta
Roof Shape	Architectural description of the exterior shape of the roof. If the roof has more than one shape, this is the primary roof shape. Illustrations to be added when the website is developed.	Constrained List	n/a	LBNL/HPXML
	A gable is the generally triangular portion of a wall between the edges of a dual-pitched roof.	*Gable*	n/a	LBNL/HPXML
	A gambrel or gambrel roof is a usually symmetrical two-sided roof with two slopes on each side.	*Gambrel*	n/a	LBNL
	A hip roof, hip-roof or hipped roof, is a type of roof where all sides slope downwards to the walls, usually with a fairly gentle slope.	*Hip*	n/a	LBNL
	A mansard or mansard roof is a four-sided gambrel-style hip roof characterized by two slopes on each of its sides with the lower slope, punctured by dormer windows, at a steeper angle than the upper.	*Mansard*	n/a	LBNL
	A flat roof is a roof which is almost level in contrast to the many types of sloped roofs.	*Flat*	n/a	LBNL/HPXML
	A single slope roof.	*Shed*	n/a	LBNL
Attic Component		Constrained List	n/a	HPXML
		Access point	n/a	
		Recessed light	n/a	
		Floor	n/a	
	In split level homes, the attic level will often change. There will be a vertical frame wall that connects the two horizontal attic planes. Often, this wall's framing cavity bays will be open where it passes the level of the lower attic plane.	*Attic level transition*	n/a	
		Top plate	n/a	
		Kneewall transition	n/a	
	A plumbing wet wall is a special type of top plate. This is the wall top plate where plumbing stack pipes penetrate the attic plane.	*Plumbing wet wall*	n/a	
	A drop soffit area is usually located above an architectural detail in the living space, often above cabinets in a kitchen or bathroom.	*Dropped soffit*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Mechanical chases are large openings in the attic plane that allow ducts, pipes or wire bunches to pass from the living space into the attic area.	*Mechanical chase*	n/a	
		Chimney or flue chase	n/a	
Solar Reflectance Index	A measure of a roof's ability to reject solar heat, as shown by a small temperature rise. It is defined so that a standard black (reflectance 0.05, emittance 0.90) is 0 and a standard white (reflectance 0.80, emittance 0.90) is 100.	Integer	n/a	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
HVAC Category	Category of equpment related to heating, ventilation, and air conditioning (HVAC).	Constrained List	n/a	
		Air distribution	n/a	
		Water distribution	n/a	
		Heating	n/a	
		Cooling	n/a	
		Duct	n/a	
HVAC Distribution System				
Air Distribution Type	Basic configuration of air-distribution equipment.	Constrained List	n/a	BEDES-Beta
	Factory-made assemblies that normally include an evaporator or cooling coil and a	*Unitary*	n/a	ASHRAE
	Customized assemblies built to suit a specific application	*Built up*	n/a	ASHRAE
	System consisting of equipment provided in more than one assembly or enclosure,	*Split*	n/a	ASHRAE
Zoning System Type	Identifies whether a system is single or multi-zone.	Constrained List	n/a	LBNL
	A single zone system consists of an air handling unit, a heating source and cooling	*Single zone*	n/a	
	A multi-zone system.	*Multi zone*	n/a	
	One system for the entire prmises.	*Central*	n/a	
Duct Configuration	Configuration of ducts.	Constrained List	n/a	BEDES-Beta
	Configuration in which the air, having been conditioned, is distributed to various	*Single*	n/a	ASHRAE
	Configuration in which conditioned air at two temperatures and humidity levels are	*Dual*	n/a	ASHRAE
	Configuration in which hot, cold, and tempered conditioned air are supplied	*Three*	n/a	ASHRAE
	No ducts	*Ductless*	n/a	
Duct Insulation Condition	Condition of duct insulation.	Constrained List	n/a	BEDES-Beta
		Excellent	n/a	
		Good	n/a	
		Average	n/a	
		~~*Fair*~~	n/a	
		Poor	n/a	
		Very poor	n/a	
		Existing	n/a	
Duct Sealing	Condition of duct sealing.	Constrained List	n/a	BEDES-Beta
		Connections sealed with mastic	n/a	
		No observable leaks	n/a	
		Some observable leaks	n/a	
		Significant leaks	n/a	
		Catastrophic leaks	n/a	
		Sealed	n/a	
Duct Insulation R Value	R-value of duct insulation.	Decimal	ft2-°F-hr/Btu	BEDES-Beta
Duct Surface Area	Total surface area of ducts associated with this air distribution system.	Decimal	ft2	BuildingSync
Supply Duct Percent Conditioned Space	Percentage of supply duct surface area that is located within conditioned space (0-1).	Decimal	Percent	BuildingSync
Return Duct Percent Conditioned Space	Percentage of return duct surface area, including the air handler, that is located within conditioned space (0-1).	Decimal	Percent	BuildingSync
Duct Type	Type of duct material.	Constrained List	n/a	BEDES-Beta
		Flex	n/a	
		Grey flex	n/a	
		Mylar flex	n/a	
		Duct board	n/a	
		Sheet metal	n/a	
		Galvanized	n/a	
		Flexible	n/a	
		Fiberboard	n/a	
		No ducting	n/a	
Duct Leakage Test Method	Method used to estimate duct leakage	Constrained List	n/a	HPXML

Term	Definition	Data Type	Unit of Measure	Definition Source
	Diagnostic tool designed to measure the airtightness of forced air heating, ventilating and air-conditioning (HVAC) ductwork. A duct leakage tester consists of a calibrated fan for measuring an air flow rate and a pressure sensing device to measure the pressure created by the fan flow. The combination of pressure and fan flow measurements are used to determine the ductwork airtightness.	*Duct leakage tester*	n/a	LBNL
	A technique involving conducting two whole house Blower Door air tightness tests with and without the supply and return registers and grills sealed off from the house. A subtraction of the sealed register test from the unsealed register test provides an estimate of duct leakage to the outside.	*Blower door subtract*	n/a	
	A technique involving a register cover with a pressure tap for a hose connection. With the house pressurized (or depressurized) to 50 Pa (-50 Pa) using a blower door, a pressure gauge is attached to the pressure pan by means of a hose. If the pressure difference is near zero, this indicates that the ductwork associated with that particular register is not connected to the outside. A pressure 5 Pa or above indicates that the ductwork is connected to or leaking to the outside. A smaller pressure difference indicates greater leakage. This method does not quantify duct leakage, but serves to identify locations of ductwork runs that are leaking to the outside. It is more of a qualitative measure, used for fault isolation.	*Pressure pan*	n/a	LBNL
		Visual inspection	n/a	
Duct Pressure Test Leakage Rate	Duct leakage found from pressure test. Reported in cubic feet per minute.	Decimal	cfm	BEDES-Beta
Supply Fraction Of Duct Leakage	Fraction of total duct leakage that is on the supply side. Remainder is assumed to be on the return side (0-1).	Decimal	Percent	BuildingSync
Duct Pressure Test Leakage Percentage	Duct leakage found from pressure test. Reported as a percentage. [%]	Decimal	Percent	BEDES-Beta
Static Pressure	The expected or installed internal static pressure of the system at full supply fan speed including all filters, coils, and accessories.	Decimal	Pa	BuildingSync
Sequencing	Sequencing availability of HVAC system	Constrained List	n/a	BuildingSync
	Sequencing of HVAC system is available (e.g. boiler staging).	*Sequencing*	n/a	
	Sequencing of HVAC system is NOT available.	*No sequencing*	n/a	
Pipe Configuration	Number of pipes for distributing steam, refrigerant, or water to individual zones.	Constrained List	n/a	BuildingSync
		1 pipe	n/a	
		2 pipe	n/a	
		3 pipe	n/a	
		4 pipe	n/a	
Pipe Insulation Thickness	Defines how thick insulation on pipes in a heating, cooling, water heating system is.	Decimal	inches	BuildingSync
Pipe Location	% of pipe length in conditioned space (0-1)	Decimal	Percent	BuildingSync
Heating System				
Heating Type	Source of heat. Heating delivery is recorded in a separate data field. Use of fans or blowers by themselves without heated air or water is not included in this definition of heating.	Constrained List	n/a	BuildingSync
	Packaged assembly of components that includes a heating source, a fan and an air filter, that relies on convection for heating delivery. Use "Thermal Medium" to specify air if desired.	*Furnace*	n/a	
	Use "Heating Medium" to further categorize the boiler as hot water or steam, if desired.	*Boiler*	n/a	
	A system that generally consists of two separate units. One that is comprised of the compressor and the condenser elements, and the other consisting of evaporator and expansion valve, connected by refrigerant tubing and a reversing valve. The flow of the refrigerant depends on whether the system is in cooling or heating mode.	*Split heat pump*	n/a	
	A Packaged terminal heat pump, or PTHP, is a factory-packaged refrigerant-based heat pump with no air distribution system other than a built-in fan.	*Packaged terminal heat pump*	n/a	
	Compact through-the-wall packaged system capable of providing total heating and cooling functions for a single zone or multiple rooms, designed with sufficient air-handling capacity for ducted installations.	*Single packaged vertical heat pump*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Factory-packaged refrigerant-based heat pump with an air distribution system	*Packaged unitary heat pump*	n/a	
	System using refrigerant as the cooling and heating medium, conditioned by a single outdoor condensing unit, and circulated within the building to multiple fan-coil units. The system supports variable motor speed and thus variable refrigerant flow rather than simply on/off operation.	*Variable refrigerant flow*	n/a	LBNL
	A centrally located plant that is used for heating. Use "Heating Medium" to further categorize as hot water or steam, if desired.	*District*	n/a	
	A centrally located plant that is used to generate steam that is then moved through a heat exchanger to create hot water for heating.	*District steam to hot water HX*	n/a	
	Air or water heated using solar collectors	*Solar thermal*	n/a	
		Fireplace	n/a	
		Heating stove	n/a	
	Built-in heater is a category intended to represent wall or floor mounted units that generate and deliver heat to a local zone such as wall-mounted electric heating panels.	*Built in heater*	n/a	
	Individual space heater is a category intended to represent a free-standing or self-contained unit that generates and delivers heat within a local zone.These heaters are characterized by a lack of pipes or ductwork for distributing hot water, steam, or warm air through a building. These heaters are portable and would include electric radiant or quartz heaters, heating panels, gas- or kerosene-fired or electric unit heaters, and infrared radiant heaters.	*Individual space heater*	n/a	
		No heating	n/a	
Heating Medium	Medium used to transport heat from a central heating system to individual zones.	Constrained List	n/a	BuildingSync
		Hot water	n/a	
		Steam	n/a	
		Refrigerant	n/a	
		Air	n/a	
		Glycol	n/a	
Heating Delivery Type	Method for delivering and or distributing heat to the building or Space Function. May be multiple delivery methods for each plant.	Constrained List	n/a	BuildingSync
		Air handler	n/a	
	Uses nozzles or the velocity of the primary air source to induce a flow of secondary air to be mixed with the primary air.	*Induction units*	n/a	ASHRAE
	Constant air volume terminal box with reheat	*CAV terminal box with reheat*	n/a	
	Variable-air volume terminal device with fan	*VAV terminal box fan powered no reheat*	n/a	
	Variable-air volume terminal device with fan with a reheat coil mounted on the discharge of the unit.	*VAV terminal box fan powered with reheat*	n/a	
	Variable-air volume terminal device with no fan and no reheat	*VAV terminal box not fan powered no reheat*	n/a	
	Variable-air volume terminal device with no fan with reheat	*VAV terminal box not fan powered with reheat*	n/a	
		Fan coil 2 pipe	n/a	
		Fan coil 4 pipe	n/a	
	Split system connecting one indoor unit to one outdoor unit	*Mini split*	n/a	
	Split system connecting multiple indoor units to one outdoor unit	*Multi split*	n/a	
	Variable refrigerant flow terminal unit	*VRF terminal units*	n/a	
		Perimeter baseboard	n/a	
		Radiator	n/a	
		Radiant floor or ceiling	n/a	
		Other radiant	n/a	
		Low pressure under floor	n/a	
		Local fan	n/a	
Reheat Source	Energy source used to provide reheat energy at a terminal unit.	Constrained List	n/a	BuildingSync
		Heating plant	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		Local electric resistance	n/a	
		Local gas	n/a	
Heating Equipment				
Burner Type	Type of burner on boiler or furnace, if applicable.	Constrained List	n/a	BEDES-Beta
	An atmospherically vented boiler draws in combustion make-up air from its surrounding area through a damper to create a draft.	*Atmospheric*	n/a	http://energyoptionsexp
	Power burners control the mixture of gas and air that is injected into the boiler's combustion chamber. These burners increase the efficiency of the boiler by providing an optimal ratio of gas to air.	*Power*	n/a	http://www.furnacecom
	A sealed combustion boiler pipes its air in from outdoors and delivers it to the boiler. The combustion gases thereafter are then piped back outdoors and are usually “pushed” mechanically by some type of blower. In other words, there is never a connection to the interior; it sends and receives air to and from the outdoors alone.	*Sealed combustion*	n/a	
	Oil burner that uses centrifugal force to spray fuel oil from a rotary fuel atomizing cup into the combustion chamber.	*Rotary cup*	n/a	LBNL
Ignition Type	Ignition mechanism in gas heating equipment. Either pilot light or an intermittent ignition device (IID)	Constrained List	n/a	BuildingSync
	Ignition device that is linked to the thermostat on a furnace or boiler and light the pilot by means of a spark or other heat source when needed. IIDs are more fuel-efficient than the traditional approach of maintaining a continuously burning pilot flame.	*Intermittent ignition device*	n/a	http://www.furnacecom
		Pilot light	n/a	
Heating Staging	The method of heating staging used by the unit. Select “Single Stage” for units with single stage (on/off) control. Select “Multiple, Discrete Stages” for units with multiple discrete stages (low-fire / high-fire). Select “Modulating” for units which contain modulating burners.	Constrained List	n/a	BuildingSync
	On/off control	*Single stage*	n/a	
	Multiple discrete stages (low-fire / high-fire)	*Multiple discrete stages*	n/a	
		Variable	n/a	
	Modulating burners are designed to control the burner output (size of flame) to match the boilers variable load requirements, during this process the burner is designed to stay at the correct fuel air ratios across the complete firing range ensuring maximum combustion and boiler efficiencies	*Modulating*	n/a	http://www.sabien-tech
Number of Heating Stages	The number of heating stages, excluding "off."	Integer	n/a	BuildingSync
Heating Stage Capacity Fraction	Average capacity of each heating stage, at ARI rated conditions, expressed as a fraction of total capacity	Decimal	Percent	BuildingSync
Input Capacity	The rate of energy consumption of the heating plant at full load.	Decimal	MMBtu	BuildingSync
Output Capacity	Output capacity of equipment.	Decimal	MMBtu	BuildingSync
Draft Type	Draft mechanism used for drawing air through a boiler, furnace, or water heater.	Constrained List	n/a	BuildingSync
	A natural heater has no blower fan and does not connect to an A/C power source. A natural draft type tankless heater takes it's "intake" combustion air from inside the room in which the heater is mounted. It then uses a natural draft to pull the exhaust out through a flue pipe exhaust.	*Natural*	n/a	
		Direct ventilation		
	Mechanical forced draught is provided by means of a fan forcing air into the combustion chamber.	*Mechanical forced*	n/a	
	In mechanical induced draught exhaust gases are pulled out of the boiler by either a steam jet or an induced draught fan.	*Mechanical induced*	n/a	
Boiler Insulation R Value	Insulation R-Value of hot water storage tank.	Decimal	hr·ft2·°F/Btu	BuildingSync
Boiler Insulation Thickness	Insulation thickness of hot water storage tank. [inches]	Decimal	inches	BuildingSync
Burner Turndown Ratio	If applicable, the turndown ratio for the burner (full input/minimum input).	Decimal	n/a	BuildingSync
Boiler Percent Condensate Return	The percentage of condensed steam that is returned to the boiler. (0-1)	Decimal	Percent	BuildingSync

Term	Definition	Data Type	Unit of Measure	Definition Source
Boiler Blowdown Rate	A blowdown of the boiler is a routine operation necessary due to the increased concentration of Total Dissolved Solids - TDS - in the boiler during the steam production. The blowdown rate of a boiler depends on: steam consumption (steam used in the process and not returned as condensate to the boiler), concentration of impurities in the feed water, maximum allowable TDS in the boiler.	Decimal	kg/h	BuildingSync
Condensing Operation	Capability of a boiler or furnace of condensing the water vapor in the exhaust flue gas to obtain a higher efficiency.	Constrained List	n/a	BuildingSync
	Boiler or furnace is capable of condensing the water vapor in the exhaust flue gas	*Condensing*	n/a	
	Boiler or furnace is NOT capable of condensing the water vapor in the exhaust flue gas	*Not condensing*	n/a	
Refrigerant	The type of refrigerant used in the heat pump	Constrained List	n/a	BuildingSync
		R134a	n/a	
		R123	n/a	
		R22	n/a	
	propane	*R290*	n/a	
		R401a	n/a	
		R404a	n/a	
		R407a	n/a	
		R407c	n/a	
		R408a	n/a	
		R409a	n/a	
		R410a	n/a	
		R500	n/a	
		R502	n/a	
		R600a	n/a	
	CO2	*R744*	n/a	
	ammonia	*R717*	n/a	
	water	*R718*	n/a	
Heat Pump Backup Heating Switchover Temperature	Minimum outside temperature at which the heat pump can operate	Decimal	°F	HPXML
Heat Pump Backup System Fuel	Backup fuel used by the heat pump	Constrained List	n/a	HPXML
Heat Pump Backup AFUE	Annual Fuel Utilization Efficiency of backup system for heat pump	Decimal	n/a	HPXML
Heat Pump Sink Source Type	Sink source of the heat pump	Constrained List	n/a	
		Closed tower	n/a	
		Ground source heat exchanger	n/a	
		Lake	n/a	
		Open tower	n/a	
		Outside air	n/a	
		Well	n/a	
Geothermal Loop		Constrained List	n/a	
		Open	n/a	
		Closed	n/a	
Cooling System				
Cooling Type	Source of cooling. Cooling delivery is recorded in a separate data field. Use of fans or blowers by themselves without chilled air or water is not included in this definition of cooling. Stand-alone dehumidifiers are also not included.	Constrained List	n/a	BuildingSync
	Split direct expansion	*Split DX air conditioner*	n/a	
		Vapor compression chiller	n/a	
		Absorption chiller	n/a	
		District chilled water	n/a	
	A cooler that cools indoor air by moisture evaporation, thereby lowering its dry-bulb temperature and raising its wet-bulb temperature, all at a constant energy (adiabatic) level	*Evaporative cooler*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	A packaged terminal air conditioner, or PTAC, is a self-contained air conditioning system commonly found in hotels, motels, senior housing facilities, hospitals, condominiums, apartment buildings, add-on rooms and sunrooms.	*Packaged terminal air conditioner*	n/a	
	A system that generally consists of two separate units. One comprised of the compressor and the condenser elements, and the other comprised of evaporator and expansion valve, connected by refrigerant tubing and a reversing valve. The flow of the refrigerant depends on whether the system is in cooling or heating mode.	*Split heat pump*	n/a	
	A Packaged terminal heat pump, or PTHP, is a factory-packaged refrigerant-based heat pump with no air distribution system other than a built-in fan.	*Packaged terminal heat pump*	n/a	
	System supporting variable motor speed and thus variable refrigerant flow rather than simply on/off operation.	*Variable refrigerant flow*	n/a	
	A unit that includes all the components- evaporative coil, compressor, expansion valve, condenser coil, and fans that's installed outside and the supply air is ducted inside. A separate heating source- electric or gas pack- is added if needed	*Packaged unitary direct expansion RTU*	n/a	
	Factory-packaged refrigerant-based heat pump with an air distribution system and a reversing valve to alter the flow of refrigerant based on the need.	*Packaged unitary heat pump*	n/a	
	Compact through-the-wall packaged system capable of providing total heating and cooling functions for a single zone or multiple rooms, designed with sufficient air-handling capacity for ducted installations.	*Single package vertical air conditioner*	n/a	
	Compact through-the-wall packaged system with heat pump, capable of providing total heating and cooling functions for a single zone or multiple rooms, designed with sufficient air-handling capacity for ducted installations.	*Single package vertical heat pump*	n/a	
		No cooling	n/a	
Cooling Medium	Medium used to transport cooling energy from a central cooling system to individual zones.	Constrained List	n/a	BuildingSync
		Chilled water	n/a	
		Refrigerant	n/a	
		Air	n/a	
		Glycol	n/a	
Air Side Economizer	Presence of air-side economizer to provide free cooling.	Constrained List	n/a	BuildingSync
		Is present	n/a	
		Is not present	n/a	
Air Side Economizer Type	Type of air economizer system associated with a cooling system.	Constrained List	n/a	BEDES-Beta
		Dry bulb temperature	n/a	
		Enthalpy	n/a	
		Demand controlled ventilation	n/a	
		Nonintegrated	n/a	
Water Side Economizer	Presence of water-side economizer to provide free cooling.	Constrained List	n/a	BuildingSync
		Is present	n/a	
		Is not present	n/a	
Water Side Economizer Type	Type of waterside economizer providing free cooling.	Constrained List	n/a	CEC
		Parallel plate and frame heat exchanger	n/a	
		Series plate and frame heat exchanger	n/a	
		Strainer cycle	n/a	
		Thermo cycle	n/a	
Cooling Equipment Redundancy	Availability of backup cooling equipment.	Constrained List	n/a	ENERGY STAR
		Is available	n/a	
		Is not available	n/a	
		N	n/a	
		Nplus1	n/a	
		Nplus2	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		2N	n/a	
		Greater than 2N	n/a	
Cooling Delivery Type	Method of delivering cooling to the zone.	Constrained List	n/a	BEDES-Beta
		Central air handler single duct	n/a	
		Central air handler dual duct	n/a	
		Mini split	n/a	
		Multi split	n/a	
		Terminal reheat	n/a	
		Fan coil 2 pipe	n/a	
		Fan coil 4 pipe	n/a	
		VRF terminal units	n/a	
		Radiant ceiling	n/a	
		Chilled beam	n/a	
		VAV terminal box modulating diffuser	n/a	
		VAV terminal box fan powered	n/a	
		VAV terminal box not fan powered	n/a	
		Under floor	n/a	
		Local fan	n/a	
Cooling Equipment				
Chiller Compressor Driver	Vehicle for driving the compressor used in a chiller	Constrained List	n/a	BuildingSync
		Electric motor	n/a	
		Steam	n/a	
		Gas turbine	n/a	
Chiller Compressor Type	Type of compressor in the chiller.	Constrained List	n/a	BEDES-Beta
	A positive-displacement compressor that uses pistons driven by a crankshaft to deliver gases at high pressure.	*Reciprocating*	n/a	ASHRAE Wiki
	A positive displacement rotary compressor that produces compression with two intermeshing helical rotors. A compressor that is a component of a vapor-compression refrigerating machine and is used to draw the refrigerant vapor from the evaporator and deliver it to the condenser.	*Screw*	n/a	ASHRAE Wiki, AUC?
	Positive displacement compressor in which the reduction in internal volume of the compression chamber is accomplished by an orbiting scroll (involute spiral) within a mating stationary scroll. A device for compressing air or refrigerant.	*Scroll*	n/a	ASHRAE Wiki, AUC?
	A non-positive displacement compressor that depends, in part, on centrifugal forces for pressure rise. A turbocompressor. Centrifugal compressors supply the compression in water chillers cycles.	*Centrifugal*	n/a	ASHRAE Wiki, AUC?
Compressor Staging	The compressor staging for the unit. Select "Single Stage" for units with single stage (on/off) control. Select "Multiple, Discrete Stages" for units with multiple compressors, discrete unloading stages, or compressors with stepped speed motors that are controlled to operate at discrete stages. Select "Variable" for compressors that operate at variable speeds or with modulating unloading	Constrained List	n/a	TPE/BCL
		Single stage	n/a	
		Multiple discrete stages	n/a	
		Variable	n/a	
Condenser Type	Type of condenser used for DX cooling plant.	Constrained List	n/a	BEDES-Beta
		Air cooled	n/a	
		Water cooled cooling tower	n/a	
		Water cooled open loop ground water	n/a	
		Water cooled closed loop ground source	n/a	
		Glycol cooled dry cooler	n/a	
Absorption Heat Source	Source of heating energy for regeneration	Constrained List	n/a	BuildingSync

Term	Definition	Data Type	Unit of Measure	Definition Source
		Steam	n/a	
		Solar energy	n/a	
		Combustion	n/a	
		Waste heat	n/a	
Absorption Stages	Number of stages in regeneration process	Constrained List	n/a	BuildingSync
		Single effect	n/a	
		Double effect	n/a	
Number Of Discrete Cooling Stages	The number of discrete operating stages, excluding "off."	Integer	n/a	TPE/BCL
Cooling Stage Capacity	Average capacity of each cooling stage, at ARI rated conditions, expressed as a fraction of total capacity	Decimal	Percent	BuildingSync
Condenser Fan Speed Operation	The condenser fan control option used by the unit. If the unit has several constant-speed condenser fans that stage on in conjunction with multiple compressors, this should be set to "Stepped Speed."	Constrained List	n/a	TPE/BCL
		Variable volume	n/a	
		Stepped speed	n/a	
		Constant volume	n/a	
Refrigerant Charge Factor	Used to adjust cooling efficiency for assumed slightly degraded performance if refrigerant charge is not verified through acceptance test procedures	Decimal	Percent	CEC
Minimum Part Load Ratio	The minimum part load ratio at which the equipment is able to operate (0-1).	Decimal	n/a	TPE/BCL
Part Load Ratio Below Which Hot Gas Bypass Operates	The part load ratio of a chiller below which hot gas bypass (HGBP) operates.	Decimal	n/a	TPE/BCL
Evaporative Cooling Type	Defines the type of evaporative cooler operation	Constrained List	n/a	CEC
		Direct	n/a	
		Direct indirect	n/a	
		Indirect	n/a	
Cell Count	The number of cells in the cooling tower. Each cell has its own fan, water flow allowing for responding to lower load conditions	Integer	n/a	CEC
Active Dehumidification	Availability of an active dehumidification system (in addition to the dehumidification that takes place during normal DX cooling operation).	Constrained List	n/a	TPE/BCL
		Is available	n/a	
		Is not available	n/a	
Evaporatively Cooled Condenser	Availability of evaporative cooling to enhance heat rejection from the condenser coils.	Constrained List	n/a	TPE/BCL
		Is available	n/a	
		Is not available	n/a	
Evaporative Wet Bulb Effectiveness	The ratio of the difference between inlet and outlet air temperature to the difference between inlet air temperature and its wet bulb temperature	Decimal	n/a	
Other HVAC				
Other HVAC Type	Type of space conditioning equipment that is not classified as heating, cooling, or air-distribution. This category includes ventilation, dehumidification, humidification, and air cleaning systems.	Constrained List	n/a	BEDES-Beta
		Humidifier	n/a	
	A self-contained, electrically operated, and mechanically refrigerated encased assembly consisting of: (a) a refrigerated surface (evaporator) that condenses moisture from the atmosphere; (b) a refrigerating system, including an electric motor; (c) an air-circulating fan; and (d) means for collecting or disposing of the condensate	*Dehumidifier*	n/a	
		Air cleaner	n/a	
		Mechanical ventilation	n/a	
		Exhaust hood kitchen	n/a	
		Exhaust hood laboratory	n/a	
Ventilation Rate	Installed flow rate for mechanical ventilation system.	Decimal	cfm	CEC
Required Ventilation Rate	Minimum ventilation rate required by local code.	Decimal	cfm	CEC
Ventilation Type	Type of ventilation, and use of heat recovery	Constrained List	n/a	HPXML
		Exhaust only	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		Supply only	n/a	
		Heat recovery ventilator	n/a	
		Energy recovery ventilator	n/a	
Natural Ventilation Method	Strategy for introducing natural ventilation	Constrained List	n/a	CEC
		Air changes per hour	n/a	
		Flow per area	n/a	
		Flow per person	n/a	
		Flow per zone	n/a	
		Wind and stack open area	n/a	
Natural Ventilation Rate	Average rate of natural ventilation when used. Units depend on ventilation method	Decimal	Dependent on Qualifier	BuildingSync
Humidification Type	Humidification type in air-distribution system.	Constrained List	n/a	BEDES-Beta
		Steam	n/a	
		Water spray	n/a	
Dehumidification Type	Dehumidification type in air-distribution system.	Constrained List	n/a	BEDES-Beta
		Desiccant wheel	n/a	
		Liquid desiccant	n/a	
System Performance Ratio	Ratio of annual system load to the annual system energy consumption (similar to a whole system COP). A higher value indicates less heating and/or cooling energy use to meet the loads, and therefore represents a more efficient HVAC system. SPR can be used to describe the heating, cooling, and overall HVAC systems.	Decimal	n/a	BuildingSync
Fan				
Size	Maximum air flow produced by the fan.	Decimal	cfm	BEDES-Beta
Installed Flow Rate	Actual flow rate of fan under normal operating conditions	Decimal	cfm	BuildingSync
Minimum Flow Rate	The lowest flow rate rated for a fan	Decimal	cfm	CEC
Maximum Fan Power	Fan power at maximum flow rate (full load)	Decimal	W	CEC
Fan Power Minimum Ratio	The minimum power draw of the fan, expressed as a ratio of the full load fan power.	Decimal	n/a	CEC
Fan Type	Method of generating air flow	Constrained List	n/a	BuildingSync
		Axial	n/a	
		Centrifugal	n/a	
Fan Application	Application of fan (supply, return, or exhaust)	Constrained List	n/a	BuildingSync
		Supply	n/a	
		Return	n/a	
		Exhaust	n/a	
Flow Control Type	Type of air flow control.	Constrained List	n/a	BEDES-Beta
		Variable volume	n/a	
		Stepped	n/a	
		Constant volume	n/a	
Fan Placement	Placement of fan relative to the air stream.	Constrained List	n/a	BEDES-Beta
		Series	n/a	
		Parallel	n/a	
		Draw through	n/a	
		Blow through	n/a	
Motor Location Relative To Air Stream	Location of the fan motor relative to the air stream.	Constrained List	n/a	BuildingSync
		Within air stream	n/a	
		Not within air stream	n/a	
Design Static Pressure	The design static pressure for the fan	Decimal	Pa	CEC
Number Of Discrete Fan Speeds	The number of discrete operating speeds for the supply-fan motor, excluding "off."	Integer	n/a	TPE/BCL
Belt Type	Type of belt drive in fan unit	Constrained List	n/a	BuildingSync
		Direct drive	n/a	
		Standard belt	n/a	
		Cogged belt	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		Synchronous belts	n/a	
Heat Recovery				
Heat Recovery Type	Type of heat recovery between two systems.	Constrained List	n/a	BEDES-Beta
		Run around coil	n/a	
		Thermal wheel	n/a	
		Heat pipe	n/a	
		Water to air heat exchanger	n/a	
		Water to water heat exchanger	n/a	
		Air to air heat exchanger	n/a	
		Earth to air heat exchanger	n/a	
		Earth to water heat exchanger	n/a	

Term	Definition	Data Type	Unit of	Definition Source
Load Category	Category of internal or external load equpment.	Constrained List	n/a	
		Lighting	n/a	
		Domestic hot water	n/a	
		Conveyance	n/a	
		Process	n/a	
		Water feature	n/a	
		Water treatment	n/a	
		Electronic equipment	n/a	
		Cooking	n/a	
		Refrigeration	n/a	
		Dishwasher	n/a	
		Laundry	n/a	
		People	n/a	
Uninterruptible Power Supply Mode	Uninterruptible power supply (UPS) is emergency power delivered when the main	Constrained List	n/a	LBNL
	Stable mode:	*Normal*	n/a	EPA
	Stable mode:	*Stored energy*	n/a	EPA
	Equipment operating the load supplied via the Bypass only.	*Bypass*	n/a	EPA
External Power Supply Mode	Designed to convert line voltage ac input into lower voltage ac or dc output,	Constrained List	n/a	EPA
	An external ac-ac power supply is an EPS designed to convert line voltage ac	*AC to AC*	n/a	EPA
	An external ac-dc power supply is an EPS designed to convert line voltage ac	*AC to DC*	n/a	EPA
	A low voltage model is an external power supply with a nameplate output voltage	*Low voltage*	n/a	EPA
	The condition in which the input of a power supply is connected to an ac source	*No load*	n/a	EPA
Lighting				
Lighting Component	Components that together make a lighting module.	Constrained List	n/a	
		Fixture	n/a	
		Ballast	n/a	
		Reflector	n/a	
		Lamp	n/a	
		Luminaire	n/a	
Lamp Type	A lamp is a replaceable component, or bulb, which is designed to produce light from electricity, though, non-electric lamps also exist.	Constrained List	n/a	
	An incandescent bulb is an electric light which produces light with a wire filament heated to a high temperature by an electric current passing through it, until it glows.	*Incandescent*	n/a	
	A fluorescent lamp or a fluorescent tube is a low pressure mercury-vapor gas-discharge lamp that uses fluorescence to produce visible light. An electric current in the gas excites mercury vapor which produces short-wave ultraviolet light that then causes a phosphor coating on the inside of the bulb to glow.	*Fluorescent*	n/a	
	A compact fluorescent lamp (CFL), also called compact fluorescent light, energy-saving light, and compact fluorescent tube, is a fluorescent lamp designed to replace an incandescent lamp; some types fit into light fixtures formerly used for incandescent lamps. The lamps use a tube which is curved or folded to fit into the space of an incandescent bulb, and a compact electronic ballast in the base of the lamp.	*Compact fluorescent*	n/a	
	High-intensity discharge lamps (HID lamps) are a type of electrical gas-discharge lamp which produces light by means of an electric arc between tungsten electrodes housed inside a translucent or transparent fused quartz or fused alumina arc tube.	*High intensity discharge*	n/a	

Term	Definition	Data Type	Unit of	Definition Source
	A halogen lamp is an incandescent lamp that has a small amount of a halogen such as iodine or bromine added. The combination of the halogen gas and the tungsten filament produces a halogen cycle chemical reaction which redeposits evaporated tungsten back onto the filament, increasing its life and maintaining the clarity of the envelope.	*Halogen*	n/a	
	Solid state lighting (SSL) include both light-emitting diode (LED) and organic light emitting diode (OLED) technologies.	*Solid state lighting*	n/a	
	The internal electrodeless lamp or induction light is a gas discharge lamp in which the power required to generate light is transferred from outside the lamp envelope to the gas inside via an electric or magnetic field, in contrast with a typical gas discharge lamp that uses internal electrodes connected to the power supply by conductors that pass through the lamp envelope.	*Induction*	n/a	
	A neon lamp (also neon glow lamp) is a miniature gas discharge lamp. The lamp typically consists of a small glass capsule that contains a mixture of neon and other gases at a low pressure and two electrodes (an anode and a cathode).	*Neon*	n/a	
	Plasma lamps are a type of gas discharge lamp energized by radio frequency (RF) power.	*Plasma*	n/a	
	Photoluminescent lighting is similar to self-luminous lighting, in that it does not use any energy, instead, photoluminescent matter emits light from the absorption of photons.	*Photoluminescent*	n/a	
	Self-Luminous lighting is similar to photoluminescent lighting given that it does not use any energy, but self-luminous bulbs use gaseous matter.	*Self luminous*	n/a	
Lamp Label	Label of a given Lamp Type.	Constrained List	n/a	
	2D are Compact Fluorescent Lamps (CFLS) that share uniform light with a unique shape. The lamps are named for their look as they resemble the backs of two “Ds” joined together.	*2D*	n/a	
	The A-series light bulb is the "classic" type of light bulb that has been the most commonly used type for general-purpose lighting applications since the early 20th century. It has a pear-like shape and an Edison screw base. The number that follows the "A" within the A series indicates the width of the bulb in one-eighth inch units.	*A series*	n/a	
	A19 is the most commonly used A-series light bulb type. It is 23⁄8 inches (60 mm) wide at its widest point, approximately 43⁄8 inches (110 mm) in length, and has a one-inch wide (type E26, i.e. approximately 26 millimetres wide) screw base.	*A19*	n/a	
	A21 bulbs are A-series with a diameter of 21/8 inches.	*A21*	n/a	
	A23 bulbs are A-series with a diameter of 23/8 inches.	*A23*	n/a	
	Bulged reflector (BR) lamps are used in recessed lighting. An BR bulb comes with a reflector lamp to maximize brightness, while the bulb has a bulged shape to direct light out. BR30 bulbs h diameter of the light bulb is 30/8 inches.	*BR30*	n/a	
	Bulged reflector (BR) lamps are used in recessed lighting. An BR bulb comes with a reflector lamp to maximize brightness, while the bulb has a bulged shape to direct light out. BR40 bulbs h diameter of the light bulb is 40/8 inches.	*BR40*	n/a	
	The ceramic discharge metal-halide (CDM) lamp, mostly referred to as Ceramic Metal Halide lamp (CMH), is a relatively new source of light that is a variation of the metal-halide lamp, which itself is a variation of the old (high-pressure) mercury-vapor lamp.	*Ceramic metal halide*	n/a	
	Fluorescent tube in a circular shape.	*Circline*	n/a	
	G16C LED light bulbs are clear round bulbs with a diameter of 2 inches (16/8 inches).	*G16C*	n/a	
	G25M LED light bulbs are round with a diameter of 25/8 inches.	*G25M*	n/a	
	G40M LED light bulbs are round with a diameter of 5 inches (40/8 inches).	*G40M*	n/a	
	An LED lamp is comprised of light-emitting diode chips, which together emit electric light.	*LED*	n/a	

Term	Definition	Data Type	Unit of	Definition Source
	A mercury-vapor lamp is a gas discharge lamp that uses an electric arc through vaporized mercury to produce light. It is a type of high-intensity discharge (HID) gas discharge lamp.	*Mercury vapor*	n/a	
	A metal-halide lamp is an electric lamp that produces light by an electric arc through a gaseous mixture of vaporized mercury and metal halides (compounds of metals with bromine or iodine). It is a type of high-intensity discharge (HID) gas discharge lamp.	*Metal halide*	n/a	
	Multifaceted reflector (MR) lamps have reflectors on the inside. The facets help gather light from the filament to create a very concentrated light beam. MR11 has a diameter of 11/8 inches.	*MR11*	n/a	
	)Multifaceted reflector (MR) lamps have reflectors on the inside. The facets help gather light from the filament to create a very concentrated light beam. MR16 has a diameter of 2 inches (16/8 inches).	*MR16*	n/a	
	Multifaceted reflector (MR) lamps have reflectors on the inside. The facets help gather light from the filament to create a very concentrated light beam. MR8 has a diameter of 1 inch (8/8 inches).	*MR8*	n/a	
	An OLED (organic light-emitting diode) is a light-emitting diode (LED) in which the emissive electroluminescent layer is a film of organic compound which emits light in response to an electric current. This layer of organic semiconductor is situated between two electrodes; typically, at least one of these electrodes is transparent.	*OLED*	n/a	
	Parabolic aluminized reflector (PAR) lamps direct light out with PAR coating which maximizes the light output. PAR16 have a diameter of 2 inches (16/8 inches).	*PAR16*	n/a	
	Parabolic aluminized reflector (PAR) lamps direct light out with PAR coating which maximizes the light output. PAR16 have a diameter of 20/8 inches.	*PAR20*	n/a	
	Parabolic aluminized reflector (PAR) lamps direct light out with PAR coating which maximizes the light output. PAR16 have a diameter of 30/8 inches.	*PAR30*	n/a	
	Parabolic aluminized reflector (PAR) lamps direct light out with PAR coating which maximizes the light output. PAR16 have a diameter of 38/8 inche).	*PAR38*	n/a	
	Pin base light bulbs have two pins extending from the base that connect the light bulb to the voltage. Electrical current then flows through the pins and into the light bulb to energize the filament or ballast to generate light.Pin bases are used in MR16s, linear fluorescents, plug-in compact fluorescent bulbs, and some HID light bulbs	*Pin base*	n/a	
	The PS series bulb is similar to the A-series, but with an elongated neck.	*PS series*	n/a	
	R20 bulbs have reflectors that direct light forward and produce more narrow soft-edged beam commonly used as floodlights. The widest diameter is 20/8 inches.	*R20*	n/a	
	R20 bulbs have reflectors that direct light forward and produce more narrow soft-edged beam commonly used as floodlights. The widest diameter is 30/8 inches.	*R30*	n/a	
	R20 bulbs have reflectors that direct light forward and produce more narrow soft-edged beam commonly used as floodlights. The widest diameter is 5 inches (40/8 inches).	*R40*	n/a	
	Single-ended lightbulbs are tubes that have only one base that connects to the voltage.	*Single ended tubular*	n/a	
	Double-ended light bulbs are tubes that connects to the voltage from two bases on either end of the burb.	*Double ended tubular*	n/a	
	A sodium-vapor lamp is a gas-discharge lamp that uses sodium in an excited state to produce light. It is a type of high-intensity discharge (HID) gas discharge lamp.	*Sodium vapor*	n/a	
	High-pressure sodium lamps have a broader spectrum of light than the low pressure, but still poorer color rendering than other types of lamps.	*Sodium vapor high pressure*	n/a	
	Low-pressure sodium lamps only give monochromatic yellow light and so inhibit color vision at night.	*Sodium vapor low pressure*	n/a	
	Spiral light bulbs are common compact fluorescent lamp (CFL) design.	*Spiral*	n/a	

Term	Definition	Data Type	Unit of	Definition Source
	Fluorescent tube with a 1 1/4 inch (31.75 mm) diameter.	*T10*	n/a	
	Fluorescent tube with a 1 1/2 inch diameter.	*T12*	n/a	
	Fluorescent U-shaped tube with a 1 1/2 inch diameter.	*T12U*	n/a	
	Fluorescent tube with a 5/8 inch (15.9 mm) diameter.	*T16*	n/a	
	Fluorescent tube with a 2 1/8 inch diameter.	*T17*	n/a	
	Fluorescent tube with a 1/4 inch (7 mm) diameter.	*T2*	n/a	
	Fluorescent tube with a 1 inch (25.4 mm) diameter.	*T26*	n/a	
	Fluorescent tube with a 1 1/8 inch (28.6 mm) diameter.	*T29*	n/a	
	Fluorescent tube with a 1 1/2 inch diameter.	*T38*	n/a	
	Fluorescent tube with a 1/2 inch (12.7 mm) diameter.	*T4*	n/a	
	Fluorescent tube with a 5/8 inch (15.9 mm) diameter.	*T5*	n/a	
	Fluorescent tube with a 5/8 inch (15.9 mm) diameter with a High Output.	*T5HO*	n/a	
	Fluorescent tube with a 1 inch (25.4 mm) diameter.	*T8*	n/a	
	Fluorescent U-shaped tube with a 1 inch (25.4 mm) diameter.	*T8U*	n/a	
	Super T8 lamps are 32W T8 lamps but with a barrier-coat design, high lumen maintenance (88-92 percent end-of-life lumens), long service life and high light output—3100+ initial lumens as opposed to 2850 for a typical standard T8.	*Super T8*	n/a	
	Fluorescent tube with a 1 1/8 inch (28.6 mm) diameter.	*T9*	n/a	
		TC	n/a	
		TM	n/a	
	Tungsten is a type of incandescent lighting using a bulb with a filament made of the metal tungsten.	*Tungsten*	n/a	
	A xenon arc lamp, a type of HID, is a specialized type of gas discharge lamp, an electric light that produces light by passing electricity through ionized xenon gas at high pressure. It produces a bright white light that closely mimics natural sunlight. Xenon arc lamps are used in movie projectors in theaters, in searchlights, and for specialized uses in industry and research to simulate sunlight.	*Xenon short arc*	n/a	
Installation Type	Installation of lamp relative to mounting surface.	Constrained List	n/a	
	A Plug-in lamp is a single lighting system in which the whole system is directly plugged-into the wall. Like nightlight.	*Plug in*	n/a	
	A recessed fixture is installed in a ceiling, rather than being mounted on the face of the ceiling or hanging down -- suspended -- from the ceiling. Recessed fixtures can also be installed in cabinets, floors, and other surfaces.	*Recessed*	n/a	
	A recessed fixture is installed on a surface, such as on a wall or ceiling, rather than being hanging down-- suspended -- from the ceiling or in a recessed ceiling cavity. Fixtures can also be installed in cabinets, floors, and other surfaces.	*Surface*	n/a	
	A suspended fixture is installed from a surface, such as on a wall or ceiling, rather than on the ceiling or in a recessed ceiling cavity. Fixtures can also be installed in cabinets, floors, and other surfaces.	*Suspended*	n/a	
Reflector Type	Characteristics of the lamp fixture.	Constrained List	n/a	
	A specular reflector is a luminaire component that has a highly polished surface, allowing wasted light to be reflected back to the intended surface.	*Specular reflector*	n/a	
	A prismatic reflector is a glass dome over the lamp with prism-like cuts in the glass to reflect light throughout the space.	*Prismatic reflector*	n/a	
Lighting Direction	Directional design of lighting fixture(s).	Constrained List	n/a	
	Direct lighting, also known as down lighting, casts downwards from a fixture to provide lighting with uniform levels of illumination. Open, louvered, and lensed fixtures can all be direct.	*Direct*	n/a	
	Indirect lighting, also known as uplighting, casts upwards from a fixture and bounces down to provide lighting with minimal glare and more uniform levels of illumination.	*Indirect*	n/a	
	Direct/Indirect (DID) lighting casts upwards and downwards from a fixture to provide a combination of direct and indirect illumination.	*Direct indirect*	n/a	

Term	Definition	Data Type	Unit of	Definition Source
	A spotlight projects a narrow, intense beam of light directly onto a place or person, especially a performer on stage.	*Spotlight*	n/a	
	A system designed for lighting a scene or object to a luminance greater than its surroundings. It may be for utility, advertising or decorative purposes.	*Floodlighting*	n/a	
	A system emits the majority of light produced in an even distribution.	Omnidirectional	n/a	
Ballast Type	A ballast is a piece of equipment required to control the starting and operating voltages of electrical gas discharge lights.	Constrained List	n/a	
	An electronic control uses solid state electronic circuitry to provide the proper starting and operating electrical conditions to power equipment.	*Electronic*	n/a	
	Electromagnetic, core and coil, or simply magnetic, ballast control is very common in line-frequency ballasts to provide the proper starting and operating electrical condition to power a fluorescent lamp, neon lamp, or high intensity discharge (HID) lamp.	*Electromagnetic*	n/a	
	An instant start ballast does not preheat the electrodes, instead using a relatively high voltage (~600 V) to initiate the discharge arc. It is the most energy efficient type, but yields the fewest lamp-start cycles, as material is blasted from the surface of the cold electrodes each time the lamp is turned on. Instant-start ballasts are best suited to applications with long duty cycles, where the lamps are not frequently turned on and off.	*Instant start*	n/a	
	A rapid start ballast applies voltage and heats the cathodes simultaneously. It provides superior lamp life and more cycle life, but uses slightly more energy as the cathodes in each end of the lamp continue to consume heating power as the lamp operates. A dimming circuit can be used with a dimming ballast, which maintains the heating current while allowing lamp current to be controlled.	*Rapid start*	n/a	
	A programmed start ballast applies power to the filaments first, it allows the cathodes to preheat and then applies voltage to the lamps to strike an arc.	*Programmed start*	n/a	
	A probe-start metal halide lamp has three electrodes in the arc tube: a starting probe electrode and two operating electrodes. To start the lamp, a discharge is created across a small gap between the starting probe electrode (also called the starter electrode) and the operating electrode. Electrons then jump across the arc tube to the other operating electrode to help start the lamp. Once the lamp is started, a bi-metal switch removes the starting probe electrode from the circuit.	*Probe start*	n/a	
	A pulse-start metal halide lamp does not have the starting probe electrode (Figure 2). Instead it has a high-voltage igniter that works with the ballast to start the lamp using a series of high-voltage pulses.	*Pulse start*	n/a	
	A hybrid ballast has a magnetic core-and-coil transformer and an electronic switch for the electrode-heating circuit. Like a magnetic ballast, a hybrid unit operates at line power frequency—60 Hz in North America, for example. These types of ballasts, which are also referred to as “cathode-disconnect ballasts”, disconnect the electrode-heating circuit after they start the lamps.	*Hybrid*	n/a	
	An integrated ballast is a built-in component of the lamp.	*Integrated*	n/a	
	F-Can ballasts are contained within an insulated cans to reduce noise.	*F can*	n/a	
Transformer Needs	Halogen lamp dependence on a transformer.	Constrained List	n/a	
	Halogen lamps that are low voltage (12V or 24 V) require a transformer to operate.	*Transformer needed*	n/a	
	Halogen lamps that are not low voltage (12V or 24 V) do not require a transformer to operate.	*No transformer needed*	n/a	
Input Voltage	Voltage rating for lighting system.	Decimal	V	
Task Lighting Availability	Task light is used to increase illuminance or improve contrast on the reading area.	Constrained List	n/a	
	Task lights are available for individuals to operate.	*Available*	n/a	
	Task lighting is not available, the main source of lighting is ambient.	*Not available*	n/a	
Lighting Characteristics	Characteristics of lamps that indicate performance levels of functionality.	Constrained List	n/a	

Term	Definition	Data Type	Unit of	Definition Source
	Color Rendering Index of a Light Source (CRI) is the measured degree of color shift objects undergo when illuminated by a light source as compared with the color of those same objects when illuminated by a reference source of comparable color temperature. (10CFR430.2)	*Color rendering index of a light source*	n/a	
	Correlated Color Temperature of a Light Source (CCT) is the absolute temperature of a blackbody whose chromaticity most nearly resembles that of the light source. (10CFR430.2) K	*Correlated color temperature of a light source*	n/a	
	The angle between the two directions for which the intensity is 10% of the maximum intensity as measured in a plane through the nominal beam centerline. (ANSI/IES RP-16-10)	*Field angle*	n/a	
	The impression of unsteadiness of visual perception induced by a light stimulus whose luminance or spectral distribution fluctuates with time. (CIE 17.443 e-ILV)	*Flicker*	n/a	
	A measure of the cyclic variation in output of a light source taking into account the waveform of the light output. It is the ratio of the area under the light output curve that is above the average light output level to the total area under the light output curve for a single cycle. (ANSI/IES RP-16-10)	*Flicker index*	n/a	
	LED Temperature Measurement Point (TMP) is a location on an LED package/module/array, designated by its manufacturer, which provides a surrogate temperature measurement location for the actual LED junction. The TMPLED may be a solder joint at the board attachment site, a point on the LED package case, or a location on the board of an LED module or array. K	*LED temperature measurement point*	n/a	
	A relative measure of the cyclic variation in output of a light source (percent modulation). It is given by the expression 100(A-B)/(A+B), where A is the maximum and B is the minimum output during a cycle. (IES RP-16-10)	*Percent flicker*	n/a	
	The frequency at which the entire periodic flicker waveform pattern repeats. Hertz	*Periodic frequency*	n/a	
	Rated Lumen Maintenance Life (LP) is the elapsed operating time over which the LED light source will maintain the percentage, p, of its initial light output, e.g., L70 (hours): time to 70% lumen maintenance. (IES LM-80-08)	*Rated lumen maintenance life*	n/a	
	Run-up Time is the time between the application of power to the device and the time when the light output first reaches a specified percentage of stable light output, i.e., 80%, 90%, etc.	*Run up time*	n/a	
	Distance from the finished floor to the work plane. Used to calculate vertical distance from the work plane to the centerline of the lighting fixture	*Work plane height*	n/a	BuildingSync
Lighting Characteristic Value	Value associated with the Lighting Characteristic.	Decimal	Dependent on Qualifier	
LED Driver Case Temperature Measurement Point	(TMPC) is a location on an LED driver case, designated by its manufacturer, which will have the highest temperature of any point on the driver case during normal operation.	String	n/a	
Domestic Hot Water				
Domestic Hot Water Type	Type of water heating equipment for hot running water.	Constrained List	n/a	
	A hot water storage tank (also hot water tank, thermal storage tank, hot water thermal storage unit, heat storage tank, hot water cylinder) is a water tank that is used for storing hot water for space heating or domestic use.	*Storage tank*	n/a	
	Instantaneous, or tankless, water heaters use high-powered burners to quickly heat water as it runs through a heat exchanger, eliminating the need for a storage tank.	*Instantaneous*	n/a	
	A heat exchanger is a piece of equipment built for efficient heat transfer from one medium to another. The media may be separated by a solid wall to prevent mixing or they may be in direct contact.	*Heat exchanger*	n/a	
Tank Heating Type	Direct or indirect heating of hot water tank.	Constrained List	n/a	
	Direct fired water heaters store 20 or more gallons of hot water in a storage tank. Hot water comes from the top of the tank, while a cold water line at the bottom of the tank replenishes it. Depending on the type of fuel the water heater uses, some form of burner warms the cold water entering the tank.	*Direct*	n/a	

Term	Definition	Data Type	Unit of	Definition Source
	Indirect water heaters work like a direct fired water heater. But instead of having its own burner, indirect water heaters use a boiler to heat fluid pushed through a coiled pipe called a heat exchanger that runs through the storage tank.	*Indirect*	n/a	
	A central heating system provides domestic hot water from one point to multiple units in the premises.	*Centralized*	n/a	
	A distributed heating system provides domestic hot water for only one unit in the premises.	*Distributed*	n/a	
	In a hot water plumbing loop, also know as a closed loop or a sometimes a gravity loop, the line from the hot water system continues from one tap, to the next. There is no branches as the line continues until it loops back to the hot water system.	*Looped*	n/a	
Indirect Tank Heating Source	Source of heat for indirect-fired hot water tank.	Constrained List	n/a	
	The geothermal heat pump, also known as the ground source heat pump, is a highly efficient renewable energy technology that is gaining wide acceptance for both residential and commercial buildings. Geothermal heat pumps are used for space heating and cooling, as well as water heating. The benefit of ground source heat pumps is they concentrate naturally existing heat, rather than by producing heat through the combustion of fossil fuels.	*Heat pump*	n/a	
	Solar water heating systems use the sun's energy to heat water. A solar water heating system is made up of several key components including solar collectors, thermal storage, system controls/controller, and back-up, conventional water heater. Sunlight strikes and heats an absorber surface within a solar collector or an actual storage tank. Either a heat-transfer fluid or the actual potable water to be used flows through tubes attached to the absorber and picks up the heat from it (systems with a separate heat-transfer-fluid loop include a heat exchanger that then heats the potable water.) The heated water is stored in a separate preheat tank or a conventional water heater tank until needed. If additional heat is needed, it is provided by electricity or fossil-fuel energy by the conventional water heating	*Solar*	n/a	
	Domestic hot water tanks are heated indirectly by primary water from the space heating boiler	*Space heating system*	n/a	
Recirculation Loop Count	The total number of hot water recirculation loops coming from and returning to a specific water heater.	Integer	n/a	
Pipe Characteristic		Constrained List	n/a	
		Insulated pipe	n/a	
		Non sinsulated pipe	n/a	
Conveyance				
Conveyance System Type	Equipment used to transporting someone or something from one place to another.	Constrained List	n/a	
	An escalator is a moving staircase consisting of an endlessly circulating belt of steps driven by a motor, conveying people between the floors of a building.	*Escalator*	n/a	
	An elevator is a platform or compartment housed in a shaft for raising and lowering people or things to different floors or levels.	*Elevator*	n/a	
	a continuous moving band of fabric, rubber, or metal used for moving objects from one place to another.	*Conveyor belt*	n/a	
	Overhead conveyor systems utilize a combination of hooks, trolleys, and chains to transport hanging items.	*Overhead conveyor*	n/a	
	Lift systems are for lifting of immobile individuals from beds, pools, restrooms, etc.	*Lift system*	n/a	
Conveyance Load Type	Type of load that the conveyance system usually transports.	Constrained List	n/a	
	People are human beings.	*People*	n/a	
	Freight is goods packaged in bulk for long-distance travel.	*Freight*	n/a	
	Goods are any foods or manufactured items.	*Goods*	n/a	
		Animals	n/a	

Term	Definition	Data Type	Unit of	Definition Source
Distance Covered	The vertical distance traveled by to elevator, diagonal distance by an escalator, or horizontal distance by conveyor belt.	Decimal	ft	
Inclination	Inclination grade of the conveyor system.	Decimal	degrees	
Process Load				
Process Load Type	Plug load essential to routine processes.	Constrained List	n/a	
	Equipment used specifically for the practice of medicine.	*Medical equipment*	n/a	
		Laboratory equipment	n/a	
		Machinery	n/a	
		Motor	n/a	
		Pump	n/a	
		Air compressor	n/a	
		Fume hood	n/a	
		Infrastructure	n/a	
		Electric vehicle charging	n/a	
	Hot water near the surface of the Earth can be used for heat for a variety of commercial and industrial uses. Direct-use applications include heating buildings, growing plants in greenhouses, drying crops, heating water at fish farms, and several industrial processes such as pasteurizing milk.	*Direct use geothermal*	n/a	
Motor Characteristic	Descriptive metrics that characterize the motor.	Constrained List	n/a	
	The number of full revolutions in a unit of time and is used to assign Motor Efficiency. 2008 NR ACM table N2-20 has four speeds: 3600 rpm, 1800 rpm, 1200 rpm, 900 rpm.	*RPM*	n/a	
	The brake horsepower of the motor before the loss in power caused by the gearbox, alternator, differential, water pump, and other auxiliary components.	*Brake horsepower*	n/a	
	The nameplate (rated) horsepower of the motor.	*Horsepower*	n/a	
	Current draw of motor at full capacity.	*Full load amps*	n/a	
	The number of pole electromagnetic windings in the motor's stator and used to assign Motor Efficiency. Pole count is always a multiple of 2.	*Pole count*	n/a	
Motor Characteristic Value	Value associated with the Motor Characteristic.	Decimal	n/a	
Motor Enclosure	Enclosing environment of the motor.	Constrained List	n/a	
	Drip-proof enclosures have ventilation openings in the shield or frame to prevent drops of liquid from falling into the motor.	*Drip proof*	n/a	
	TEAO, or totally enclosed air over, enclosures are dust-tight for fan and blower motors.	*TEAO*	n/a	
	TENV, or totally enclosed non-ventilated, enclosures have no ventilation to prevent free exchange of air, but are not airtight.	*TENV*	n/a	
	TEFC, or totally enclosed fan cooled, enclosures are the same as TENV covers but with an external fan as an integral part of the motor.	*TEFC*	n/a	
	Totally enclosed hostile and severe environment enclosures are designed for use in extreme conditions - moist and/or chemical environments. Not for hazardous locations.	*Totally enclosed hostile and severe environment*	n/a	
	Totally enclosed blower cooled covers are the same as TEFC enclosures with external fan on a power supply independent of the inverter output.	*Totally enclosed blower cooled*	n/a	
	Explosion-proof enclosures for Class ! (gases and vapors) and Class II (combustible dust) motors.	*Explosion proof*	n/a	
		Enclosed	n/a	
		Open	n/a	
Pump Application	Type of system served by a pump	Constrained List	n/a	
		Boiler	n/a	
		Chilled Water	n/a	
		Domestic Hot Water	n/a	
		Solar Hot Water	n/a	
		Condenser	n/a	
		Cooling Tower	n/a	
		Ground Loop	n/a	

Term	Definition	Data Type	Unit of	Definition Source
		Pool	n/a	
		Recirculation	n/a	
		Process Hot Water	n/a	
		Process Cold Water	n/a	
		Potable Cold Water	n/a	
		Refrigerant	n/a	
		Air	n/a	
Water Feature				
Water Feature Type	A water feature is a general name for a pool, fountain, or hot tub.	Constrained List	n/a	
		Hot tub	n/a	
		Pool	n/a	
		Fountain	n/a	
		Water fall	n/a	
		Stream	n/a	
		Aquarium	n/a	
Pool Size Category	Categorical size of a pool.	Constrained List	n/a	
	A pool the size of olympic training with dimensions 50 meters long by 25 meters wide.	*Olympic*	n/a	
	Pool is predominantly used for recreation rather than training and size is not specified.	*Recreational*	n/a	
	A pool that is 25 meters long, half the slength of an olympic-sized pool.	*Short course*	n/a	
Water Feature Heating Method	Water feature heating methods.	Constrained List	n/a	
	The pool is heated by an artificial heating system that consumes fuel.	Artificial	n/a	
	The pool is heated by a passive heating system that relies on renewable energy, such as solar. Does not include fuel consumed by pumps.	Passive	n/a	
Cover Type	A pool cover can serve many purposes, including insulation, weather protection, and safety for children and pets.	Constrained List	n/a	
	A solar pool covers utilize the sun's energy to generate heat for the pool. These covers float freely on the pool surface and are designed primarily for heating the pool and prolonging the pool usage season. They are not the most efficient covers for keeping debris out of a pool and are not considered a safety cover.	*Solar cover*	n/a	
	Solar rings are designed to provide heat for a pool similar to a standard solar pool cover, but are more adept at passing heat to deeper parts of the pool. They can also be turned over when the pool temperature is ideal, enabling them to act as barriers to sunlight that will evaporate water and pool chemicals.	*Solar rings*	n/a	
	Leaf nets are basic covers designed to keep leaves and other larger contaminants out of a pool.	*Leaf net*	n/a	
	Winter pool covers are designed to protect a pool from debris as well as other unwanted pool contaminators. While many winter covers offer features such as thermal protection or coloring to help guard against algae growth, they do often vary in weave thickness which can be a determinate in the durability and overall quality of the cover.	*Winter cover*	n/a	
	Safety pool covers are solid covers that are designed to be anchored down and keep everything from loose debris to kids and pets out of a pool.	*Safety cover*	n/a	
	Safety nets are designed with gaps too small for a child to fall through, but too big to allow efficient balancing or movement.	*Safety net*	n/a	
Water Treatment				
Flow Qualifier	Flow of water in a water treatment and distribution plant or wastewater treatment plant.	Constrained List	n/a	ENERGY STAR
	Average Flow is the total average daily flow of water through a Water Treatment and Distribution Plant or Wastewater Treatment Plant	*Average*	n/a	ENERGY STAR
	Plant Design Flow Rate is the capacity for which a water or wastewater treatment facility has been designed.	*Plant design*	n/a	ENERGY STAR
Flow Value	Flow value associated with the Flow Qualifier.	Decimal	Mgal/day	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
Average Effluent Biological Oxygen Demand	Average Effluent Biological Oxygen Demand (BOD5) is the BOD5 concentration of wastewater after it is treated and is leaving a Wastewater Treatment Plant. The concentration should be an average concentration, estimated over a 12-month period. BOD is the measure of the amount of oxygen required by bacteria for stabilizing material that can be decomposed under aerobic conditions. BOD5 is a commonly used determinant of the organic strength of a waste, recording the oxygen demand over a five-day period.	Decimal	mg/l	ENERGY STAR
Average Influent Biological Oxygen Demand	Average Influent Biological Oxygen Demand (BOD5) is the BOD5 concentration of wastewater when it is entering a Wastewater Treatment Plant to be treated. The concentration should be an average concentration, estimated over a 12-month period. BOD is the measure of the amount of oxygen required by bacteria for stabilizing material that can be decomposed under aerobic conditions. BOD5 is a commonly used determinant of the organic strength of a waste, recording the oxygen demand over a five-day period.	Decimal	mg/l	ENERGY STAR
Trickle Filtration Process	Trickle Filtration is a method of biological treatment by wastewater treatment plants.	Constrained List	n/a	ENERGY STAR
	Fixed Film Trickle Filtration is a process used to reduce Biological Oxygen Demand (BOD) and ammonia nitrogen levels. Trickling filters are composed of a bed of porous material (rocks, slag, plastic media, or any other medium with a high surface area and high permeability). Wastewater is distributed over the surface of the media, where it flows downward as a thin film over the media surface for aerobic treatment. The wastewater is then collected at the bottom through an under-drain system. The effluent is then settled by gravity to remove biological solids prior to being discharged.	*Fixed film*	n/a	ENERGY STAR
Nutrient Removal Process	Nutrient removal is considered to be any process included for the purpose of removing nutrients (i.e., nitrogen, phosphorous).	Constrained List	n/a	ENERGY STAR
	There is a nutrient removal process(es). This may include biological nitrification, biological denitrification, phosphorus removal, or recirculating sand filters.	*Implemented*	n/a	ENERGY STAR
		Not implemented	n/a	
Electronic Equipment				
Electronic Equipment Type	The type of electronic equipment.	Constrained List	n/a	
		Computer	n/a	
		Server	n/a	
		Imaging	n/a	
		Display	n/a	
		Telephone	n/a	
		Set top box	n/a	
		Video recording	n/a	
		Audio	n/a	
		Charger	n/a	
Uninterruptible Power Supplies	The type of uninterruptible power supply (UPS).	Constrained List	n/a	
	Combination of converters, switches, and energy storage devices (such as batteries) constituting a power system for maintaining continuity of load power in case of input power failure.	*UPS*	n/a	ENERGY STAR
	A UPS comprised of two or more single UPS units, sharing one or more common frames and a common energy storage system, whose outputs, in Normal Mode of operation, are connected to a common output bus contained entirely within the frame(s). The total quantity of single UPS units in a modular UPS equals “n + r” where n is the quantity of single UPS units required to support the load; r is the quantity of redundant UPS units. Modular UPSs may be used to provide redundancy, to scale capacity or both.	*Modular UPS*	n/a	ENERGY STAR
UPS Power Conversion	The type of UPS power conversion.	Constrained List	n/a	
	UPS where solid-state power electronic components provide the output voltage.	*Static UPS*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	UPS where one or more electrical rotating machines provide the output voltage. May include two types: 1) Rotary UPS (RUPS) without Diesel which is a rotary UPS that does not contain an integral diesel engine to supply power to the load during an input power failure, and 2) Diesel-coupled rotary UPS (DRUPS), which is a rotary UPS that contains an integral diesel engine that may be used to supply power to the load during an input power failure.	*Rotary UPS*	n/a	ENERGY STAR
UPS Power Output	The type of power output, such as AC or DC, for a UPS.	Constrained List	n/a	
	UPS that supplies power with a continuous flow of electric charge that periodically reverses direction.	*Alternating current output UPS*	n/a	ENERGY STAR
	UPS that supplies power with a continuous flow of electric charge that is unidirectional. Includes both individual rectifier units for dc applications and entire Dc-output UPS frames or systems, consisting of rectifier modules, controllers, and any other supporting components.	*Direct current output UPS*	n/a	ENERGY STAR
UPS Input Dependency Characteristics	The input dependency characteristics of a uninterruptible power supply (UPS).	Constrained List	n/a	
	Capable of protecting the load from power outage.	*Voltage and frequency dependent*	n/a	ENERGY STAR
	A Voltage Independent (VI) is capable of protecting the load as required for VFD, above, and in addition from: a) Under-voltage applied continuously to the input b) Over-voltage applied continuously to the input	*Voltage independent*	n/a	ENERGY STAR
	A Voltage and Frequency Independent (VFI) is independent of voltage and frequency variations and capable of protecting the load against adverse effects from such variations without depleting the stored energy source.	*Voltage and frequency independent*	n/a	ENERGY STAR
UPS System Redundancy	UPS System Redundancy describes the redundant capacity of the Uninterruptible Power Supply (UPS) in a Data Center. Redundant components are typically required to accommodate IT loads in the event of equipment failure. The specific level of redundancy will depend on your particular Data Center.	Constrained List	n/a	ENERGY STAR
		N	n/a	
		Nplus1	n/a	
		Nplus2	n/a	
		2N	n/a	
		Greater than 2N	n/a	
UPS Support	Load supported by the UPS.	Constrained List	n/a	
	Uninterruptible Power Supply (UPS) supports only IT equipment.	*Only IT equipment*	n/a	
	Uninterruptible Power Supply (UPS) supports IT equipment plus non-IT loads less than 10% of total load.	*Load less than 10 percent*	n/a	
	Uninterruptible Power Supply (UPS) supports IT equipment plus non-IT loads greater than 10% of total load. The load is submetered.	*Load greater than 10 percent submetered*	n/a	
	Uninterruptible Power Supply (UPS) supports IT equipment plus non-IT loads greater than 10% of total load. The load is not submetered.	*Load greater than 10 percent not submetered*	n/a	
	There is no Uninterruptible Power Supply (UPS).	*No UPS*	n/a	
Telephone Type	A Telephone is a commercially available electronic product whose primary purpose is to transmit and receive sound over a distance using a voice or data network.	Constrained List	n/a	ENERGY STAR
	A Telephone or component of a Telephone system that ultimately converts sound into analog waveforms for transmission through the Public Switched Telephone Network (PSTN).	*Analog telephone*	n/a	ENERGY STAR
	A Voice over Internet Protocol (VoIP) Telephone is a telephone or component of a Telephone system that converts sound into Internet Protocol data packets for transmission through an Ethernet connection.	*Voice over internet protocol*	n/a	ENERGY STAR
	A Telephone or component of a Telephone system that has the ability to ultimately convert sound into both analog waveforms for transmission through the PSTN and Internet Protocol data packets for transmission through an Ethernet connection.	*Hybrid*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	A Telephone that converts sound into multiple-access (e.g., Code-Division Multiple Access (CDMA), Global System for Mobile Communications (GSM), and fourth generation long term evolution (4G LTE)) packets for transmission through a cellular network.	*Cellular*	n/a	ENERGY STAR
Telephone Configuration	Telephone configuration to the network.	Constrained List	n/a	
	A Telephone with a base station and a handset. The cradle of a Cordless Telephone or its External Power Supply is designed to plug into a wall outlet. Although the Cordless Telephone base has a permanent physical connection to the network, there is no physical connection between the portable handset and the network.	*Cordless*	n/a	ENERGY STAR
	A Telephone with a permanent physical connection between the handset and the network.	*Corded*	n/a	ENERGY STAR
	A Telephone without a handset that utilizes a speakerphone for all communications and is primarily used for conference calls.	*Conference*	n/a	ENERGY STAR
	A Telephone consisting of a handset, cradle, and battery, designed for use with a multi-handset Telephone system.	*Handset*	n/a	ENERGY STAR
	A Wireless (Wi-Fi) Telephone is a Telephone consisting of a handset, cradle, and battery that connects to a network via an Institute of Electrical and Electronic Engineers Standard 802.11-2012 (IEEE 802.11-2012) (Wi-Fi) connection.	*Wireless*	n/a	ENERGY STAR
Telephone Functionality	Available services on the telephone.	Constrained List	n/a	
	The capability of a Telephone to convert both full-motion video and sound into Internet Protocol data packets for transmission through an Ethernet connection.	*Video calling*	n/a	ENERGY STAR
	A secondary Ethernet port on a telephone that provides the capability to pass data connectivity to an external device (e.g., a computer's Ethernet network interface controller (NIC)).	*Data switch port*	n/a	ENERGY STAR
Set Top Box Type	A Set-top Box (STB) is a device combining hardware components with software programming designed for the primary purpose of receiving television and related services from terrestrial, cable, satellite, broadband, or local networks and providing video output using at least one direct video connection.	Constrained List	n/a	ENERGY STAR
	Displayless Video Gateway (DVG) is a device combining hardware components with software programming designed for the primary purpose of receiving television and related services from terrestrial, cable, satellite, broadband, or local networks and providing video without any direct video connection.	*Displayless video gateway*	n/a	ENERGY STAR
	A STB or DVG that can receive television signals from a broadband, hybrid fiber/coaxial, or community cable distribution system with Conditional Access (CA) or a STB or DVG capable of receiving cable service after installation of a CableCARD or other type of Conditional Access system.	*Cable*	n/a	ENERGY STAR
	A STB or DVG that can receive and decode video content as delivered from a MVPD satellite network.	*Satellite*	n/a	ENERGY STAR
	Cable Digital Transport Adapter (DTA) is a minimally-configured Cable STB that can receive television signals from a broadband, hybrid fiber/coaxial, or community cable distribution system.	*Cable digital transport adapter*	n/a	ENERGY STAR
	Over-the-top (OTT) Internet Protocol (IP) is an IP STB that cannot receive signals from a Multichannel Video Programming Distributor (MVPD) as defined in Title 47 U.S. Code § 522.	*Over the top internet protocol*	n/a	ENERGY STAR
	Multichannel Video Programming Distributor (MVPD) Internet Protocol (IP) is an IP STB or DVG that can receive signals from a MVPD.	*Multichannel video programming distributor internet protocol*	n/a	ENERGY STAR
	A STB that can receive television signals over the air (OTA) or via community cable distribution system without Conditional Access (CA).	*Terrestrial*	n/a	ENERGY STAR
	Thin-client or Remote is a STB that can receive content over an HNI from another STB or DVG, but is unable to interface directly to the MVPD network.	*Thin client*	n/a	ENERGY STAR
IP Functionality	Functions provided by the Internet Protocol (IP) equipment.	Constrained List	n/a	

Term	Definition	Data Type	Unit of	Definition Source
	The capability to decrypt premium audio/video content and services and provide other network control functions via a plug-in Conditional Access module that complies with the ANSI/SCTE 28 HOST-POD Interface Standard1.	*CableCARD*	n/a	ENERGY STAR
	Digital Video Recorder (DVR) is a feature that records television signals on a hard disk drive (HDD) or other non-volatile storage device integrated into the STB or DVG for playback at an arbitrary time. A DVR includes features such as: Play, Record, Pause, Fast Forward (FF), and Fast Rewind (FR). STBs or DVGs that only support buffering or a Service Provider network-based “DVR” service are not considered DVR STBs or DVGs for purposes of this specification. The presence of DVR functionality does not mean the device is defined to be a STB or DVG.	*Digital video recorder*	n/a	ENERGY STAR
	The capability to distribute data and audio/video content over cable television infrastructure in accordance with the CableLabs® Data Over Cable Service Interface Specification2.	*DOCSIS*	n/a	ENERGY STAR
	An interface with external devices over a local area network (example: Institute of Electrical and Electronics Engineers (IEEE) 802.11 (Wireless-Fidelity or Wi- Fi), Multimedia over Coax Alliance (MoCA), HomePNA alliance (HPNA), IEEE 802.3, HomePlug AV) that is capable of transmitting video content. (HNI)	*Home network interface*	n/a	ENERGY STAR
	IEEE 802.11n/ac and related MIMO enabled Wi-Fi functionality that supports more than one spatial stream in both send and receive. When using the notation MIMO AxB: A is considered the number of spatial streams while B is the number of antennas supported. A spatial stream is an independent and separately encoded data signal. (HNI)	*Multi input multi output wireless*	n/a	ENERGY STAR
	The capability to provide independent live audio/video content to multiple devices (2 or more Clients) or support pause/time-shifting capability for otherwise standalone IP or Thin- client STBs within a single family living unit. This definition does not include the capability to manage gateway services for multi-subscriber scenarios.	*Multi room*	n/a	ENERGY STAR
	A STB or DVG feature that allows the device to receive multiple independent streams of video content for use with one or more Clients, one or more directly connected Display Devices, or a DVR, etc. This definition does not include the capability to manage gateway services for multi-subscriber scenarios.	*Multi stream*	n/a	ENERGY STAR
	Video decoding providing compression efficiency significantly higher than H.264/AVC, for example HEVC (H.265).	*High efficiency video processing*	n/a	ENERGY STAR
	The capability to provide wireless network connectivity to multiple clients. For the purposes of this specification, Access Point functionality includes only IEEE 802.11 (Wi-Fi) connectivity.	*Access point*	n/a	ENERGY STAR
	The capability to determine the optimal path along which network traffic should be forwarded. Routers forward packets from one network to another based on network layer information. Router functionality includes Access Point functionality.	*Router*	n/a	ENERGY STAR
	The ability to provide analog telephone service through one or more RJ11 or RJ14 jacks.	*Telephony*	n/a	ENERGY STAR
Battery Charger Type	A device intended to replenish the charge in a rechargeable battery. A battery charger connects to the mains at the power input and connects to the battery at the output. The charger may be comprised of multiple components, in more than one enclosure, and may be fully or partially contained in the Battery Operated End-use Product.	Constrained List	n/a	ENERGY STAR
	A battery charger that is individually packaged without batteries. Batteries that the a la carte charger is designed to charge should be listed on the packaging, battery, and/or in printed or electronic user information materials. A la carte chargers may have multi-voltage or multi-port capability.	*A la carte*	n/a	ENERGY STAR
	A battery charger that, by design, may charge a variety of batteries that have different Nominal Battery Voltages.	*Multi voltage*	n/a	ENERGY STAR
	A battery charger that, by design, is capable of simultaneously charging two or more batteries. Multi-port chargers may have multi-voltage capability.	*Multi port*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	A battery charger that, by design, charges separable batteries that are disconnected from the Battery Operated End-use Product.	*Stand alone*	n/a	ENERGY STAR
	A multi-port charger, such as a universal AA battery charger, that charges batteries in batches (i.e., groups of batteries charged in series). For the purposes of this specification, each of these batches shall be treated as a discrete battery pack.1	*Batch*	n/a	ENERGY STAR
	A combination of a Battery Charger and a detachable or integral Battery that is designed to power a Battery Operated End-use Product.	*Battery charging system*	n/a	ENERGY STAR
Battery Device Type	A type of battery device.	Constrained List	n/a	
	A cordless product or appliance fully powered by the battery at least part of the time.	*Battery operated end use product*	n/a	ENERGY STAR
	A product or appliance designed to operate on battery power or directly from the mains with a discharged battery.	*Cordless*	n/a	ENERGY STAR
	A system in which power is transferred between windings in two separate enclosures through magnetic induction rather than metal-to-metal contact. Inductive coupling is typically used in small household appliances, such as cordless toothbrushes and shavers.	*Inductive coupling*	n/a	ENERGY STAR
Computer Type	A device which performs logical operations and processes data. For the purposes of this specification, computers include both stationary and portable units, including Desktop Computers, Integrated Desktop Computers, Notebook Computers, Small-Scale Servers, Thin Clients, and Workstations.	Constrained List	n/a	ENERGY STAR
	A computer where the main unit is intended to be located in a permanent location, often on a desk or on the floor. Desktop computers are not designed for portability and utilize an external computer display, keyboard and mouse. Desktop computers are designed for a broad range of home and office applications, including point of sale applications.	*Desktop*	n/a	ENERGY STAR
	A desktop system in which the computer and computer display function as a single unit which receives its AC power through a single cable.	*Integrated desktop*	n/a	
	A laptop or notebook designed specifically for portability and to be operated for extended periods of time both with and without a direct connection to an ac mains power source. Laptops include an Integrated Display, a non-detachable, mechanical keyboard (using physical, moveable keys), and pointing device.	*Laptop*	n/a	ENERGY STAR
	A computer that typically uses desktop components in a desktop form factor, but is designed primarily to be a storage host for other computers. Small-scale Servers are designed to perform functions such as providing network infrastructure services (e.g., archiving) and hosting data/media. These products are not designed to process information for other systems or run web servers as a primary function.	*Small scale server*	n/a	ENERGY STAR
	A resilient/scalable server which ships as a pre-integrated/pre-tested system housed in one or more full frames or racks and that includes a high connectivity I/O subsystem with a minimum of 32 dedicated I/O slots.	*Large scale server*	n/a	ENERGY STAR
	An independently-powered computer that relies on a connection to remote computing resources (e.g., computer server, remote workstation) to obtain primary functionality. Main computing functions (e.g., program execution, data storage, interaction with other Internet resources) are provided by the remote computing resources. Designed for use in a permanent location (e.g. on a desk) and not for portability.	*Thin client*	n/a	ENERGY STAR
	A tablet computer, or simply tablet, is a mobile computer with display, circuitry and battery in a single unit. Tablets are equipped with sensors, including cameras, microphone, accelerometer and touch screen, with finger or stylus gestures replacing computer mouse and keyboard.	*Tablet*	n/a	Wikipedia

Term	Definition	Data Type	Unit of	Definition Source
	A high-performance desktop computer designed for professional video editing, graphics, scientific/engineering, or other applications that require the maximum computing power available on the market. Workstations differ from desktop computers both in their intended applications and their hardware configurations. Workstations may contain multi-core/dual processors, power supplies with DC output ratings in excess of 500 watts, dual high-end video cards, and multiple hard drives. To qualify as a workstation, a computer must be certified by a number of independent software vendors (ISVs) to run high performance software applications	*Workstation*	n/a	ENERGY STAR
	A cash register is a mechanical or electronic device for registering and calculating transactions. It is usually attached to a drawer for storing cash and other valuables. The cash register is also usually attached to a printer, that can print out receipts for record keeping purposes.	*Cash register*	n/a	
Imaging Equipment Type	Single purpose or multi-purpose system.	Constrained List	n/a	
	Produces paper duplicates from paper originals. Includes upgradeable digital copiers (UDCs).	*Copier*	n/a	ENERGY STAR
	Generates paper output from electronic input. A printer is capable of receiving information from single-user or networked computers, or other input devices (e.g., digital cameras). printers that can be field-upgraded to meet the definition of an Multi-Function Device	*Printer*	n/a	ENERGY STAR
	A fax, or facsimile, machine whose primary functions are (1) to scan paper originals for electronic transmission to remote units, and (2) to receive electronic transmissions for conversion to paper output. A fax machine may also be capable of producing paper duplicates. Electronic transmission is primarily over a public telephone system, but may also be via a computer network or the Internet.	*Fax machine*	n/a	ENERGY STAR
	Converts paper originals into electronic images that can be stored, edited, converted, or transmitted, primarily in a personal computing environment.	*Scanner*	n/a	ENERGY STAR
	Prints postage on mail pieces.	*Mailing machine*	n/a	ENERGY STAR
	A product sold as a fully-automated duplicator system through the method of stencil duplicating with digital reproduction functionality.	*Digital duplicator*	n/a	ENERGY STAR
	A Multi-Function Device (MFD) product that performs two or more of the core functions of a Printer, Scanner, Copier, or Fax Machine. An MFD may have a physically integrated form factor, or it may consist of a combination of functionally integrated components. MFD copy functionality is considered to be distinct from single-sheet convenience copying functionality sometimes offered by fax machines. This definition includes products such as MFDs, and “multi-function products” (MFPs)	*Multi function device*	n/a	ENERGY STAR
Display Type	A display screen and associated electronics, often encased in a single housing, that as its primary function displays visual information from (1) a computer, workstation or server via one or more inputs (e.g., VGA, DVI, HDMI, DisplayPort, IEEE 1394, USB), (2) external storage (e.g., USB flash drive, memory card), or (3) a network connection. Such as a monitor (e.g., LCD, CRT), electronic scoreboards, tv or projector	Constrained List	n/a	ENERGY STAR
	An electronic device, typically with a diagonal screen size greater than 12 inches and a pixel density greater than 5,000 pixels per square inch (pixels/in2), that displays a computer's user interface and open programs, allowing the user to interact with the computer, typically using a keyboard and mouse	*Computer monitor*	n/a	ENERGY STAR
	An electronic device typically with a diagonal screen size greater than 12 inches and a pixel density less than or equal to 5,000 pixels/in2. It is typically marketed as commercial signage for use in areas where it is intended to be viewed by multiple people in non-desk based environments, such as retail or department stores, restaurants, museums, hotels, outdoor venues, airports, conference rooms or classrooms	*Signage display*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	An electronic device, typically with a diagonal screen size less than 12 inches, whose primary function is to display digital images. It may also feature a programmable timer, occupancy sensor, audio, video, or bluetooth or wireless connectivity.	*Digital picture frame*	n/a	ENERGY STAR
	A CRT, also known as cathode ray tube or computer display terminal, is a type of display for a computer monitor and television.	*CRT*	n/a	ENERGY STAR
Television Type	A type of television product.	Constrained List	n/a	
	A television product in which the display device is a projector that focuses images onto a screen located inside the TV enclosure.	*Rear projection*	n/a	ENERGY STAR
	A television product in which the display device emits light either directly from the screen surface or transmits light from a source mounted directly behind the screen.	*Direct view*	n/a	ENERGY STAR
	A television product in which the TV and one or more additional devices (e.g., DVD player, Blu-ray Disc player, Hard Disk Drive) are combined into a single enclosure, and which meets all of the following criteria: a) It is not possible to measure the power of the individual components without removing the product housing; and b) The product connects to a wall outlet via a single power cord.	*Combination unit*	n/a	ENERGY STAR
	A television product composed of two or more separate components (e.g., display device and tuner) that is marketed and sold as a television under a single model or system designation. A component television may have more than one power cord.	*Component*	n/a	ENERGY STAR
	A television product which includes the following features: a) A control port for bi-directional communication (DB-9, RJ11, RJ12, RJ45, coaxial cable, or HDMI-CEC); b) Activated hospitality protocol software (e.g., SmartPort, MPI, MTI, Serial Protocol) to provide direct access to Video-On-Demand (VOD) systems or a digital media player designed for hospitality-specific applications; and c) A power state that meets the definition of Download Acquisition Mode.	*Hospitality*	n/a	ENERGY STAR
	A television product which has an NTSC, PAL, or SECAM tuner, and may have analog video inputs (e.g., composite video, component video, S-video, RGB).	*Analog*	n/a	ENERGY STAR
	A television product which has at least one digital tuner or at least one digital video input (e.g., HDMI). Products with an analog tuner and both analog and digital inputs are considered digital products under this specification.	*Digital*	n/a	ENERGY STAR
		Plasma		
Audio Visual Characteristics	Audio and visual equipment characteristics or features installed standard or post-manufacturing.	Constrained List	n/a	
	A High-Definition Multimedia Interface (HDMI) is a compact audio/video interface for transmitting uncompressed digital data.	*High definition multimedia interface*	n/a	ENERGY STAR
	High Definition Resolution (HD) is video output with resolution greater than 480 lines (480 i/p).	*High definition resolution*	n/a	ENERGY STAR
	Standard Definition Resolution (SD) is video output with resolution less than or equal to 480 lines (480 i/p).	*Standard definition resolution*	n/a	ENERGY STAR
	A Full-spectrum Audio Amplifier is an amplifier capable of full audible frequency range (20Hz to 20kHz) output on all channels.	*Full-spectrum audio amplifier*	n/a	ENERGY STAR
	A Limited-bandwidth Audio Amplifier is an amplifier limited to less than full audible frequency range (20Hz to 20kHz) output on one or more channels.	*Limited bandwidth audio amplifier*	n/a	ENERGY STAR
	A function by which a device increases the amplitude of an audio signal for purposes of sending the signal to a transducer for playback.	*Audio amplification*	n/a	ENERGY STAR
	A function by which a device modifies an audio signal for a purpose other than amplification.	*Audio signal processing*	n/a	ENERGY STAR
	A function by which a product provides a visual display of less than 480 x 234 pixel resolution or 5 inches diagonal screen size, including a back-lit alphanumeric clock or channel indicator. This definition does not include single indicator lamps.	*Status display*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	A function by which a device can playback streaming digital video content packetized or downloaded over an IP network.	*IP video tuner*	n/a	ENERGY STAR
	A function by which a device can connect to a network for transmission and receipt of data. The connection may be wired or wireless (e.g., IR communications, Ethernet, Bluetooth, RS-232, USB).	*Networking protocol*	n/a	ENERGY STAR
	Networking connections that have been defined to require additional power for transmission and receipt of data in Audio/Video products. Connections are limited to Gigabit Ethernet and Wi-Fi.	*Wifi and gigabit ethernet protocols*	n/a	ENERGY STAR
	A function by which a device can read and/or write data to removable disk media (e.g., CD, DVD, Blu-ray Disc).	*Optical disc player*	n/a	ENERGY STAR
	The capability to transmit or display video signals with a minimum output resolution of 3840×2160 pixels in progressive scan mode at minimum frame rate of 24 fps (abbreviated 2160p24).	*Ultra HD resolution*	n/a	ENERGY STAR
	The capability to transmit or display video signals with 3D depth information for stereoscopic display.	*Three dimensional capability*	n/a	ENERGY STAR
Display Resolution	Resolution is screen resolution in pixels.	Integer	pixel	LBNL
Display Pixel Density	Pixel density is equal to the resolution in pixels divided by viewable screen area in inches squared. Term is related to Energy Star power requirements.	decimal	pixel/in2	LBNL
Server Type	The types of computer servers.	Constrained List	n/a	
	A computer server that is designed for a high level of availability in a highly managed environment. A managed server is designed to be configured with redundant power supplies, and contains an installed dedicated management controller (e.g., service processor). Energy Star criteria.	*Managed*	n/a	ENERGY STAR
	A system comprised of a blade chassis and one or more removable blade servers and/or other units (e.g., blade storage, blade network equipment). Blade systems provide a scalable means for combining multiple blade server or storage units in a single enclosure, and are designed to allow service technicians to easily add or replace (hot-swap) blades in the field.	*Blade system*	n/a	ENERGY STAR
	A computer server that is designed with complete hardware redundancy, in which every computing component is replicated between two nodes running identical and concurrent workloads (i.e., if one node fails or needs repair, the second node can run the workload alone to avoid downtime). A fully fault tolerant server uses two systems to simultaneously and repetitively run a single workload for continuous availability in a mission critical application.	*Fully fault tolerant server*	n/a	ENERGY STAR
	A computer server designed with extensive Reliability, Availability, Serviceability (RAS) and scalability features integrated in the microarchitecture of the system, CPU and chipset. For purposes of ENERGY STAR qualification under this specification, a Resilient Server shall have the characteristics as described in Appendix B of this specification.	*Resilient server*	n/a	ENERGY STAR
	A computer server that is designed with two or more independent server nodes that share a single enclosure and one or more power supplies. In a multi-node server, power is distributed to all nodes through shared power supplies. Server nodes in a multi-node server are not designed to be hot-swappable.	*Multi node server*	n/a	ENERGY STAR
	A computer server that is bundled with a pre-installed OS and application software that is used to perform a dedicated function or set of tightly coupled functions. Server appliances deliver services through one or more networks (e.g., IP or SAN), and are typically managed through a web or command line interface. Server appliance hardware and software configurations are customized by the vendor to perform a specific task (e.g., name services, firewall services, authentication services, encryption services, and voice-over-IP (VoIP) services), and are not intended to execute user supplied software.	*Server appliance*	n/a	ENERGY STAR
	A computing system which is designed and optimized to execute highly parallel applications. HPC systems feature a large number of clustered homogeneous nodes often featuring high speed inter-processing interconnects as well as large memory capability and bandwidth. HPC systems may be purposely built, or assembled from more commonly available computer servers.	*High performance computing system*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	A computer server that is designed solely to operate on a dc power source.	*Direct current server*	n/a	ENERGY STAR
	A computer server that is designed for deployment in a standard 19- inch data center rack as defined by EIA-310, IEC 60297, or DIN 41494. For the purposes of this specification, a blade server is considered under a separate category and excluded from the rack-mounted category.	*Rack mounted server*	n/a	ENERGY STAR
	A pedestal server, also known as a tower server, self-contained computer server that is designed with PSUs, cooling, I/O devices, and other resources necessary for stand-alone operation. The frame of a pedestal server is similar to that of a tower client computer.	*Pedestal server*	n/a	ENERGY STAR
Server Components	Server components that are used by a server.	Constrained List	n/a	
	Power Supply Unit (PSU) is a device that converts ac or dc input power to one or more dc power outputs for the purpose of powering a computer server. A computer server PSU must be self-contained and physically separable from the motherboard and must connect to the system via a removable or hard-wired electrical connection.	*Power supply unit*	n/a	ENERGY STAR
	A device which provides data input and output capability between a computer server and other devices. An I/O device may be integral to the computer server motherboard or may be connected to the motherboard via expansion slots (e.g., PCI, PCIe). Examples of I/O devices include discrete Ethernet devices, InfiniBand devices, RAID/SAS controllers, and Fibre Channel devices.	*IO device*	n/a	ENERGY STAR
	The main circuit board of the server. For purposes of this specification, the motherboard includes connectors for attaching additional boards and typically includes the following components: processor, memory, BIOS, and expansion slots.	*Motherboard*	n/a	ENERGY STAR
	The logic circuitry that responds to and processes the basic instructions that drive a server. For purposes of this specification, the processor is the central processing unit (CPU) of the computer server. A typical CPU is a physical package to be installed on the server motherboard via a socket or direct solder attachment. The CPU package may include one or more processor cores.	*Processor*	n/a	ENERGY STAR
	For purposes of this specification, memory is a part of a server external to the processor in which information is stored for immediate use by the processor.	*Memory*	n/a	ENERGY STAR
	Hard Drive (HDD) is the primary computer storage device which reads and writes to one or more rotating magnetic disk platters.	*Hard drive*	n/a	ENERGY STAR
	Solid State Drive (SSD) is a storage device that uses memory chips instead of rotating magnetic platters for data storage.	*Solid state drive*	n/a	ENERGY STAR
Network Equipment Type	A type of network equipment.	Constrained List	n/a	
	A device whose primary function is to pass Internet Protocol (IP) traffic among various network interfaces / ports.	*Network equipment*	n/a	ENERGY STAR
	Network Equipment that is intended to serve users in either small networks or a subset of a large network. SNE includes a) all Network Equipment with integral wireless capability and b) other Network Equipment meeting all of the following criteria: a) Designed for stationary operation; b) Contains no more than eleven (11) wired Physical Network Ports; c) Primary configuration for operation outside of standard equipment racks; and d) Meets the definition of one or more of the Product Types defined below. (SNE)	*Small network equipment*	n/a	ENERGY STAR
	Network Equipment that is rack-mounted, intended for use in standard equipment racks, and/or contains more than eleven (11) ports for wired network.	*Large network equipment*	n/a	ENERGY STAR
	A device that transmits and receives digitally-modulated analog signals over a wired or optical network as its primary function. The Broadband Modem category does not include devices with integrated Router, Switch, or Access Point functionality.	*Broadband modem*	n/a	ENERGY STAR
	A network device with a modem and one or more of the following functions: wired network routing, multi-port Ethernet switching and/or access point functionality. (IAD)	*Integrated access device*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	A type of device that converts signals between copper (wired) or wireless connections and an optical fiber connection. ONTs are available in either desktop or building-mounted versions with different connectivity options. (ONT)	*Optical network termination device*	n/a	ENERGY STAR
	A device that provides wireless network connectivity to multiple clients as its primary function. For the purposes of this specification, Access Points include devices providing only IEEE 802.11 (Wi-Fi) connectivity.	*Access point*	n/a	ENERGY STAR
	A network device that determines the optimal path along which network traffic should be forwarded as its primary function. Routers forward packets from one network to another based on network layer information. Devices fitting this definition may provide both Router functionality and wireless network capability.	*Router*	n/a	ENERGY STAR
	A network device that filters, forwards, and floods frames based on the destination address of each frame as its primary function. The switch operates at the data link layer of the OSI model.	*Switch*	n/a	ENERGY STAR
Network Shipment	Associated functions for network traffic or shipment that enables data to network transfer.	Constrained List	n/a	
	A device that functions as either an originator or destination for network traffic passed through Network Equipment. Examples of end point devices include computers, servers, set-top boxes, IP-capable televisions, IP phones, etc. For the purposes of this specification, an endpoint device is not considered network equipment.	*End point device*	n/a	ENERGY STAR
	Energy Efficient Ethernet (EEE) is a technology which enables reduced power consumption of Ethernet interfaces during times of low data throughput. Specified by IEEE 802.3az.	*Energy efficient ethernet*	n/a	ENERGY STAR
	The maximum PHY bit rate possible on a particular link (e.g., 1000BASE-T Ethernet supports 1 Gb/s in each direction [2 Gb/s total]; IEEE 802.11g supports 54 Mb/s total).	*Link rate*	n/a	ENERGY STAR
	An integrated physical connection point primarily intended to accept non- IP data. For the purposes of this specification, a port must support one of the following media types to fit this definition: a) Universal Serial Bus (USB); b) Firewire; c) Thunderbolt; d) SATA; e) SCSI; or f) RS-232	*Physical data port*	n/a	ENERGY STAR
	An integrated physical connection point primarily intended to accept IP or similar traffic via a cable. For the purposes of this specification, a port must support one of the following media types to fit this definition: a) Twisted Pair Copper (Ethernet, DSL); b) Coaxial Cable (DOCSIS); or c) Fiber Optic	*Physical network port*	n/a	ENERGY STAR
	A technology which enables transfer of electrical power, along with data, to network end point devices through an Ethernet cable. Currently specified by IEEE 802.3af and IEEE 802.3at. (PoE)	*Power over ethernet*	n/a	ENERGY STAR
	An equipment enclosure commonly seen in data centers or managed facilities and intended to house a variety of information technology equipment. Front panel width is typically 19 inches (482.6 mm) in width. Standard Equipment Racks are defined by EIA-310, IEC 60297, or DIN 41494.	*Standard equipment rack*	n/a	ENERGY STAR
	The network equipment device being tested. (UUT)	*Unit under test*	n/a	ENERGY STAR
	A device that is capable of establishing an 802.11x link with an Access Point (AP) and transmitting data to and receiving from the AP. (WLAN)	*Wireless local area network test client*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	The ability of an Endpoint Device to maintain network presence while in Sleep Mode or another low power mode (LPM) of equal or lower power consumption and intelligently wake when further processing is required (including occasional processing required to maintain network presence). Presence of the Endpoint Device, its network services and applications is maintained even though the Endpoint Device is in a LPM. From the vantage point of the network, an End Point Device with full network connectivity that is in LPM is functionally equivalent to an idle End Point Device with respect to common applications and usage models. Full network connectivity in LPM is not limited to a specific set of protocols but can cover applications installed after initial installation. Also referred to as “network proxy” functionality and as described in the Ecma-393 standard. a) Network Proxy - Base Capability: To maintain addresses and presence on the network while in LPM, the system handles IPv4 ARP and IPv6 NS/ND. b) Network Proxy - Full Capability: While in LPM, the system supports Base Capability, c) Network Proxy - Remote Wake: While in LPM, the system is capable of remotely waking upon request from outside the local network. Includes Base Capability. d) Network Proxy - Service Discovery/Name Services: While in LPM, the system allows for advertising host services and network name. Includes Base Capability.	*Full network connectivity*	n/a	ENERGY STAR
Network Auxiliary Equipment	Auxiliary equipment enabling and maintaining data storage services.	Constrained List	n/a	
	A device whose primary function is to pass data among various network interfaces, providing data connectivity among connected devices (e.g., routers and switches). Data connectivity is achieved via the routing of data packets encapsulated according to Internet Protocol, Fibre Channel, InfiniBand or similar protocol.	*Network equipment*	n/a	ENERGY STAR
	A fully-functional storage system that supplies data storage services to clients and devices attached directly or through a network. Components and subsystems that are an integral part of the storage product architecture (e.g., to provide internal communications between controllers and disks) are considered to be part of the storage product. In contrast, components that are normally associated with a storage environment at the data center level (e.g., devices required for operation of an external SAN) are not considered to be part of the storage product. A storage product may be composed of integrated storage controllers, storage devices, embedded network elements, software, and other devices. While storage products may contain one or more embedded processors, these processors do not execute user-supplied software applications but may execute data-	*Storage product*	n/a	ENERGY STAR
	Uninterruptible Power Supply (UPS) is a combination of converters, switches, and energy storage devices (such as batteries) constituting a power system for maintaining continuity of load power in case of input power failure.	*Uninterruptible power supply*	n/a	ENERGY STAR
Network Key Terms	Key terms related to server activities.	Constrained List	n/a	
	A computer or computer server that manages a benchmark evaluation process. The controller system performs the following functions: start and stop each segment (phase) of the performance benchmark; control the workload demands of the performance benchmark; start and stop data collection from the power analyzer so that power and performance data from each phase can be correlated; store log files containing benchmark power and performance information; convert raw data into a suitable format for benchmark reporting, submission and validation; and collect and store environmental data, if automated for the benchmark.	*Controller system*	n/a	ENERGY STAR
	A computer or computer server that generates workload traffic for transmission to a unit under test (UUT) connected via a network switch.	*Network client testing*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	An acronym for reliability, availability, and serviceability features. RAS is sometimes expanded to RASM, which adds “Manageability” criteria. The three primary components of RAS as related to a computer server.	*RAS features*	n/a	ENERGY STAR
	The ratio of processor computing activity to full-load processor computing activity at a specified voltage and frequency, measured instantaneously or with a short term average of use over a set of active and/or idle cycles.	*Server processor utilization*	n/a	ENERGY STAR
	A type of hardware virtualization technique that enables multiple guest operating systems to run on a single host system at the same time.	*Hypervisor*	n/a	ENERGY STAR
	Computing expansion add-in cards installed in general-purpose add-in expansion slots (e.g., GPGPUs installed in a PCI slot). (APAs)	*Auxiliary processing accelerators*	n/a	ENERGY STAR
	Channel or Memory Port connecting a Memory Controller to a defined number of memory devices (e.g. DIMMs) in a computer server. A typical computer server may contain multiple Memory Controllers, which may in turn support one or more Buffered DDR Channels. As such, each Buffered DDR Channel serves only a fraction of the total addressable memory space in a computer server.	*Buffered DDR channel*	n/a	ENERGY STAR
Uninterruptible Power Supply Type	Uninterruptible Power Supply (UPS) is a combination of converters, switches, and energy storage devices (such as batteries) constituting a power system for maintaining continuity of load power in case of input power failure.	Constrained List	n/a	
	Uninterruptible Power Supply (UPS) is a combination of converters, switches, and energy storage devices (such as batteries) constituting a power system for maintaining continuity of load power in case of input power failure.	*Standard UPS*	n/a	ENERGY STAR
	A UPS comprised of two or more single UPS units, sharing one or more common frames and a common energy storage system, whose outputs, in Normal Mode of operation, are connected to a common output bus contained entirely within the frame(s). The total quantity of single UPS units in a modular UPS equals “n + r” where n is the quantity of single UPS units required to support the load; r is the quantity of redundant UPS units. Modular UPSs may be used to provide redundancy, to scale capacity or both.	*Modular UPS*	n/a	ENERGY STAR
	UPS where solid-state power electronic components provide the output voltage.	*Static UPS*	n/a	ENERGY STAR
	A Rotary UPS is where one or more electrical rotating machines provide the output voltage. A rotary UPS that does not contain an integral diesel engine to supply power to the load during an input power failure. (RUPS)	*Rotary UPS without diesel*	n/a	ENERGY STAR
	A Rotary UPS is where one or more electrical rotating machines provide the output voltage. A rotary UPS that contains an integral diesel engine that may be used to supply power to the load during an input power failure. (DRUPS)	*Diesel-coupled rotary UPS*	n/a	ENERGY STAR
	UPS that supplies power with a continuous flow of electric charge that periodically reverses direction.	*Alternating current output UPS*	n/a	ENERGY STAR
	UPS that supplies power with a continuous flow of electric charge that is unidirectional. Includes both individual rectifier units for dc applications and entire Dc-output UPS frames or systems, consisting of rectifier modules, controllers, and any other supporting components.	*Direct current output UPS*	n/a	ENERGY STAR
Cooking				
Cooking Appliance Type	Appliance or equipment used to cook food.	Constrained List	n/a	
		Range	n/a	
	Hot top ranges, or French top ranges, consist of burners or elements that apply heat indirectly through a ceramic, glass, or metal cover to pots and pans from below.	*Hot top range*	n/a	Food Service Survey
	Open burner ranges consist of burners or elements that apply heat directly to pots and pans from below	*Open burner range*	n/a	Food Service Survey
	A self-contained range has one or more chambers or wells (openings) over which woks are placed for cooking. A wok range is designed to keep food in motion by stirring, lifting and tossing over a short amount of time over high heat. There are different types of designs that may include features such as controls.	*Wok range*	n/a	PG&E

Term	Definition	Data Type	Unit of	Definition Source
	A braising pan or skillet cooks food and also serves as a steam table to hold warm food. The cooking surface has a plate that has walls on all four sides forming a shallow rectangular pan and often equipped with a mounted lid. Capacity ranges from 10 to 50 gal (38-190 L). The configuration maybe be freestanding on an open stationary frame, cabinet-style base, wall-mounted on trunnions, and have tabletops.	*Braising pan*	n/a	PG&E
	Underfired broilers, also called charbroilers, cook food on a grid placed over a heat source.	*Underfired broiler*	n/a	Food Service Survey
	Overfired broilers cook food on a grid placed under a heat source.	*Overfired broiler*	n/a	Food Service Survey
	Conveyer/chain broilers apply heat to both the top and bottom of the food as it travels through the appliance on a belt, including conveyor toasters.	*Conveyor broiler*	n/a	Food Service Survey
	Salamander broiler, or cheesemelter, is a type of overfired broiler intended for a limited set of tasks, including browning food or melting cheese.	*Salamander broiler*	n/a	Food Service Survey
		Broiler	n/a	
	Microwave ovens cook or heat food by means of microwave energy. Some microwave ovens also have thermal elements designed for surface browning of food. Microwave ovens are sometimes available as combination ovens, which have additional heating elements or convection capability. Microwave ovens enable users to cook food in ways similar to conventional ovens. These products are offered in a broad range of sizes and configurations. Typical microwave ovens are available in countertop or over-the-range configurations.	*Microwave oven*	n/a	ENERGY STAR
	Toasters are countertop appliances designed for toasting, defrosting, and warming food.	*Toaster*	n/a	ENERGY STAR
	A fryer with a vat that measures >12 inches and < 18 inches wide, and a shortening capacity > 25 pounds and < 65 pounds. ASTM Standard F1361-07, Test Method for the Performance of Open Deep Fat Fryers (standard fryers)	*Standard fryer*	n/a	ENERGY STAR
	A fryer with a vat that measures > 18 inches and < 24 inches wide, and a shortening capacity > 50 pounds. ASTM Standard F2144-09, Test Method for Performance of Large Open Vat Fryers (large vat fryers)	*Large vat fryer*	n/a	ENERGY STAR
	A standard or large vat fryer with an internal wall that separates the vat into two equal sides.	*Split vat fryer*	n/a	ENERGY STAR
	A general-purpose oven that cooks food by forcing hot dry air over the surface of the food product. The rapidly moving hot air strips away the layer of cooler air next to the food and enables the food to absorb the heat energy. For the purposes of this specification, convection ovens do not include ovens that have the ability to heat the cooking cavity with saturated or superheated steam. However, this oven type may have moisture injection capabilities (e.g., baking ovens and moisture-assist ovens). Ovens that include a hold feature are eligible under this specification as long as convection is the only method used to fully cook the food.	*Convection oven*	n/a	ENERGY STAR
	A device that combines the function of hot air convection (oven mode), saturated and superheated steam heating (steam mode), and combination convection/steam mode for moist heating, to perform steaming, baking, roasting, rethermalizing, and proofing of various food products. In general, the term combination oven is used to describe this type of equipment, which is self-contained. The combination oven is also referred to as a combination oven/steamer, combi or combo.	*Combination oven*	n/a	ENERGY STAR
	An oven that cooks food primarily using the naturally occurring hot air currents to transfer heat over the surface of the food product without the use of a fan or blower. The burner or elements heat the air within the oven cavity as well as the cavity walls, causing currents of hot air that transfer heat to the surface of the food. The hot air's buoyancy carries it upward through cooler air, which then slowly sinks to the bottom of the oven as it cools off.	*Standard oven*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	An oven designed to carry food product on a moving belt into and through a heated chamber. A conveyor oven may stand alone or be placed on a counter top. Common foods for cooking may include pizza or bread.	*Conveyor oven*	n/a	ENERGY STAR
	An oven designed specifically for low-temperature (e.g., less than 300°F) cooking, followed by a holding period at a specified temperature.	*Slow cook and hold oven*	n/a	ENERGY STAR
	An oven that cooks food product directly on the floor of a heated chamber. The bottom of each compartment is called a deck and heat is typically supplied by burners or elements located beneath the deck. The oven ceiling, floor, and walls are designed to absorb heat quickly and radiate that heat back slowly and evenly.	*Deck oven*	n/a	ENERGY STAR
	A rack oven that has the ability to produce steam internally and includes an internal rotating rack where pans are manually pushed into the racks. Mini-rack ovens typically hold 5 – 8 full-size sheet pans.	*Mini rack oven*	n/a	ENERGY STAR
	A high-capacity oven, with the ability to produce steam internally and fitted with a motor-driven mechanism for rotating multiple pans fitted into one or more pan racks within the cavity.	*Rack roll in oven*	n/a	ENERGY STAR
	An oven base built into a range. Range ovens may use either standard or convection technologies to cook food.	*Range oven*	n/a	ENERGY STAR
	An oven that utilizes one or more non-traditional heat transfer technologies to cook food product significantly faster than would be possible using conventional (e.g., convection, conduction, radiant) heat transfer technologies. Heat transfer technologies that may be employed include microwave, quartz halogen, and high-velocity or impingement convection.	*Rapid cook oven*	n/a	ENERGY STAR
	An oven fitted with a mechanism to move or turn food past a fixed heat source while the food is slowly being cooked on all sides.	*Rotisserie oven*	n/a	ENERGY STAR
	An oven cabinet that allows venting of humidity while adjusting food moisture to specific conditions. Retherm ovens are designed to accommodate a variety of trays and pans.	*Retherm oven*	n/a	PG&E
	Designed for toasting, baking, and broiling. Standard accessories include a baking pan and removable crumb tray / drip pan for easy maintenance.	*Convection toaster oven*	n/a	
	Also referred to as a “compartment steamer,” a device with one or more food steaming compartments in which the energy in the steam is transferred to the food by direct contact. Models may include countertop models, wall-mounted models and floor-models mounted on a stand, pedestal or cabinet-style base.	*Steam cooker*	n/a	ENERGY STAR
	Steam kettles are a self-contained version of a stockpot used to simmer or boil liquids for cooking.	*Steam kettle*	n/a	Food Service Survey
	An appliance that consists of one or more heated drawers and that is designed to hold hot food that has been cooked in a separate appliance at a specified temperature.	*Drawer warmer*	n/a	ENERGY STAR
	An appliance with a heated compartment that is designed to display and maintain the temperature of hot food that has been cooked in a separate appliance.	*Heated transparent merchandising cabinets*	n/a	ENERGY STAR
	A multiple-mode appliance intended for cooking food that may be used to hold the temperature of the food that has been cooked in the same appliance.	*Cook and hold appliance*	n/a	ENERGY STAR
	An enclosed mobile, portable, or stationary appliance designed to maintain the proper temperature and relative humidity for supporting fermentation of dough products by yeast.	*Proofing cabinet*	n/a	ENERGY STAR
	A commercial appliance designed for cooking food in oil or its own juices by direct contact with either a flat, smooth, hot surface (e.g., polished steel or chrome plate) or a hot channeled cooking surface (e.g., polished steel or chrome 1⁄2-inch grooved plate) where plate temperature is thermostatically controlled.	*Single sided griddle*	n/a	ENERGY STAR
	A commercial appliance designed for cooking food in oil or its own juices by direct contact with two hot surfaces where temperature is thermostatically controlled. A double-sided griddle has hinged upper griddle plates (platens) that swing down over the food, thereby cooking the food from both sides at once.	*Double sided griddle*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	A commercial appliance designed for cooking food in oil or its own juices by direct contact with two hot surfaces where temperature is thermostatically controlled.	*Griddle*	n/a	ENERGY STAR
	A multi-purpose appliance used for surface cooking by direct contact with a heated plate, and may also function as a device for roasting, broiling, grilling or any combination of these methods. A fry-top range may have an oven located beneath the cooktop or shelving or may be mounted on top of a refrigerated base.	*Fry top griddle*	n/a	ENERGY STAR
	Brews coffee by percolating hot water through a brew basket of coffee grounds. Coffee is captured in a decanter that may be heated by a warming plate.	*Automatic drip filter coffee maker*	n/a	ENERGY STAR
	Brews coffee product by forcing a precise amount of hot water through a small container of coffee grounds to make a single serving.	*Single serve coffee maker*	n/a	ENERGY STAR
	Produces a coffee product called espresso by forcing hot water through coffee grounds. Pressure, typically around 15 bars, and gravity drive the coffee product into a cup. Includes both pump (pump driven) and steam (steam driven) machines. Includes automatic, semi-automatic, and manual machines with independent electricity heat source. Semi-automatic machines allow the operator to control coffee extraction and steaming. Fully automatic machines are capable of grinding, dosing, tamping, and brewing coffee. Espresso machines often include auxiliary milk steaming and frothing functions.	*Espresso machine*	n/a	ENERGY STAR
Oven Size	Capacity of combination oven in terms of standard sizing.	Constrained List	n/a	
	A combination oven capable of accommodating two 12 x 20 x 2 1⁄2-inch steam table pans per rack position, loaded side by side, from front-to-back or lengthwise. A convection oven that is capable of accommodating standard full-size sheet pans measuring 18 x 26 x 1-inch.	*Full size*	n/a	ENERGY STAR
	A combination oven capable of accommodating a single 12 x 20 x 2 1⁄2-inch steam table pan per rack position, loaded from front-to-back or lengthwise. A convection oven that is capable of accommodating half-size sheet pans measuring 18 x 13 x 1-inch.	*Half size*	n/a	ENERGY STAR
	A combination oven capable of accommodating a single 12 x 10 x 2 1⁄2-inch steam table pan per rack position, loaded from front-to-back or lengthwise.	*Two thirds size*	n/a	ENERGY STAR
Number Of Oven Racks	Number of full rack of sheet pans of product an oven is able to hold based on nominal 4-inch spacing between pans.	Integer	n/a	ENERGY STAR
Coffee Maker Components	Components of a coffee maker for brewing coffee.	Constrained List	n/a	
	An electric resistance heating element in the water reservoir is used to heat up water for brewing in drip coffee makers.	*Heating element*	n/a	ENERGY STAR
	Decanter or carafe is a glass or multi-layer insulated stainless steel carafes are common in drip filter coffee makers. Insulated carafes are typically more efficient, since less energy is required to keep brewed coffee warm.	*Decanter*	n/a	ENERGY STAR
	An electric motor powers a grinder to prepare whole coffee beans for brewing.	*Grinder*	n/a	ENERGY STAR
	An electric resistance heater is used to maintain brewed coffee at a temperature between 160 and 190°F.	*Warming plate*	n/a	ENERGY STAR
	A microprocessor is used to control various user-selectable product functions, including carafe pre-warming and automatic brewing start/stop timers.	*Microprocessor*	n/a	ENERGY STAR
	A boiler or thermoblock are espresso machine components create hot water for brewing and steam for frothing. Non-pump machines use pressure from steam, which is generated by boiling water in a sealed chamber. In a thermoblock arrangement, the high-pressure water pump forces cold water into the thermoblock after it is preheated.	*Thermoblock*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	An electric pump or piston is allows the brewing process to pump cold water from the water reservoir and injects it into the boiler under pressure greater than 100 psi. The pressure of the incoming water forces the hot water already in the boiler into the group or brew head.	*Electric pump*	n/a	ENERGY STAR
	Vessel in which a steam-air mixture is discharged to froth milk. Contains a conduit having an air admitting inlet and an air discharging outlet.	*Steam wand*	n/a	ENERGY STAR
Refrigeration				
Refrigeration Type	Refrigeration equipment includes a refrigerator or freezer used for storing food products at specified temperatures, with the condensing unit and compressor built into the cabinet, and designed for use by commercial or institutional premises, other than laboratory settings. These units may be vertical or chest configurations and may contain a worktop surface.	Constrained List	n/a	ENERGY STAR
	A cabinet designed for the refrigerated storage of food, designed to be capable of achieving temperatures above 32 °F (0 °C) and below 39 °F (3.9 °C). A refrigerator may include a compartment for the freezing and storage of food at temperatures below 32 °F (0 °C), but does not provide a separate low temperature compartment designed for the freezing and storage of food at temperatures below 8 °F (-13.3 °C), with the condensing unit and compressor built into the cabinet.	*Refrigerator*	n/a	ENERGY STAR
	A cabinet designed as a unit for the freezing and storage of food at temperatures of 0 °F (-17.8 °C) or below, with the condensing unit and compressor built into the cabinet.	*Freezer*	n/a	ENERGY STAR
	A cabinet which consists of two or more compartments with at least one of the compartments designed for the refrigerated storage of food and designed to be capable of achieving storage temperatures above 32 °F (0 °C) and below 39°F (3.9 °C), and with at least one of the compartments designed for the freezing and storage of food at temperatures below 8 °F (-13.3 °C) which may be adjusted by the user to a temperature of 0 °F (-17.8 °C) or below.	*Combination*	n/a	ENERGY STAR
Ice Machine	A factory-made assembly (not necessarily shipped in one package) consisting of a condensing unit and ice-making section operating as an integrated unit, with means for making and harvesting ice. It is an assembly that makes up to 4,000 lbs of ice per day at Standard Ratings Conditions, as defined in Section 5.2.1 of ARI Standard 810-2006, and may also include means for storing or dispensing ice, or both.	Constrained List	n/a	ENERGY STAR
	An ice making head (IMH) is a model with the ice-making mechanism and the condensing unit in a single package, but with a separate ice storage bin.	*Ice making head*	n/a	ENERGY STAR
	A Remote condensing unit (RCU) or split system unit is a model in which the ice-making mechanism and condenser or condensing unit are in separate sections.	*Remote condensing unit*	n/a	ENERGY STAR
	Self-Contained (SCU): A model in which the ice-making mechanism and storage compartment are in an integral cabinet.	*Self contained unit*	n/a	ENERGY STAR
	Air-Cooled: An ice machine wherein motor driven fans or centrifugal blowers move air through the condenser to remove heat from the refrigerant.	*Air cooled*	n/a	ENERGY STAR
	Cubed: Cubed ice machines have an alternate freezing and harvesting period. Water is circulated over an evaporator where it freezes until cubes are fully formed. The cubed ice is then harvested and moved to storage. The ice may be in cube shape, or in a variation of a solid shape.	*Cubed*	n/a	ENERGY STAR
	Flake: Flake ice machines produce ice continuously, usually in a barrel-shaped evaporator. An auger inside the evaporator scrapes ice off the sides into a storage bin.	*Flake*	n/a	ENERGY STAR
	Nugget: Nugget ice machines use the same process as flake machines but compress the ice flakes into nuggets.	*Nugget*	n/a	ENERGY STAR
Cabinet Configuration	Configuration can include refrigeration cases and walk-ins, not central refrigeration systems.	Constrained List	n/a	
	A display or holding refrigerator where product is accessible for removal by opening or moving doors or panels.	*Closed case*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	An open case, or reach-in, refrigeration unit allows foodservice staff or customers to store or retrieve products but cannot enter and then close the door.	*Open case*	n/a	Food Service Survey
	A refrigeration case, also known as a refrigeration cabinet, designed for easy reach in, can be open or closed, vertical or horizontal.	*Case*	n/a	
	A large refrigeration room that allows walk-in accessibility.	*Walk in*	n/a	ENERGY STAR
	A cabinet that has one door and is full-sized according to national standards.	*Full sized one door*	n/a	ENERGY STAR
	A cabinet that has two doors and is full-sized according to national standards.	*Full sized two doors*	n/a	ENERGY STAR
	A cabinet that is half-sized or quarter-sized relative to the standard residential refrigerator.	*Half or quarter size*	n/a	ENERGY STAR
Equipment Features	Features of a refrigerator or freezer equipment.	Constrained List	n/a	
	Manual defrost refers to the type of defrosting system included for a freezer.	*Manual defrost*	n/a	ENERGY STAR
	Frost free or a self-defrost freezer cycles off/on automatically to effect a discharge of ice and keeps the interior frost free.	*Frost free*	n/a	ENERGY STAR
	A vending machine that requires refrigeration capabilities.	*Refrigerated vending machine*	n/a	ENERGY STAR
Door Configuration	Door configuration of the refrigerator/freezer unit.	Constrained List	n/a	
	The side-by-side door configuration is a cabinet that is divided in half lengthwise. These refrigerators have two doors, which swing out from the middle so one door stays closed while the other door is open and vice versa.	*Side by side*	n/a	ENERGY STAR
	The top-and-bottom door configuration is a cabinet that is divided in half widthwise.	*Top and bottom*	n/a	ENERGY STAR
	A combination configuration may have a freezer on one side and a refrigerator on the other.	*Combination*	n/a	ENERGY STAR
	An enclosed refrigeration cabinet to which access is gained only through a top-opening door.	*Chest*	n/a	ENERGY STAR
	Less than 75% of the front surface area is glass.	*Solid door*	n/a	ENERGY STAR
	Greater than, or equal to, 75% of the front surface area is glass.	*Glass door*	n/a	ENERGY STAR
Case Door Orientation	Orientation of refrigerated case doors used for display cases at stores, food-service establishments.	Constrained List	n/a	
	Horizontal case doors have sliding doors on the top of a cabinet, often made of glass for display.	*Horizontal*	n/a	ENERGY STAR
	Vertical case doors have sliding doors on the side of a cabinet, often made of glass for display.	*Vertical*	n/a	ENERGY STAR
	Combination case doors have one or more sliding doors on a certain part of a cabinet, often made of glass for display.	*Combination*	n/a	ENERGY STAR
Defrosting Type	Type of defrost method used for commercial refrigerated display and storage cabinets. Designed to remove frost (ice) from cooling coils of a refrigerating system.	Constrained List	n/a	
	Electric defrost systems typically have heat applied externally, however, systems have been developed which apply electric heat from within to give rapid defrost. Applicable to low temperature refrigerators.	*Electric*	n/a	ENERGY STAR
	Defrosting in which the temperature of the evaporator coils is allowed to rise naturally during an off-cycle, during which no refrigerant is supplied.	*Off cycle*	n/a	ENERGY STAR
	Hot Gas Defrosting is a method that utilizes heat internally, from inside the pipes of the evaporator, usually the highly superheated vaporized refrigerant from the compressor.	*Hot gas*	n/a	ENERGY STAR
	defrosting an evaporator by reversing its function with that of the condenser.	*Reverse cycle*	n/a	ENERGY STAR
	defrosting in which water is sprayed or poured over the frosted surface.	*Water*	n/a	ENERGY STAR
	Defrosting that uses cool gas (or vapor) from the top of the receiver instead of hot gas (discharge).	*Cool gas*	n/a	ENERGY STAR
Refrigeration Components	Components that make up the refrigeration equipment.	Constrained List	n/a	
	An anti-sweat heater feature for glass display doors for a refrigerated case. May have control option for energy efficiency.	*Anti sweat heater equipment*	n/a	ASHRAE Wiki
	A crankcase heater that prevents condensation when the refrigeration equipment is off.	*Crankcase heater*	n/a	AUC

Term	Definition	Data Type	Unit of	Definition Source
	The level of refrigerant superheater is controlled using a desuperheater valve. A refrigerant-to-water heat exchanger that transfers heat from high-pressure, high-temperature refrigerant to domestic water. Heat transfer occurs when the heat pump (air conditioner) operates to satisfy the building space conditioning load. Within the refrigeration circuit, the desuperheater is located between the compressor discharge and the reversing valve of a heat pump or between the compressor discharge and the inlet to the refrigerant-to-air condenser of an air conditioner.	*Desuperheater valve*	n/a	ASHRAE Wiki
	Condenser comprising several heat-exchanging components operating on one or several refrigeration systems. For instance, valve is used to split the condenser loop to better control head pressure.	*Split condenser*	n/a	ASHRAE Wiki, AUC
	Automatic valve or control device used to maintain the pressure, and thereby the temperature, in an evaporator above a predetermined minimum. For instance, when mechanical or electronic regulators are used to maintain the suction temperature in the individual cases.	*Evaporator pressure regulators*	n/a	ASHRAE Wiki, AUC
	Heat exchanger, after the condenser, for subcooling the condensed refrigerant.	*Refrigerant subcooler*	n/a	ASHRAE Wiki
	Compressor unloader is (1) device for controlling compressor capacity by rendering one or more cylinders ineffective. (2) device on or in a compressor for equalizing the high- and low-side pressures for a brief period during starting in order to decrease the starting load on the motor.	*Compressor unloader*	n/a	ASHRAE Wiki
	A device or unit used to condense a substance from its gaseous to its liquid state, by cooling it. In so doing, the latent heat is given up by the substance, and will transfer to the condenser coolant.	*Condenser*	n/a	
Refrigeration Compressor Type	Type of compressor in the refrigeration system. See Chiller Compressor Type for list.	Constrained List	n/a	
Number Of Cycles	Number of stages or cycles available for unloading the compressor in a refrigeration system.	Integer	n/a	AUC
Refrigeration Dimensions	Dimensions of refrigeration equipment components.	Constrained List	n/a	
	That portion of the total refrigeration capacity of a liquid cooler that produces useful cooling. This is the product of the mass flow rate of liquid, specific heat of the liquid, and the difference between entering and leaving liquid temperatures, expressed in energy units per unit of time. It is represented also by the total refrigeration capacity less the heat leakage rate. MMBtu/hr	*Net refrigeration capacity*	n/a	ASHRAE Wiki
	Diameter of the return line of the refrigerant coming back from refrigerated cases. inches	*Refrigerant return line diameter*	n/a	ENERGY STAR
	Number of return lines from refrigerated cases to the compressor.	*Number of refrigerant return lines*	n/a	ENERGY STAR
Water Cooler Unit	A freestanding device that consumes energy to cool and/or heat potable water.	Constrained List	n/a	
	Units that dispense cold water only.	*Cold only*	n/a	ENERGY STAR
	Units that dispense both hot and cold water. Some units may also offer room-temperature water.	*Hot and cold*	n/a	ENERGY STAR
	Units that dispense both cold and room-temperature water.	*Cool and cold*	n/a	ENERGY STAR
	A water cooler which, in addition to the primary function of cooling and dispensing potable water, includes a refrigerated compartment with or without provisions for making ice.	*Compartment type water cooler*	n/a	ENERGY STAR
Water Cooler Source	The water source of a particular water cooler.	Constrained List	n/a	
	A bottle or reservoir supplies water to the water cooler.	*Bottle type*	n/a	ENERGY STAR
	The Point of Use (POU) refers to the water cooler that is connected to a pressurized water source.	*Point of use*	n/a	ENERGY STAR
	A unit that ships as either Bottle-type or POU and includes a conversion kit intended to convert the Water Cooler from a Bottle-type unit to a POU unit or to convert a POU unit to a Bottle-type unit.	*Conversion type water cooler*	n/a	ENERGY STAR
Water Cooler Storage	The type of water storage of a water cooler.	Constrained List	n/a	
	Thermally conditioned water is stored in a tank in the water cooler and is available instantaneously.	*Storage*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	The water cooler heats water as it is requested, which typically takes a few minutes to deliver.	*On demand*	n/a	ENERGY STAR
Dishwasher				
Dishwasher Machine Type	They type of dishwasher machine such as being either stationary rack or conveyor.	Constrained List	n/a	
	A dishwashing machine in which a rack of dishes remains stationary within the machine while subjected to sequential wash and rinse sprays. This definition also applies to machines in which the rack revolves on an axis during the wash and rinse cycles.	*Stationary rack*	n/a	ENERGY STAR
	A dishwashing machine that employs a conveyor or similar mechanism to carry dishes through a series of wash and rinse sprays within the machine.	*Conveyor*	n/a	ENERGY STAR
Dishwasher Configuration	A machine designed to clean and sanitize plates, pots, pans, glasses, cups, bowls, utensils, and trays by applying sprays of detergent solution (with or without blasting media granules) and a sanitizing rinse.	Constrained List	n/a	ENERGY STAR, DOE, National Appliance Energy Conservation Act
	Available in both caster-equipped floor models and more compact countertop styles.	*Counter top*	n/a	ENERGY STAR
	A dishwasher which is not permanently connected to the household water and electric supply lines. It can be mounted on wheels and easily moved from one place to another in normal use. This definition includes dishwashers intended to be used on a countertop or table.	*Portable*	n/a	ENERGY STAR
	A stationary rack machine with an overall height of 38 inches or less, designed to be installed under food preparation workspaces. Under counter dishwashers can be either chemical or hot water sanitizing, with an internal or external booster heater for the latter.	*Stationary under counter*	n/a	ENERGY STAR
	A stationary rack machine designed to accept a standard 20 inch x 20 inch dish rack which requires the raising of a door to place the rack into the wash/rinse chamber. Closing of the door typically initiates the wash cycle. Subcategories of single tank, stationary door type machines include: single rack, double rack, pot, pan and utensil washers, chemical dump type and hooded wash compartment (“hood type”). Single tank, door type models can be either chemical or hot water sanitizing, with an internal or external booster heater for the latter.	*Stationary single tank door type*	n/a	ENERGY STAR
	A stationary rack, door type machine designed to clean and sanitize pots, pans, and kitchen utensils.	*Stationary pot pan utensil*	n/a	ENERGY STAR
	A stationary rack, under counter machine specifically designed to clean and sanitize glasses.	*Stationary glasswashing*	n/a	ENERGY STAR
	A conveyor machine that includes a tank for wash water followed by a sanitizing rinse (pumped or fresh water). This type of machine does not have a pumped rinse tank. This type of machine may include a prewashing section ahead of the washing section and an auxiliary rinse section, for purposes of reusing the sanitizing rinse water, between the power rinse and sanitizing rinse sections. Single tank conveyor dishwashers can be either chemical or hot water sanitizing, with an internal or external booster heater for the latter.	*Single tank conveyor*	n/a	ENERGY STAR
	A conveyor type machine that includes one or more tanks for wash water and one or more tanks for pumped rinse water, followed by a sanitizing rinse. This type of machine may include a pre-washing section before the washing section and an auxiliary rinse section, for purposes of reusing the sanitizing rinse water, between the power rinse and sanitizing rinse section. Multiple tank conveyor dishwashers can be either chemical or hot water sanitizing, with an internal or external booster heater for the latter.	*Multiple tank conveyor*	n/a	ENERGY STAR
	A single conveyor machine where the dishes are loaded directly on the conveyor rather than transported within a rack. This machine is also referred to as a rackless conveyor.	*Single tank flight conveyor*	n/a	ENERGY STAR
	A multiple conveyor machine where the dishes are loaded directly on the conveyor rather than transported within a rack. This machine is also referred to as a rackless conveyor.	*Multiple tank flight conveyor*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
Dishwasher Sanitization	The dishwater sanitization method for cleaning and preparing the dishwashing machine for operation using water or chemical cleaning processes.	Constrained List	n/a	
	A machine that applies hot water to the surfaces of dishes to achieve sanitization.	*Hot water sanitizing high temperature*	n/a	ENERGY STAR
	A machine that applies a chemical sanitizing solution to the surfaces of dishes to achieve sanitization.	*Chemical sanitizing low temperature*	n/a	ENERGY STAR
	A low temp, stationary rack machine with a pumped recirculated sanitizing rinse.	*Chemical dump*	n/a	ENERGY STAR
	A machine designed to operate as either a high temp or low temp machine.	*Dual sanitizing*	n/a	ENERGY STAR
Dishwasher Capacity	Dishwasher capacity can use the amount of dishes that can fit on a dishwasher rack. ENERGY STAR has set a capacity limit that also differentiates between standard-sized models, fitting at least eight place settings and six serving places, and compact-sized models, fitting lower than that.	Constrained List	n/a	
	A dishwasher that has a capacity of less than eight place settings plus six serving pieces as specified in ANSI/AHAM DW-1.	*Compact*	n/a	ENERGY STAR
	A dishwasher that has a capacity equal to or greater than eight place settings plus six serving pieces as specified in ANSI/AHAM DW-1.	*Standard*	n/a	ENERGY STAR
Laundry				
Laundry Appliance Type	Type of Laundry appliance according to its function such as washer only, dryer only, and a washer/dryer combination unit.	Constrained List	n/a	
	A product designed to clean clothes, utilizing a water solution of soap and/or detergent and mechanical agitation or other movement, and must be one of the following classes: automatic clothes washers, semi-automatic clothes washers, and other clothes washers.	*Clothes washer*	n/a	ENERGY STAR
	A clothes washer that has an optional add-on dry cycle, where drying is accomplished through use of electricity or gas as a heat source and forced air circulation; drying cannot be selected independently from a wash cycle.	*Clothes washer with dry cycle*	n/a	ENERGY STAR
	An appliance for drying loads of laundry.	*Clothes dryer*	n/a	
	A consumer product designed to clean and dry fabrics in a single drum, where a separate drying cycle uses electricity or gas as a heat source and forced air circulation.	*Combination all in one clothes washer dryer*	n/a	ENERGY STAR
	A washer and dryer is stacked on top of one another as one set while having individual functional units.	*Unitized stacked washer dryer pair*	n/a	ENERGY STAR
Laundry Configuration	The type of configuration of a laundry appliance. Such as front and top loading clothes washers.	Constrained List	n/a	
	Load laundry from the front of the machine.	*Front*	n/a	ENERGY STAR
	Load laundry from the top of the machine.	*Top*	n/a	ENERGY STAR
Clothes Washer Modified Energy Factor	Modified Energy Factor, MEF, is the energy performance metric for ENERGY STAR qualified clothes washers and all clothes washers as of February 1, 2013. MEF is the quotient of the capacity of the clothes container, C, divided by the total clothes washer energy consumption per cycle, with such energy consumption expressed as the sum of the machine electrical energy consumption, M, the hot water energy consumption, E, and the energy required for removal of the remaining moisture in the wash load, D. The higher MEF, the more efficient the clothes washer. The equation is: MEF = C/(M + E + D)	Decimal	ft3/kWh/cycle	ENERGY STAR
Clothes Washer Integrated Modified Energy Factor	The quotient of the cubic foot (or liter) capacity of the clothes container divided by the total clothes washer energy consumption per cycle, with such energy consumption expressed as the sum of the machine electrical energy consumption, the hot water energy consumption, the energy required for removal of the remaining moisture in the wash load, and the combined low-power mode energy consumption.	Decimal	ft3/kWh/cycle	ENERGY STAR
Clothes Dryer Type	The type of clothes dryer appliance.	Constrained List	n/a	ENERGY STAR
	A clothes dryer with a drum capacity of less than 4.4 cubic feet.	*Compact*	n/a	ENERGY STAR
	A clothes dryer with a drum capacity of 4.4 cubic feet or greater.	*Standard*	n/a	ENERGY STAR
	A clothes dryer that exhausts the evaporated moisture from the cabinet.	*Conventional vented*	n/a	ENERGY STAR

Term	Definition	Data Type	Unit of	Definition Source
	A clothes dryer that uses a closed-loop system with an internal condenser to remove the evaporated moisture from the heated air. Moist air is not discharged from the cabinet.	*Ventless*	n/a	ENERGY STAR
	A ventless clothes dryer that uses cold tap water for internal condenser cooling.	*Water cooled ventless*	n/a	ENERGY STAR
Clothes Dryer Drum Capacity	This is the drum capacity of the clothes dryers in cubic feet as measured by the U.S. Department of Energy test procedure, Code of Federal Regulations, Title 10, Section 430, Subpart B, Appendix D2. Products with a drum capacity less than 4.4 cubic feet are considered compact.	Decimal	ft3	ENERGY STAR

Term	Definition	Data Type	Unit of Measure	Definition Source
Operation				
Operation Event	An operation event is an activity that is performed at the premises as part of	Constrained List	n/a	
	Number of individual meals served. One meal includes the main entree as well as	*Meal served*	n/a	
		Laundry loads	n/a	
		Ice performance	n/a	
		Sporting event	n/a	
	Such as a show, concert, seminar, religious service, etc.	*Non-sporting event*	n/a	
	Such as surgeries in an outpatient hospital.	*Procedure*	n/a	
	Such as individual classes held in educational institutions.	*Class*	n/a	
	Total number of customers served. Each individual visit by the same customer	*Service*	n/a	
	Such as items produced by a manufacturer.	*Item production*	n/a	
	Event that passes as an organization's threshold for a single customer transaction.	*Customer transaction*	n/a	
	A receipt transaction is any time money is exchanged for goods or service and can	*Receipt transaction*	n/a	
Operation Events Per Year	Number of operation events that take place in a year.	Integer	n/a	
Operational Control Actor	The actor who has authority to introduce and implement any or all operating and/or	Constrained List		BuildingSync and
		Owner		
		Tenant		
		Landlord		
		Occupant		
Meal Type	The type of meal served in this operation event.	Constrained List	n/a	
	The first meal of the day, usually eaten in the morning.	*Breakfast*	n/a	Food Service Survey
	A meal eaten in the middle of the day, typically one that is lighter or less formal	*Lunch*	n/a	Food Service Survey
	The main meal of the day, typically more formal and in the evening.	*Dinner*	n/a	Food Service Survey
	A beverage, portion of food, or light meal, between larger meals, including hot or	*Coffee Snack*	n/a	Food Service Survey
	The sweet course eaten at the end of a meal or in between meals.	*Dessert*	n/a	Food Service Survey
	Party-sized meals are prepared within the premises to be served and consumed	*Catered*	n/a	Food Service Survey
	Meals prepared within the premises, to be consumed within the establishment or	*Dine-in*	n/a	Food Service Survey
	Meals prepared within the premises, to be consumed at some other location. Meal	*Carry-out*	n/a	Food Service Survey
	Meals prepared within the premises, to be consumed at some other location. Meal is handed over a drive-thru window.	*Drive through*	n/a	LBNL
Laundry Load Type	Type of materials laundered.	Constrained List	n/a	ENERGY STAR
		Linens	n/a	
		Terry	n/a	
		Dry clean	n/a	
		Delicates	n/a	
		Permanent press	n/a	
		Clothing	n/a	
Schedule				
Schedule Period	The period label for the schedule.	Constrained List	n/a	
	The default schedule in effect the majority of the year.	*Primary*	n/a	
	A period of time that is different than the primary schedule due to seasonal changes in customer base.	*Seasonal*	n/a	
	Period when the premises or equipment is closed or not in use.	*Dormant*	n/a	
		Rate structure	n/a	
		TOU rate	n/a	
		Demand window	n/a	
		Spring	n/a	
		Summer	n/a	
		Fall	n/a	
		Winter	n/a	
Schedule Period Begin Month	The month when this schedule period takes effect.	Integer	Month	

Term	Definition	Data Type	Unit of Measure	Definition Source
Schedule Period Begin Day	The day when this schedule period takes effect.	Integer	Day	
Schedule Period End Month	The month when this schedule period ends.	Integer	Month	
Schedule Period End Day	The day when this schedule period ends.	Integer	Day	
Schedule Category	The category this schedule applies to.	Constrained List	n/a	
	The schedule during which business is commonly conducted.	*Business*	n/a	
	Occupants on premises.	*Occupied*	n/a	
	Occupants not on premises.	*Unoccupied*	n/a	
	Occupants sleeping in premises.	*Sleeping*	n/a	
	Non-employee occupants allowed on premises	*Public access*	n/a	
	A time when the load is reduced, typically when occupants are away from the premises.	*Setback*	n/a	
	The schedule during which general equipment is in operation. This may be hours extended past regular business hours and accounts for ramp-up and ramp-down times.	*Operating*	n/a	
	The schedule during which HVAC equipment is in operation. This may be hours extended past regular business hours and accounts for ramp-up and ramp-down times.	*HVAC equipment*	n/a	
	The schedule during which cooling equipment is in operation. This may be hours extended past regular business hours and accounts for ramp-up and ramp-down times.	*Cooling equipment*	n/a	
	The schedule during which heating equipment is in operation. This may be hours extended past regular business hours and accounts for ramp-up and ramp-down times.	*Heating equipment*	n/a	
	The schedule during which majority of lights are on.	*Lighting*	n/a	
	The schedule during which cooking equipment is utilized.	*Cooking equipment*	n/a	
	Plug loads	*Miscellaneous equipment*	n/a	
		On peak	n/a	
		Off peak	n/a	
		Super off peak	n/a	
Schedule Day	Day(s) this schedule applies to.	Constrained List	n/a	
	Sunday is the day of the week following Saturday and preceding Saturday, and (together with Saturday) forming part of the weekend.	*Sunday*	n/a	
	Monday is the first weekday following Sunday and preceding Tuesday.	*Monday*	n/a	
	Tuesday is the second weekday following Monday and preceding Wednesday.	*Tuesday*	n/a	
	Wednesday is the third weekday following Tuesday and preceding Thursday.	*Wednesday*	n/a	
	Thursday is the fourth weekday following Wednesday and preceding Friday.	*Thursday*	n/a	
	Friday is the fifth weekday following Thursday and preceding Saturday.	*Friday*	n/a	
	Saturday is the day of the week following Friday and preceding Sunday, and (together with Sunday) forming part of the weekend.	*Saturday*	n/a	
	The schedule is the same every day Monday through Friday.	*Weekday*	n/a	
	The schedule is the same on Saturday and Sunday.	*Weekend*	n/a	
	A holiday is a day of festivity or recreation when traditionally no work may be limited.	*Holiday*	n/a	
	Every day of the week that is not an observed holiday.	*All week*	n/a	
Day Start Time	In military time (0000 start of day). If the night before the schedule runs into this day, then start time is 0000, while yesterday's end time is 2400. For example, a nightclub may be open from 8PM Friday to 2AM Saturday, then on Friday: Day Start Time is 2000 and Day End Time is 2400, and on Saturday: Dat Start Time is 0000 and Day End Hour is 0200	TimeStamp	Military time	
Day End Time	In military time (0000 start of day). If the end hour is the next day, then this day ends at 2400 and the next starts at 0000 and ends at closing time. For example, a nightclub may be open from 8PM Friday to 2AM Saturday, then on Friday: Day Start Time is 2000 and Day End Time is 2400, and on Saturday: Dat Start Time is 0000 and Day End Hour is 0200	TimeStamp	Military time	
Average Daily Hours	If exact start and end hours are unknown, then the total number of hours per day.	Integer	hours/day	

Term	Definition	Data Type	Unit of Measure	Definition Source
Average Weekly Hours	Number of hours in a typical week.	Integer	hours/week	
Average Annual Weeks	The number of weeks that the premises or equipment is in use. For example, a pool premises may only be open for 16 weeks out of the year.	Integer	weeks/year	
Observed Holidays	Holidays in which the operations follow a holiday schedule that is different from the main schedule.	Constrained List	n/a	
	New Year's Eve is celebrated on December 31 as the last day of the Western calendar.	*New Years Eve*	n/a	
	New Year's Day is federal holiday celebrated on January 1 as the first day of the Western calendar.	*New Years Day*	n/a	
	New Year's Day Observed is the nearest weekday to January 1. If New Year's Day is on a Saturday, the U.S. will observe the Friday proceeding it, and if it lands on Sunday, the following Monday will be observed.	*New Years Day Observed*	n/a	
	Martin Luther King Day is a federal holiday held on the third Monday of January	*Martin Luther King Day*	n/a	
	President's D, or Washington's Birthday, is a federal holiday celebrated on the third Monday of February in honor of George Washington, the first President of the United States, and the presidents proceeding him.	*President's Day*	n/a	
	Memorial Day is a federal holiday observed on the last Monday of May to commemorate fallen soldiers.	*Memorial Day*	n/a	
	Flag Day of the United States is a holiday celebrated on June 14 to commemorate the adoption of the United States flag, though it is not federally observed.	*Flag Day*	n/a	
	Independence Day in the United States is a federally celebrated holiday on July 4, also called the Fourth of July, when the U.S. signed the Declaration of Independence.	*Independence Day*	n/a	
	Independence Day Observed is the nearest weekday to July 4. If Independence Day is on a Saturday, the U.S. will observe the Friday proceeding it, and if it lands on Sunday, the following Monday will be observed.	*Independence Day Observed*	n/a	
	Labor day is a federal holiday observed on the first Monday of September to celebrate the achievements of workers and the labor movement.	*Labor Day*	n/a	
	Columbus Day is a federal holiday observed on the second Monday of October to celebrate the arrival of Christopher Columbus in the Americas.	*Columbus Day*	n/a	
	Veterans Day is an international holiday, observed federally on November 11 to commemorate the signing of the Armistice ending World War I, and all the veterans of the U.S. Armed Forces.	*Veterans Day*	n/a	
	Thanksgiving is a federal holiday observed on the third Thursday of November to honor the dinner shared by Native Americans and the Pilgrims.	*Thanksgiving*	n/a	
	Thanksgiving Friday is the Friday following Thanksgiving, though not a federally recognized holiday, schools and employers usually grant the day off.	*Thanksgiving Friday*	n/a	
	Christmas Eve is the day before the Christmas Day Holiday on December 24. Though not a federally recognized holiday, schools and employers often grant the day off.	*Christmas Eve*	n/a	
	Christmas Day is an international holiday observed on December 25 to traditionally celebrate the birth of Jesus Christ. It was declared a federal holiday in 1968.	*Christmas Day*	n/a	
	Christmas Day Observed is the nearest weekday to December 25 if it falls on a weekend. If Christmas Day is on a Saturday, the U.S. will observe the Friday proceeding it, and if it lands on Sunday, the following Monday will be observed.	*Christmas Day Celebrated*	n/a	
	Caesar Chavez Day is a commemorative holiday to celebrate the birth of the civil rights leader on March 31st.	*Caesar Chavez Day*	n/a	
Partial Operation Percentage	Percent of category that is in operation. If Schedule Category is Occupancy, then the percent of occupants from typical max. If Schedule Category is an equipment, then power as a percent of installed capacity.	Decimal	Percent	
Operational Mode	The equipment state of connection to a power source for use, and providing one or more primary functions.	Constrained List	n/a	
	Connected to a power source, activated, receiving a main charge or ready to use, and is providing one or more of its primary functions.	*On*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	The power state in which a product is not producing output, has reached operating conditions, has not yet entered into any lower-power modes, and can enter Active State with minimal delay.	*Ready state*	n/a	
	The operational state in which the machine is carrying out primary work.	*Active*	n/a	
	Not connected to a power source, produces no function, and cannot be switched into any other mode with a remote control unit, an internal signal, or an external signal.	*Off*	n/a	
	A reduced power state that a product enters either automatically after a period of inactivity. For products evaluated under the TEC test method, Sleep Mode permits operation of all product features (including maintenance of network connectivity), albeit with a possible delay to transition into Active State. For products evaluated under the OM test method, Sleep Mode permits operation of a single active network interface, as well as a fax connection if applicable, albeit with a possible delay to transition into Active State.	*Sleep*	n/a	
	The machine server is operational, but not performing any useful work.	*Idle*	n/a	
	Energy saver mode is a setting that consumes less energy than it does in idle mode.	*Energy saver*	n/a	
	Traffic is passed across ports of equipment at relatively slow data rate. For instance, network data rate of 1.0 kb/s (0.5 kb/s in each direction) as defined in the Energy Star test procedure.	*Low Data Rate*	n/a	
	Traffic is passed across ports of equipment at a selected reference rate, considered high data rate such as for network.	*High Data Rate*	n/a	
	The lowest power consumption state which cannot be switched off by the user and that may persist for an indefinite time when the product is connected to the main electricity supply.	*Standby*	n/a	
	Produces no functional output, but can be switched into another mode with the remote control unit or an internal signal. Has no saved hardware state. For instance, the Game Console has no active network link although may be capable of charging devices in this mode. The lowest power consumption mode which cannot be switched off (influenced) by the user and that may persist for an indefinite time when an appliance is connected to the main electricity supply. Standby mode: a) no battery is present in the charger, or, where the battery is integral to a product, the product is not attached to the charger, b) the charger is connected to mains, and	*Passive standby*	n/a	
	Produces no functional output, but can be switched into another mode with the remote control unit or an internal signal, and with an external signal, and is exchanging/receiving data with/from an external source.	*High activity standby*	n/a	
	Produces no functional output, but can be switched into another mode with the remote control unit or an internal signal, and with an external signal, and is not exchanging/receiving data with/from an external source.	*Low activity standby*	n/a	
	Actively engaged in system maintenance or download updated functionality after waking or in response to user input.	*Updating*	n/a	
	Wash mode is when the machine is actively running a cycle and is spraying wash water.	*Wash*	n/a	
	Rinse mode is when the machine is at the end of the actively running cycle and is spraying rinse water.	*Rinse*	n/a	
	For stationary rack machines, the dishwasher is in dwell mode when it is actively running a cycle but is not in wash or rinse modes.	*Dwell*	n/a	
	Power is supplied as it is required by demand	*On demand*	n/a	
	Power is supplied according to an associated schedule	*Schedule*	n/a	
Controls				
Control Technology	Technological device that enables control of the system.	Constrained List	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	A thermostat is a device that automatically regulates temperature, or that activates a device when the temperature reaches a certain point.	*Thermostat*	n/a	
	A thermostatic radiator valve (TRV) is a self-regulating valve fitted to hot water heating system radiator, to control the temperature of a room by changing the flow of hot water to the radiator.	*Thermostatic radiator valve*	n/a	
	A zone valve is a specific type of valve used to control the flow of water or steam in a hydronic heating or cooling system.	*Thermostatic zone valve*	n/a	
		Sensor	n/a	
		Timer	n/a	
		Meter	n/a	
		Advanced power strip	n/a	
	Refrigeration anti-sweat heaters	*Anti sweat heaters*	n/a	
	EMCS	*Energy management and controls system*	n/a	
	BAS	*Building automation system*	n/a	
	Manual operation of on and off switch.	*Manual*	n/a	
		Manual dimming	n/a	
		Always on	n/a	
Control Strategy	Control logic or strategy that is programed into the system.	Constrained List	n/a	
	Demand control ventilation (DCV) is a ventilation system capability that provides for the automatic reduction of outdoor air intake below design rates when the actual occupancy of spaces served by the system is less than design occupancy.	*Demand control ventilation*	n/a	DOE
	Direct digital control (DDC) is a control system that uses digital processors to directly control HVAC equipment. Such a system may be specific to the equipment controlled with pre-set programs, or be a separate system that has customizable programs. For multi-zone systems, the DDC system must “report to a central control panel” or bring together information from each zone.	*Direct digital control*	n/a	DOE
	Dual maximum logic comes from the fact that there are two maximum airflow setpoints: one for heating in addition to the one for cooling.	*Dual maximum logic*	n/a	
	With single maximum logic the damper will remain at the minimum airflow rate during heating operation. As the heating load increases, the water flow rate in the reheat coil will be increased to maintain temperature in the zone until the maximum water flow rate is reached or the user-specified maximum reheat air temperature is reached.	*Single maximum logic*	n/a	
	The coldest reset strategy is used in dual duct systems to reset the setpoint temperature of the air in the heating supply duct. Usually it is used in conjunction with a warmest reset strategy resetting the temperature of the air in the cooling supply duct. For each zone in the system at each system timestep, the control logic calculates a supply air temperature that will meet the zone heating load at the maximum zone supply air flow rate. The highest of the possible supply air temperatures becomes the new supply air temperature setpoint, subject to minimum and maximum supply air temperature constraints. The resulting temperature setpoint is the lowest supply air temperature that will meet the heating requirements of all the zones. When compared to a fixed heating supply air temperature setpoint, this strategy minimises central boiler energy consumption (if the hot water temperature is also reset or there are variable speed pumps) at the cost of possible increased fan energy (if there is variable volume control in the air	*Coldest reset*	n/a	
		Warmest reset	n/a	
		Wet Bulb reset	n/a	
		Outside air reset	n/a	
		Fixed	n/a	
		Differential	n/a	
		Pneumatic	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	An electronic control uses solid state electronic circuitry to provide the proper starting and operating electrical conditions to power equipment.	*Electronic*	n/a	
	Or scheduled	*Programmable*	n/a	
		Scheduled	n/a	
		Staged setpoint	n/a	
		Max cells	n/a	
		Min cells	n/a	
		Two position flow	n/a	
		Variable flow	n/a	
		Average flow	n/a	
		Critical zone	n/a	
		Daylight dimming	n/a	
		Bi level	n/a	
		Multi level	n/a	
		Recirculation	n/a	
	Resetting duct static pressure to keep it only as high as is needed to satisfy the neediest zone..	*Static pressure reset*	n/a	
	Resetting the supply-air-temperature set point based on the outside air temperature	*Supply air temperature reset*	n/a	
	The capability to automatically switch a device from On Mode to Sleep Mode after a	*Auto power down*	n/a	
	Reheat control strategy. Use additional qualifiers (e.g., dual maximum logic) to clarify	*Reheat*	n/a	
	Lighting can be continuously dimmed from full power to minimum power	*Continuous dimming*	n/a	
	Lighting can be continuously dimmed from full power to minimum power and can also be turned off	*Continuous dimming plus off*	n/a	
	Lighting can be dimmed in discrete steps	*Stepped dimming*	n/a	
Percent Of Area Controlled	Percentage of the premises gross floor area that is controlled by this system.	Decimal	Percent	
Setpoint Type	Setpoint type that this control systems adheres to.	Constrained List	n/a	
	°F	*Room temperature*	n/a	
	Temperature setting of supply air for heating or cooling. °F	*Supply air temperature*	n/a	
	Outside air temperature where supply air temperature is reset for heating or cooling. °F	*Outside air temperature limit*	n/a	
	The percent of the total volume of delivered air that is outdoor air to be mixed with recirculated conditioned air.	*Outside air percentage*	n/a	
	The flow rate of outside air that the system is able to deliver. For systems with economizing or demand controlled ventilation capability, this is the outdoor airflow rate when the outside air damper is fully open and the fan speed is at maximum. ft3/min	*Outside air flow rate*	n/a	
	Dry bulb temperature setting for use of control equipment, such as economizer and condenser. °F	*Dry bulb control point*	n/a	
	Enthalpy setting for use of economizer for cooling. Btu/lb	*Enthalpy control point*	n/a	
	The outside air temperature which the economizer will return to the minimum position. °F	*Temperature lockout*	n/a	
	The water temperature that the equipment supplies, such as the chilled water temperature setpoint for a chiller, or hot water temperature setpoint for water leaving a boiler. °F	*Supply water temperature*	n/a	
	The water temperature that the equipment receives from return duct. °F	*Return water temperature*	n/a	
	The temperature of the mixed water container, such as the water in a pool, or the water in a thermal energy storage tank. °F	*Mixed water temperature*	n/a	
	cfm	*Flow rate*	n/a	
	Percent	*Humidity*	n/a	
	Lighting level used for controlling electric lights when daylighting is available.	*Daylight illuminance*	n/a	
	Pa	*Pressure*	n/a	
	m/s	*Speed*	n/a	
	The part load ratio at which the system is able to operate.	*Part load ratio*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	The part load ratio of the chiller below which hot gas bypass (HGBP) operates.	*Part load ratio for HGBP*	n/a	
	The temperature of the refrigerant vapor returning to the compressor or condensing unit. °F	*Suction vapor temperature*	n/a	ASHRAE Wiki
	The saturation temperature, in degrees, corresponding to the measured refrigerant pressure at the condenser inlet. °F	*Condensing temperature*	n/a	ASHRAE Wiki
	The ambient air temperature under design conditions. °F	*Design ambient temperature*	n/a	
	The difference between the condensing temperature of the refrigerant in the condenser and the design ambient temperature. °F	*Design temperature difference*	n/a	
	The fraction of maximum lighting output a lighting system produces, at the corresponding "Power fraction"	*Output fraction*	n/a	
	The fraction of maximum power input to a dimmed lighting system	*Power fraction*	n/a	
Setpoint Setting Condition	Setpoint settings conditions that apply to this setpoint.	Constrained List	n/a	
	Setpoint applies to reset conditions.	*Reset*	n/a	
	Setpoint applies to normal operating conditions.	*Normal*	n/a	
Setpoint Low	The lowest allowed range in setpoint. If there is no range, then the low and high setpoints are the same.	Decimal	Dependent on Qualifier	
Setpoint High	The highest allowed range in setpoint. If there is no range, then the low and high setpoints are the same.	Decimal	Dependent on Qualifier	
Setpoint	The single target value for a setpoint that does not include a range.	Decimal	Dependent on Qualifier	
Sensor Type	Physical property measured by the sensor.	Constrained List	n/a	
	°F	*Temperature*	n/a	
	Percent	*Humidity*	n/a	
	psi	*Static pressure*	n/a	
	ft3/min	*Air flow*	n/a	
	m/s	*Speed*	n/a	
	dB	*Sound*	n/a	
	ft3/min	*Water flow*	n/a	
	n/a	*Motion*	n/a	
	n/a	*Vacancy*	n/a	
	n/a	*Occupancy*	n/a	
	n/a	*Status*	n/a	
	Percent	*Oxygen*	n/a	
	n/a	*Carbon dioxide*	n/a	
	n/a	*Carbon monoxide*	n/a	
	fc	*Photosensor*	n/a	
Meter Type	Meters can be divided into several categories based on their capabilities	Constrained List	n/a	LBNL
		Revenue grade meter	n/a	
		Advanced resource meter	n/a	
		Analog	n/a	
		Interval	n/a	
		Net	n/a	
	A smart meter is usually an electronic device that records consumption of electric energy in intervals of an hour or less and communicates that information at least daily back to the utility for monitoring and billing.	*Smart meter*	n/a	
		PDU input meter	n/a	
		IT equipment input meter	n/a	
		Supply UPS output meter	n/a	
		PDU output meter	n/a	
Reset Routine	Times when the HVAC equipment is setback. For example, when the heat is lowered during the heating season, or the cooling setpoint increased during the cooling season.	Constrained List	n/a	
		During the day	n/a	
		At night	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		During sleeping and unoccupied hours	n/a	
		Seasonal	n/a	
		Never or rarely	n/a	
HVAC Systems Controlled	HVAC system that are monitored by this control.	Constrained List	n/a	
		All HVAC		
		Heating	n/a	
		Cooling	n/a	
		Distribution terminals	n/a	
Maintenance				
Maintenance Type	Maintenance is the process of maintaining or preserving someone or something.	Constrained List	n/a	
		Inspection	n/a	
		Cleaning	n/a	
		Calibration	n/a	
		Repair	n/a	
		Replace	n/a	
Frequency Of Maintenance	Frequency of maintenance on the premises or equipment.	Constrained List	n/a	
		As needed	n/a	
		Daily	n/a	
		Weekly	n/a	
		Bi weekly	n/a	
		Monthly	n/a	
		Semi quarterly	n/a	
		Quarterly	n/a	
		Semi annually	n/a	
		Annually	n/a	
Maintenance Events Per Year	The number of maintenance events performed on the premises or equipment in the time period.	Integer	n/a	
Date Of Most Recent Maintenance Event	The date of the most recent maintenance that was performed on the premises or equipment.	Date Format from Metadata	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
Energy Generation Technology	Technology utilized on the premises to generate non-purchased energy, including	Constrained List	n/a	
	Standby generator installed on-premises for back-up electricity production.	*Standby generator*	n/a	
	Turbines generate electricity from mechanical energy exerted by a renewable	*Turbine*	n/a	EPA
	Microturbines are small electricity generators that can burn a wide variety of fuels	*Microturbine*	n/a	DOE
	A single fuel cell consists of an electrolyte sandwiched between two electrodes.	*Fuel cell*	n/a	NREL
	Gasification is a process that converts organic or fossil fuel based carbonaceous	*Gasification*	n/a	Gasification Technolog
	Binary cycle geothermal power generation plants differ from Dry Steam and Flash	*Binary cycle*	n/a	DOE
	An anaerobic biodigester, contains methane, a natural by-product of anaerobic	*Anaerobic biodigester*	n/a	EPA
	Systems that use the natural flow of water rather than damming or diverting flow	*Hydrokinetic*	n/a	
	Photovoltaic (PV) systems derive energy from incoming solar radiation that is	*Photovoltaic*	n/a	ANSI/ASHRAE, CEC
	Solar parabolic troughs are a type of linear concentrator system that collects the	*Solar parabolic trough*	n/a	NREL
	Linear Fresnel reflector systems are a type of linear concentrating systems that	*Linear fresnel reflector*	n/a	NREL
	A power tower system uses a large field of flat, sun-tracking mirrors known as	*Solar power tower*	n/a	NREL
	A solar dish/engine system uses a mirrored dish similar to a very large satellite	*Solar dish*	n/a	NREL
	Generic solar thermal system collector	*Solar thermal system collector*	n/a	
	Generic energy generation system powered by wind	*Wind*	n/a	
Energy Storage Technology	A few different forms of energy storage systems exist including: potential, kinetic,	Constrained List	n/a	
	Batteries are energy storage systems consisting of one or more cells, in which	*Battery*	n/a	
	Storage of a chilled or heated elements to be be utilized at a later time. (TES)	*Thermal energy storage*	n/a	
	Pumped hydroelectric energy storage is a type of potential energy storage where	*Pumped-storage hydroelectricity*	n/a	
	Flywheel energy storage is a form of kinetic energy comprised of a rotating	*Flywheel*	n/a	
Water Storage Technology		Constrained List	n/a	
	Containers that collect and store roof runoff for later reuse. They can provide an	*Rain barrel*	n/a	
		Reclaimed water system	n/a	
Thermal Medium	Type of material used in thermal energy storage technology.	Constrained List	n/a	
	Air as a thermal medium is used for space heating or cooling.	*Air*	n/a	
	Ice is usually stored to provide cooling services.	*Ice*	n/a	
	Pool water heated by solar thermal collectors.	*Pool water*	n/a	
	Domestic hot water is typically used for bathing, cooking, cleaning, and space heating.	*Domestic water*	n/a	
	Molten salt is a means of storing heat at a high temperature. This is a current commercial technology used in conjunction with concentrated solar power for later use in electricity generation, to allow solar power to provide electricity on a more continuous basis. These molten salts (Potassium nitrate, Calcium nitrate, Sodium nitrate, Lithium nitrate, etc.) have the property to absorb and store the heat energy that is released to the water, to transfer energy when needed. To improve the salt properties it must be mixed in a eutectic mixture.	*Molten salt*	n/a	
	Sand storage includes sand particles as the heat collector, heat transfer and thermal energy storage media.	*Sand*	n/a	
	Rock storage material has thermal transfer medium characteristics include air, water and other phase-change materials.	*Rock*	n/a	
	Solar energy is stored chemically in reduced solid oxides. Heat is released at a constant temperature. Air is used as both the heat-transfer fluid and the chemical reactants. Oxide systems can be tailored to match input heat temperature.	*Chemical oxides*	n/a	
Technology Component	Component of the energy-storing or -generating equipment.	Constrained List	n/a	
		Array	n/a	
		Racking system	n/a	
		Module	n/a	
		Rotor	n/a	
		Hub	n/a	
		Drive shaft	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		Inverter	n/a	
Turbine Rotation Axis	The orientation of the line axis about which the turbine rotates.	Constrained List	n/a	
	Axis is parallel to the plane of the horizon.	*Horizontal*	n/a	
	Axis is perpendicular to the plane of the horizon.	*Vertical*	n/a	
Rated Wind Speed	The rated, or nominal, wind speed is the speed at which the turbine produces power at its full capacity.	Decimal	m/s	
Installation Status	States the status of installation for a generation and storage equipment.	Constrained List	n/a	
	The premises is set up for installation of the generation equipment.	*Ready*	n/a	
	The premises is unavailable or not ready for installation of the generation equipment.	*Unavailable*	n/a	
Solar Thermal System Collector Type	Type of solar energy collector used in a solar hot water or space heating system	Constrained List	n/a	
		Single glazing black	n/a	
		Single glazing selective	n/a	
		Double glazing black	n/a	
		Double glazing selective	n/a	
		Evacuated tube	n/a	
		Integrated collector storage	n/a	
Thermal Loop Configuration	Heat transfer medium and controls used for the solar collector loop	Constrained List	n/a	
		Direct	n/a	
		Indirect	n/a	
		Passive thermosyphon	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
Resource	Type of energy resource fuel. This can be applied at the premises or individual	Constrained List	n/a	LBNL
	Water used for irrigation	*Irrigation water*	n/a	
	Combination of multiple resource fuels.	*Energy*	n/a	
		Electricity	n/a	
		Electric power	n/a	
	Natural gas is a hydrocarbon gas mixture consisting primarily of methane, but	*Natural gas*	n/a	
		Fuel oil	n/a	
		Fuel oil no 1	n/a	
		Fuel oil no 2	n/a	
		Fuel oil no 4	n/a	
		Fuel oil no 5 and no 6	n/a	
		District steam	n/a	
		District hot water	n/a	
		District chilled water	n/a	
		Propane	n/a	
		Liquid propane	n/a	
		Kerosene	n/a	
		Diesel	n/a	
		Coal	n/a	
		Coal anthracite	n/a	
		Coal bituminous	n/a	
		Coke	n/a	
		Wood	n/a	
		Wood pellets	n/a	
	Hydropower projects capture the kinetic energy of moving water to produce	*Hydropower*	n/a	
	Biofuel or biogas. Biofuels can also be used for transportation.	*Biofuel*	n/a	
	Wind turbines harness the kinetic energy in the wind and is converted to	*Wind*	n/a	
	Geothermal systems capture the earth's heat for use in generating electricity.	*Geothermal*	n/a	
	Solar energy uses the sun's energy for HVAC, heating water and producing electricity.	*Solar*	n/a	
	Biomass refers to the combustion of solid biomass feedstocks, such as energy crops, agricultural crops, forestry residues, aquatic crops, biomass processing residues, municipal waste, and animal waste. Biomass can be used to power turbines that generate electricity or directly for heating.	*Biomass*	n/a	
	A hydrothermal resource is a geothermal resource that often involves fluid, heat, and permeability for electricity generation. These geothermal systems can occur in diverse geologic settings, sometimes without clear surface manifestations of the underlying resource. Low-temperature geothermal energy is defined as heat obtained from the geothermal fluid in the ground at temperatures of 300°F (150°C) or less. Low-temperature resources can be harnessed to generate electricity using binary cycle electricity generating technology.	*Hydrothermal*	n/a	
	Dry steam geothermal power plants use hydrothermal fluids that are primarily steam. The steam travels directly to a turbine, which drives a generator that produces electricity. The steam eliminates the need to burn fossil fuels to run the turbine (also eliminating the need to transport and store fuels). These plants emit only excess steam and very minor amounts of gases. An example of a source is the Geysers in Northern California.	*Dry steam*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	Flash steam plants are the most common type of geothermal power generation plants in operation today. Fluid at temperatures greater than 360°F (182°C) is pumped under high pressure into a tank at the surface held at a much lower pressure, causing some of the fluid to rapidly vaporize, or "flash." The vapor then drives a turbine, which drives a generator. If any liquid remains in the tank, it can be flashed again in a second tank to extract even more energy.	*Flash steam*	n/a	
	Ethanol, also known as ethyl alcohol, grain alcohol, and EtOH, comes from the fermentation of sugars found in food crops such as corn, or cellulosic material such as wood chips, leaves, agricultural waste, and similar material. Ethanol is used in gasoline mixtures to power many automobiles. There may be more energy needed to cultivate, harvest, and process the material than is contained in the final fuel produced. Biomass feedstocks are grown and transported to ethanol production facilities. After ethanol is produced at facilities, a distribution network supplies ethanol-gasoline blends to fueling stations for use by drivers.	*Ethanol*	n/a	
	Biodiesel is made by converting natural oils—usually new or used vegetable oils and animal fats—into usable liquid fuels. The fuel can be used in many engines or combustion appliances designed for diesel or no. 2 fuel oil. It is non-toxic and biodegradable.	*Biodiesel*	n/a	
	Byproduct heat resource from a type of equipment that's captured and may be repurposed.	*Waste heat*	n/a	
		Water	n/a	
	Water that is of sufficient quality for human consumption and that is obtained from public water systems that are classified, permitted, and approved for human consumption.	*Potable water*	n/a	ESPM
	Wastewater is any water that has been adversely affected in quality by anthropogenic influence. Municipal wastewater is usually conveyed in a combined sewer or sanitary sewer, and treated at a wastewater treatment plant.	*Wastewater*	n/a	
	Greywater or sullage is defined as wastewater generated from plates and wash-hand basins, showers and baths, which, because it is nearly as clean as potable water, can be recycled on site for uses such as toilet flushing, landscape irrigation and constructed wetlands.	*Greywater*	n/a	
	Reclaimed water or recycled water, is former wastewater (sewage) that is treated to remove solids and impurities, and used in sustainable landscaping irrigation, to recharge groundwater aquifers, to meet commercial and industrial water needs, and for drinking.	*Reclaimed water*	n/a	
		Captured rainwater	n/a	
	Water that is not obtained from a surface water source, groundwater source, nor purchased reclaimed water from a third party. It can include rainwater or stormwater harvested onsite, sump pump water harvesting, gray water, air-cooling condensate, reject water from water purification systems, water reclaimed onsite, or water derived from other water reuse strategies.	*Alternative water*	n/a	ESPM
End Use	End use that the resource primarily applies to. This can be also be attributed to a renewable energy that's generated on-site that has its own dedicated meter. This can be applied at the premises or individual system or equipment level.	Constrained List	n/a	LBNL
		Premises	n/a	
	Baseload is the energy consumed for the day-to-day operation of a premises that is not used as a response to outside weather (i.e., excludes heating and cooling).	*Baseload*	n/a	HPXML
		Total lighting	n/a	
		Interior lighting	n/a	
		Exterior lighting	n/a	
		Heating	n/a	
		Cooling	n/a	
		Ventilation	n/a	
		Pump	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		IT equipment	n/a	
		Plug in electric vehicle	n/a	
		Plug load	n/a	
		Process load	n/a	
		Conveyance	n/a	
		Domestic hot water	n/a	
		Refrigeration	n/a	
		Cooking	n/a	
		Dishwasher	n/a	
		Laundry	n/a	
		Pool heating	n/a	
	Resource used to fuel a generator, which delivers energy on-site.	*Generator*	n/a	
Resource Generation	Type of resource generation	Constrained List	n/a	BEDES-Beta
	Resource is delivered by an off site utility	*Delivered*	n/a	
	Resource is generated onsite	*Generated*	n/a	
	Resource is generated using renewable technology	*Renewable*	n/a	
	Resource is generated onsite and exported off site	*Exported*	n/a	
Grid Connection	Indicates whether the onsite resource generation is connected to the grid.	Constrained List	n/a	LBNL
		Stand alone	n/a	
		Grid Connected	n/a	
Metering Configuration	The structure of how the various meters are arranged	Constrained List	n/a	BEDES Beta
	Tenants are directly metered individually	*Direct metering*	n/a	
	Tenants not directly metered or sub-metered	*Master meter without sub metering*	n/a	
	Tenants sub-metered by building owner	*Master meter with sub metering*	n/a	
	The is the master meter	*Master meter*	n/a	
	This is a sub-meter	*Sub meter*	n/a	
Fuel Interruptibility	This refers to the practice of supplementing fuel (electricity, natural gas, fuel oil.) by other means when there are interruptions in supply from the utility.	Constrained List	n/a	BEDES-Beta
		Interruptible	n/a	
		Firm	n/a	
Shared Resource Configuration	Situation that applies if a resource is shared with multiple premises, such as shared chilled water among buildings.	Constrained List	n/a	BEDES-Beta
		Shared		
	Shared resource systems or meters for multiple buildings on a single lot	*Multiple buildings on a single lot*	n/a	
	Shared resource systems or meter for multiple buildings on multiple lots	*Multiple buildings on multiple lots*	n/a	
	Resource system or meter not shared	*Not shared*	n/a	
Resource Value	The amount of resource consumed, generated, or exported from the premises.	Single	Dependent on Qualifier	BEDES-Beta
Resource Intensity	The resource value divided by the premises gross floor area.	Single	Dependent on Qualifier	LBNL
Percent of Total	The percentage this value makes up of the total.	Decimal	Percent	LBNL
Resource Cost	The cost of a resource over a selected time period.	Decimal	$	
Resource Cost Intensity	The cost per square foot associated with a selected time period for a premises. It can be an individual value for different energy types, and can also be an aggregated value across all energy types. This term can be associated with one or more Resource Qualifiers in the constrained list.	Decimal	$/ft2	
Resource Boundary	The boundary that encompases the measured resource.	Constrained List	n/a	
	The resource amount consumed on the site and not including transmission losses form the source.	*Site*	n/a	
	The associated resource includes losses that take place during generation, transmission, and distribution of the energy from the source to the site.	*Source*	n/a	
	The associated resource is consumed or generated on-site	*Onsite*	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
	The associated resource is consumed or generated off-site	*Offsite*	n/a	
		Net	n/a	
		Gross	n/a	
Temporal Status	Temporal charcateristic of this measurement.	Constrained List	n/a	
	Intended to represent conditions, prior to making any resource impacting changes	*Pre retrofit*	n/a	
	Intended to represent conditions, after implementing resource impacting changes	*Post retrofit*	n/a	
		Baseline	n/a	
		Current	n/a	
	Intended to serve as a reference for comparing the actual value and to track progress	*Target*	n/a	
	Intended to serve as a reference for comparing the actual value with a design value to evaluate relative performance	*Design target*	n/a	
		Last billing period	n/a	
		Additional to last billing period	n/a	
		Current billing period	n/a	
		Billed to date	n/a	
		Current day	n/a	
		Current day last year	n/a	
		Previous day	n/a	
		Previous day last year	n/a	
Normalization	Normalization criteria to shift or scaled the measurement, where the intention is that these normalized values allow the comparison of corresponding normalized values for different datasets.	Constrained List	n/a	
	Intended to serve as a comparison metric to show the relative performance in a population- 50% of properties perform below the median, and 50% perform above the median.	*National median*	n/a	
		Regional median	n/a	
	The expected value if the new operations were revised to reflect the operations in a specific year	*Adjusted to specific year*	n/a	
	The expected value, if the current year weather conditions were revised to reflect 30-year average weather conditions. This weather normalized value can be used to understand changes in energy to account for changes in weather.	*Weather normalized*	n/a	
Percent Improvement	Percent improvement over a baseline. This will enable comparison of actual energy use against target and progress tracking.	Decimal	Percent	LBNL
Source Site Ratio	Ratio of energy consumed at a central power plant to that delivered to a customer.	Decimal	n/a	
Renewable Energy Credits (RECs) Retained	Percentage of Renewable Energy Credits (RECs) that were kept compared to the total quantity of RECs that is associated with the total amount of renewable energy that was generated.	Decimal	Percent	ESPMGlossary
Resource Flow Intensity	For Water and Waste-water treatment facilities, the Energy Use, divided by the total average flow through the plant.	Single	kBtu/gpd	ESPMGlossary
Interval Start Date	The start date that marks the beginning of the time interval for a value. Format for the date can be found in Metadata's "Date Format"	Date Format from Metada	n/a	BEDES Beta
Interval End Date	The end date that marks the ending of the time interval for a value. Format for the date can be found in Metadata's "Date Format"	Date Format from Metada	n/a	BEDES Beta
Interval Start Time	The start time that marks the beginning of a time interval	TimeStamp	n/a	
Interval End Time	The end time that marks the beginning of a time interval	TimeStamp	n/a	
Interval Frequency	Indicates frequency of data that's available for a given variable. Data that's available can range from 10 minute interval to annual. This interval frequency can be applied to resource or other time series data like weather	Constrained List	n/a	LBNL
		1 minute	n/a	
		10 minute	n/a	
		15 minute	n/a	
		30 minute	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		Hour	n/a	
		Day	n/a	
		Week	n/a	
		Month	n/a	
		Annual	n/a	
		Quarter	n/a	
Interval Duration	Length of interval reading ~~in seconds~~	Decimal	Dependent on Qualifier	CEC Proposition 39
Power Metric	Measurement of power.	Constrained List	n/a	
	Amps	*Current*	n/a	
	degrees	*Current angle*	n/a	
	Hz	*Frequency*	n/a	
	Power factor is the ratio of the real power flowing to the load, to the apparent power in the circuit	*Power factor*	n/a	
	V	*Voltage*	n/a	
	degrees	*Voltage angle*	n/a	
	The distortion power factor describes how the harmonic distortion of a load current decreases the average power transferred to the load.	*Distortion power factor*	n/a	
	A measurement of long term Rapid Voltage Change in hundredths of a Volt. This is derived from 2 hours of Pst values (12 values combined in cubic relationship).	*Power line flicker long term pst*	n/a	
	A value measured over 10 minutes that characterizes the likelihood that the voltage fluctuations would result in perceptible light flicker. A value of 1.0 is designed to represent the level that 50% of people would perceive flicker in a 60 watt incandescent bulb. The value reported is represented as an integer in hundredths	*Power line flicker short term pst*	n/a	
	A measurement of the Harmonic Voltage during the period. For DC, distortion is with respect to a signal of zero Hz.	*Harmonic voltage*	n/a	
	A count of Long Interruption events (as defined by measurement-Protocol) during the summary interval period.	*Long interruptions*	n/a	
	A measurement of the Mains [Signaling] Voltage during the summary interval period in uV.	*Mains voltage*	n/a	
	A measurement of the power frequency during the summary interval period micro Hz	*Power frequency*	n/a	
	A count of Rapid Voltage Change events during the summary interval period	*Rapid voltage changes*	n/a	
	A count of Short Interruption events during the summary interval period	*Short interruptions*	n/a	
	Interval of summary period	*Summary interval*	n/a	
	A count of Supply Voltage Dip events during the summary interval period	*Supply voltage dips*	n/a	
	A count of Supply Voltage Imbalance events during the summary interval period	*Supply voltage imbalance*	n/a	
	A count of Supply Voltage Variations during the summary interval period	*Supply voltage variations*	n/a	
	A count of Temporary Over-voltage events (as defined by measurement-Protocol) during the summary interval period	*Temporary over voltage*	n/a	
	Power	*Power*	n/a	
	Volumetric flow such as for natural gas or other fuels	*Volumetric flow*	n/a	BuildingSync
Power Metric Value	Value of the measurement of associated power metric	Decimal	Dependent on Qualifier	
Reading Time Zone Code	The 3 letter code for the time zone where the reading was taken.	Constrained List	n/a	LBNL
		EDT	n/a	
		EST	n/a	
		CDT	n/a	
		CST	n/a	
		MDT	n/a	
		MST	n/a	
		PDT	n/a	
		PST	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
		HST	n/a	
		HDT	n/a	
		AKST	n/a	
		AKDT	n/a	
		GMT	n/a	
Interval Measure	Type of data recorded by the meter	Constrained List	n/a	BEDES Beta
		Point	n/a	
		Median	n/a	
		Average	n/a	
		Minimum	n/a	
		Maximum	n/a	
		Total	n/a	
		On peak	n/a	
		Semi peak	n/a	
		Off peak	n/a	
		Demand	n/a	
		Ratchet demand	n/a	
Phase	Phase information associated with Readings	Constrained List	n/a	Greenbutton
		Phase AN	n/a	
		Phase A	n/a	
		Phase AB	n/a	
		Phase BN	n/a	
		Phase B	n/a	
		Phase CN	n/a	
		Phase C	n/a	
		Phase ABC	n/a	
		Phase BC	n/a	
		Phase CA	n/a	
		Phase S1	n/a	
		Phase S2	n/a	
		Phase S1S2	n/a	
		Phase S1N	n/a	
		Phase S2N	n/a	
		Phase S1S2N	n/a	
Current Flow Direction	Direction associated with current related time series data	Constrained List	n/a	Greenbutton
		Forward	n/a	
		Reverse	n/a	
Rate Structure				
Rate Structure ID	The name or title of the rate structure	String	n/a	Open EI
Rate Structure	Rates that determine how charges are levied by the utility	Constrained List	n/a	LBNL
	A consumer will pay one flat rate no matter what the usage level is	*Flat rate*	n/a	
	Time of use, or TOU, rates vary by time of day and time of year	*Time of use ~~rate~~*	n/a	
	Tiered rates increase the per-unit price of a utility as usage increases	*Tiered rate increasing*	n/a	
	Tiered rates decrease the per-unit price of a utility as usage increases	*Tiered rate decreasing*	n/a	
	A rate that keep raising based on highest demand to date for a set period of time.	*Ratchet*	n/a	
	(RTP) - pricing rates generally apply to usage on an hourly basis.	*Real time pricing*	n/a	SmartGrid.gov
	(VPP) - a hybrid of time-of-use and real-time pricing where the different periods for pricing are defined in advance (e.g., on-peak=6 hours for summer weekday afternoon; off-peak = all other hours in the summer months), but the price established for the on-peak period varies by utility and market conditions	*Variable peak pricing*	n/a	SmartGrid.gov

Term	Definition	Data Type	Unit of Measure	Definition Source
	(CPP) - when utilities observe or anticipate high wholesale market prices or power system emergency conditions, they may call critical events during a specified time period (e.g., 3 p.m.—6 p.m. on a hot summer weekday), the price for electricity during these time periods is substantially raised. Two variants of this type of rate design exist: one where the time and duration of the price increase are predetermined when events are called and another where the time and duration of the price increase may vary based on the electric grid's need to have loads reduced	*Critical peak pricing*	n/a	SmartGrid.gov
	(CPR) - when utilities observe or anticipate high wholesale market prices or power system emergency conditions, they may call critical events during pre-specified time periods (e.g., 3 p.m.—6 p.m. summer weekday afternoons), the price for electricity during these time periods remains the same but the customer is refunded at a single, predetermined value for any reduction in consumption relative to what the utility deemed the customer was expected to consume.	*Critical peak rebates*	n/a	SmartGrid.gov
	Standard rate structure	*Standard*	n/a	SEE Action
	Low income rate structure	*Low income*	n/a	SEE Action
Rate Structure Name	The name or title of TOU period	String	n/a	Greenbutton
Rate Structure Reference	Reference or hyperlink for the rate schedule, tariff book	String	n/a	OpenEI
Charge Rate	Charge per unit of resource.	Constrained List	n/a	
	The fixed monthly charge or fee billed monthly regardless of consumption	*Fixed monthly*	n/a	
	Charge rate to buy a unit of resource consumption.	*Buy*	n/a	
	Charge rate to sell a unit of resource back to the utility from customer site generation.	*Sell*	n/a	
	The annual average cost of providing an additional unit of resource.	*Average marginal buy*	n/a	BuildingSync
	Annual average rate to sell a unit of electricity back to the utility from customer site electricity generation through PV, wind etc.	*Average marginal sell*	n/a	BuildingSync
	Charge rate adjustments for any fees, riders, fuel adjustments, etc.	*Adjustment*	n/a	
	The additional charge for low power factor	*Reactive power charge*	n/a	
Rate Charge Value	Charge rate value, in $ per unit.	Decimal	$/unit	
Tier ID	This term is intended to capture the tier designation for a particular rate structure. For electricity pricing that is based on tiered pricing, each tier is allotted a certain maximum (kWh), above which the user is moved to the next tier that has a different unit pricing. For example - Tier 1 for rate schedule EV9	Integer	n/a	Greenbutton
Tier Maximum	The maximum amount of resource used at which a tier rate is applied for a given rate schedule and a tier. For example - Tier 1 for rate schedule EV9 is applicable till a maximum kWh of 1000.	Decimal	n/a	OpenEI/LBNL
Tier Minimum	Minimum energy for this rate structure range.	Decimal	n/a	
Rate Designation	Energy or demand designation to determine the rate.	Constrained List	n/a	OpenEI/LBNL
		Energy	n/a	
		Demand	n/a	
Demand Ratchet Percentage	Certain rate schedules incorporate demand ratchet percentage to ensure minimum billing demands based on historical peak demands. Billing demand in these cases is based comparing the month's demand and maximum of previous 11 month's demand times the demand ratchet percentage	Decimal	Percent	OpenEI/LBNL
Minimum Power Factor Without Penalty	Minimum power factor that needs to be maintained without any penalties	Decimal	Percent	LBNL

Term	Definition	Data Type	Unit of Measure	Definition Source
Emission Boundary	The boundary that encompases the measured emissions.	Constrained List	n/a	
	This is used in association with GHG emissions, associated with on-site fuel	*Direct*	n/a	
	This is used in association with GHG emissions, associated with purchases of fuel,	*Indirect*	n/a	
	This is used in association with emissions, premises' GHG emissions minus the	*Net*	n/a	
Emission Source	Source of emissions.	Constrained List	n/a	
	This is used in association with GHG emissions, associated with biogenic fuels	*Biomass*	n/a	
		Water treatment	n/a	
		Transportation	n/a	
		Avoided	n/a	
Emissions Factor	Emissions factor associated with a Resource	Decimal	kg/unit	BEDES Beta
Emission Gas Type	Emission gas type	*Constrained List*	n/a	ESPMGlossary
	General greenhouse gas emissions	*GHG*		
	CO2e (equivalent) allows other greenhouse gas emissions to be expressed in terms of CO2 based on their relative global warming potential (GWP). CO2 has a GWP of 1, methane has a GWP of approximately 25 (on a 100 year time horizon). In other words, for every 1 tonne of methane (CH4) emitted, an equivalent of 25 tonnes of CO2 would be emitted.	*CO2e*	n/a	
	Carbon dioxide, or CO2, is a natural, colorless and odorless greenhouse gas that is emitted when fossil fuels (i.e. natural gas, oil, coal etc.) are burnt.	*CO2*	n/a	
	Methane	*CH4*	n/a	
	Nitrous oxide	*N2O*	n/a	
	Nitric oxide (NO) and nitrogen dioxide (NO2) are together referred to as nitrogen oxides (NOx)	*NOx*	n/a	
	Sulfer dioxide	*SO2*		
Emissions Value	Emissions that result in gases that trap heat in the atmosphere.	Decimal	Dependent on Qualifier	EPA
Emissions Intensity	The Greenhouse Gas (GHG) emissions for the premises, divided by the gross	Decimal	Dependent on Qualifier	ESPMGlossary
Emissions Flow Intensity	The resulting GHG Emissions for Water and Wastewater treatment facilities	Decimal	Dependent on Qualifier	ESPMGlossary

Term	Definition	Data Type	Unit of Measure	Definition Source
Hazardous Waste Weight	Total weight of hazardous waste	Decimal	lbs	GRESB
Non Hazardous Waste Weight	Total weight of non-hazardous waste	Decimal	lbs	GRESB
Waste Recycling Percentage	Recycling percentage of waste by disposal route (% of total waste)	Decimal	Percent	GRESB
Waste Incineration Percentage	Incineration percentage of waste by disposal route (% of total waste)	Decimal	Percent	GRESB
Waste Landfill Percentage	Landfill percentage of waste by disposal route (% of total waste)	Decimal	Percent	GRESB

Term	Definition	Data Type
Unit Of Measure	Unit of measurement for the data value.	Constrained List
	Degree	degree
	U.S dollars	$
	Dollar per square feet	$/ft2
	Dollar per cubic feet	$/ft3
	Dollar per cubic feet per minute	$/(ft3/min)
	Dollar per Btu per hour-degree Fahrenheit	$/(Btu/h-F)
	Dollar per kBtu-hour per hour (equivalent to $/kW)	$/(kBtuh/h)
	Dollar per volt-ampere reactive (reactive power)	$/kVAR
	Dollar per kilowatt (demand)	$/kW
	Dollar per kilowatt hour (energy)	$/kWh
	Amperes	A
	Acres	Acres
	British Thermal Unit (energy)	Btu
	Unit of Thermal Conductance	Btu/h·ft·°F
	British thermal units per second	*Btu/s*
	British thermal unit per hour (energy rate)	Btu/hr
	Unit of Thermal Conductance	Btu/hr·ft2·°F
	British thermal unit (energy) per pound per degree temperature, used to define	Btu/lb-°F
	British thermal unit per watt hour	Btu/Wh
	Hundred cubic feet	ccf
	calorie/hour	*cal/h*
	Celsius	C
	Cubic feet per minute	cfm
	Cubic feet per hour	cfh
	Cubic meter per hour	cmh
	Full cord	Cord
	cycles/kWh	cycles/kWh
	days	days
	degree	degree
	Fahrenheit	F
	foot-candle	fc
	feet	ft
	square feet	ft2
	unit of insulation resistance	ft2-°F-hr/Btu
	cubic meters	*Cubic Meters*
	cubic feet	ft3
	million cubic feet	*MCF*
		ft3/kWh/cycle
	cubic feet per minute	ft3/min

Term	Definition	Data Type
	thousand cubic feet per hour	*kcf/h*
	million cubic feet per day	*MCF/day*
	Foot-Pound Force Per Hour	*ft-lbf/h*
	Foot-Pound Force Per Minute	*ft-lbf/min*
	gallons	gallons
	gallons/cycle	gallons/cycle
	gallons/cycle/cubic feet	gallons/cycle/ft3
	Gallons per minute	*gpm*
	gallons/day	gallons/day
	hour	hour
	hours/day	hours/day
	hours/week	hours/week
	horsepower	hp
	Unit of thermal resistance	hr·ft2·°F/Btu
	Hertz- unit of frequency	Hz
	inches	inches
	square inches	in2
	thousand British thermal unit	kBtu
	thousand British thermal unit per square feet	kBtu/ft2
	thousand British thermal unit per gallons per day	kBtu/gpd
	thousand British thermal unit per unit hour	kBtu/hr
	thousand cubic feet	kcf
	kilogram	kg
	kilogram per hour	kg/h
	kilogram per MMBtu of energy	kg/MMBtu
	Thousand gallons	kgal
	Thousand gallons per square feet	kgal/ft2
	kilogram of co2 equivalent	kgCO2e
	kilogram of co2 equivalent per gallons per day	kgCO2e/gpd
	kilogram of co2 equivalent per million british thermal unit	kgCO2e/MMBtu
	Thousand pounds	klbs
	pounds per cubic feet	lb/ft3
	pounds	lbs
	pounds per kilowatt hour	lbs/kWh
	pounds per hour	*lbs/h*
	linear feet	linear ft
	Liters per kilowatt hour	Liters/kWh
	loads/week	loads/week
	million gallons	*Mgal*
	million pounds	*Mlbs*
	kilowatt	kW
	kilowatt per ton	kW/ton
	million Watt	*MW*
	Watt hours	*Wh*

Term	Definition	Data Type
	kilowatt hour	kWh
	thousand pounds per hour	*Klbs/h*
	million pounds per hour	*Mlbs/h*
	Luminous power per unit solid angle per unit projected source area. Units are sometimes called nits.	cd/m2
	Luminous power emitted from a surface.	lux
	meters per second	m/s
	Million cubic feet	mcf
	milligrams per day	mg/l
	million gallons per day	Mgal/d
	microhertz	micro Hz
	microvolts	micro V
	minutes	min
	Thousand pounds	Mlbs
	million British Thermal Unit	MMBtu
	million British Thermal Unit per hour	MMBtu/hr
	months	Month
	Miles per hour	mph
	Metric Ton of Co2 equivalent	MtCO2e
	Megawatt hours	MWh
	Pascal	Pa
	percent	Percent
	Pixel	pixel
	pixels per inch	ppi
	pixels per square inch	pixel/in2
	pounds per square inch	psi
	revolutions per minute	rpm
	second	s
	Therms	Therm
	therms per hour	*therms/h*
	Metric ton or tonnes	Mass ton
	Ton of refrigeration	Cooling ton
	Ton hours	Ton-hour
	Volt	V
	Watt	W
	Watt per ft2	W/ft2
	Watt-hour	Wh
	Weeks/year	weeks/year
	Years	Years

Term	Definition	Data Type	Unit of Measure	Definition Source
Date Format	Formatting for the date data.	Constrained List	n/a	
	Format: CCYY	*Year*	n/a	
	Format: CCYY-MM	*MonthYear*	n/a	
	Format: CCYY-MM-DD	*Date*	n/a	
	Format: CCYY-MM-DDTHH:MM:SS.SSS	*DateTime*	n/a	
	Format: CCYY-MM-DDTHH:MM:SS.SSS:TimeZone	*DateTimeStamp*	n/a	
Solicitation	Specify if the data field is required or optional.	Constrained List	n/a	
	This field is required in the software tool the data is coming from, or is it required by	*Required*	n/a	
	This field is optional in the software tool the data is coming from, or is it optional by	*Optional*	n/a	
Derivation Method	The method by which the data was learned.	Constrained List	n/a	
	The data was noted as a fact through visual observation.	*Observed*	n/a	
	The data is calculated from direct measurements made on site.	*Calculated*	n/a	
	The value was ascertained using a device.	*Measured*	n/a	
	The data point is an estimation of the actual value or condition.	*Estimated*	n/a	
	Data value was replaced by a machine computed value based on analysis of histor	*Reference day estimate*	n/a	
	Data value was estimated using linear interpolation	*Linear interpolation*	n/a	
	Defaulted	*Default*	n/a	
	A temporary value that will be updated later	*Temporary*	n/a	
	The accuracy of this data was confirmed by an appropriate entity.	*Confirmed*	n/a	
	Data value was determined using a test procedure	*Tested*	n/a	
	Data value was calculated using a model	*Modeled*	n/a	
	Data value was estimated using extrapolation	*Extrapolation*	n/a	
	Calculated using logic or mathematical operations	*Derived*	n/a	Green Button
	Revised to reflect average weather conditions	*Normalized for weather*	n/a	Green Button
Confirmed By	Entity that confirmed the accuracy of the data.	String	n/a	
Collection Process	The method by which the data was collected or entered.	Constrained List	n/a	
	The value was entered manually by a user, either through direct typing or spreadsh	*Direct input upload*	n/a	
	The value was transferred via a web services or other software connection directly	*API transfer*	n/a	
	Data that has been calculated (using logic or mathematical operations), not necess	*Derived*	n/a	
	The value is a default value	*Default*	n/a	
	Aggregated usage for multiple tenant tenant spaces provided by Utility	*Aggregated utility data*	n/a	
Origin	What is the origin of the data value?	Constrained List	n/a	
	The data came from government records, such as property tax assessor records	*Government record*	n/a	
	Property management agent or realtor provided the floor area value.	*Agent*	n/a	
		Assessor	n/a	
	An accredited auditor measured the floor area value.	*Auditor*	n/a	
	As specified in the Product Specification	*Product specification*	n/a	
	As specified in the Building Component Library (BCL)	*Building component library*	n/a	
	The data came automatically and directly from a utility, such as in a green button co	*Utility transfer*	n/a	
	Transfer through an intermediate tool such as an Energy Management System (EM	*Energy management system*	n/a	
	Data was calculated based on building plans, and then input by hand	*Drawings*	n/a	
	Data was directly measured (e.g. building floor area or product size)	*Direct measurement*	n/a	
	The data came from a design program (e.g. CAD/BIM files)	*Design files*	n/a	
	The data source is a computer simulation of the building. See the Software Tools te	*Simulation*	n/a	
	The data came from, or was calculated by, ENERGY STAR Portfolio Manager	*ENERGY STAR Portfolio Manage*	n/a	
	US Environmental Protection Agency	*US EPA*	n/a	
	US Energy Information Administration	*US EIA*	n/a	
	The data came from the EPA Target Finder calculator	*Target Finder*	n/a	
		Arch2030	n/a	
	The data came from an ASHRAE calculation	*ASHRAE*	n/a	
	The data came from a utility	*Utility*	n/a	
Confidence	Confidence in the accuracy of the data	Percent	n/a	

Term	Definition	Data Type	Unit of Measure	Definition Source
Record Scope	The extent to which the record fulfills the intended scope. For example, the extent t	Constrained List	n/a	LBNL
	The record does not meet the scope.	*Partial*	n/a	
	The record meets the scope without excess.	*Complete*	n/a	
	The record data exceeds the scope.	*Excess*	n/a	
Quality Alert	Field to capture alert relating to data quality.	String	n/a	
Quality	Indication of the quality of the data	Constrained List	n/a	
	Replaced or approved by a human	*Manually edited*	n/a	
	Data that has failed one or more checks	*Questionable*	n/a	
	Data that has been calculated as a projection or forecast of future readings	*Projected*	n/a	
	Data value was computed using linear interpolation based on the readings before a	*Mixed*	n/a	
	Data that has not gone through the validation, editing and estimation process	*Raw*	n/a	
	Data has been guaranteed by an authorized person or method	*Guaranteed*	n/a	
	Data that has been validated and possibly edited and/or estimated in accordance w	*Validated*	n/a	
	Data that failed at least one of the required validation checks but was determined t	*Verified*	n/a	
		Actual	n/a	
	Sufficient accuracy to settle DR transactions. PBI eligible data must have at least	*Revenue quality*	n/a	Green Button
Measurement Protocol	A reference to the source standard used as the measurement protocol definition. E	String	n/a	Green Button
Range Value Inclusivity	Determines if the lower and higher values in a range are inclusive or exclusive of th	Constrained List	n/a	
		Less than	n/a	
		Greater than	n/a	
		Equal to	n/a	
Low Range Value	Minimum value in a range.	Decimal	n/a	
High Range Value	Maximum value in a range.	Decimal	n/a	

Composite Term	Atomic Terms	Data Type	Unit of Measure
Absorption Chiller Capacity	Cooling Type = Absorption chiller	Decimal	Cooling ton
	Capacity = [volume]		
	Unit of Measure = Cooling ton		
Annual Heating AFUE Efficiency Value	Efficiency Qualifier = Annual heating	Decimal	n/a
	Efficiency Metric Qualifier = AFUE		
	Efficiency Value = [value]		
Annual Onsite Renewable Electricity Resource Value	Interval Frequency = Annual	Decimal	kWh
	Resource Boundary = Onsite		
	Resource Generation = Renewable		
	Resource = Electricity		
	Resource Value = [value]		
	Unit of Measure = kWh		
Annual Photovoltaic Exported Electricity Resource Value	Interval Frequency = Annual	Decimal	kWh
	Energy Generation Technology = Photovoltaic		
	Resource Generation = Exported		
	Resource = Electricity		
	Resource Value = [value]		
	Unit of Measure = kWh		
Annual Site Energy Resource Intensity	Interval Frequency = Annual	Decimal	kBtu/ft2
	Resource Boundary = Site		
	Resource = Energy		
	Resource Intensity = [value]		
	Unit of Measure = kBtu/ft2		
Annual Source Energy Resource Intensity	Interval Frequency = Annual	Decimal	kBtu/ft2
	Resource Boundary = Source		
	Resource = Energy		
	Resource Intensity = [value]		
	Unit of Measure = kBtu/ft2		
Annual Weather Normalized Heating Resource Value	Interval Frequency = Annual	Decimal	kBtu
	Normalization = Weather normalized		
	End Use = Heating		
	Resource Value = [value]		
	Unit of Measure = kBtu		
Audit Complied Compliance Status Date	Action Category = Audit	Date	MM-YYYY
	Compliance Status = Complied		
	Compliance Status Date = [value]		
	Date Format = YearMonth		
Baseline Annual Energy Resource Intensity	Temporal Status = Baseline	Decimal	kBtu/ft2
	Interval Frequency = Annual		
	Resource = Energy		
	Resource Intensity = [value]		
	Unit of Measure = kBtu/ft2		

Composite Term	Atomic Terms	Data Type	Unit of Measure
Building Footprint Area	Premises Level = Building	Decimal	ft2
	Floor Area Qualifier = Footprint		
	Area = [value]		
Chiller Plant Improvements Commissioning Cost	Technology Category = Chiller plant improvements	Decimal	$
	Action Category = Commissioning		
	Cost = [value]		
Completed Construction Status Date	Construction Status = Completed	Date	YYYY
	Construction Status Date = [value]		
	Date Format = Year		
Conditioned Building Volume	Conditioning Status = Conditioned	Decimal	ft3
	Premises Level = Building		
	Volume = [value]		
Cooled Gross Area	Conditioning Status = Cooled	Decimal	ft2
	Floor Area Qualifier = Gross		
	Area = [value]		
Created Date	Date Status = Created	Date	CCYY-MM-DD
	Date = [value]		
Direct Annual CO2e Emissions Value	Emission Boundary = Direct	Decimal	kgCO2e
	Interval Frequency = Annual		
	Emission Gas Type = CO2e		
	Emissions Value = [value]		
	Unit of Measure = kgCO2e		
Electricity Demand Rate Charge Value	Resource = Electricity	Decimal	$/kW
	Rate Designation = Demand		
	Rate Charge Value = [value]		
	Unit of Measure = $/kW		
Electricity Demand Tier Maximum	Resource = Electricity	Decimal	kW
	Rate Designation = Demand		
	Tier Maximum = [value]		
	Unit of Measure = kW		
Energy Auditor Credential	Contact Label = Energy Auditor	Constrained List	n/a
	Credential = [value]		
Exterior Shading System	Location = Exterior	Constrained List	n/a
	Shading System = [value]		
Floor Quantity	Spatial Unit Type = Floor	Integer	n/a
	Quantity = [value]		
Gross Area	Floor Area Qualifier = Gross	Decimal	ft2
	Area = [value]		
Gross Floor Area	Floor Area Qualifier = Gross	Decimal	ft2
	Opaque Surface = Floor		
	Area = [value]		
Ground Floor Bedroom Quantity	Location = Ground floor	Integer	n/a
	Spatial Unit Type = Bedroom		
	Quantity = [value]		
Heating Capacity	HVAC Category = Heating	Decimal	Btu/hr

Composite Term	Atomic Terms	Data Type	Unit of Measure
	Capacity = [value]		
	Unit of Measure = Btu/hr		
Package Estimated Energy Cost Savings	Reporting Level = Package	Decimal	$
	Derivation Method = Estimated		
	Resource = Energy		
	Cost Savings = [value]		
Pre Retrofit Watts Per Lamp Consumption Rate	Temporal Status = Pre retrofit	Decimal	W
	Consumption Rate Type = Watts per lamp		
	Consumption Rate = [value]		
	Unit of Measure = W		
Primary Occupancy Classification	Premises Level = Primary	Constrained List	n/a
	Occupancy Classification = [List Option]		
Thermal Zone Area	Spatial Unit Type = Thermal zone	Decimal	ft2
	Area = [value]		
Water Meter Quantity	Resource = Water	Integer	n/a
	Control Technology = Meter		
	Quantity = [value]		

References for Definition Sources	
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers ASHRAE Terminology https://www.ashrae.org/resources--publications/free-resources/ashrae-terminology
AUC	Audit Use Case- A former name for BuildingSync
BEDES TWG	BEDES Technical Working Group (2014)
BEDES-Beta	BEDES Beta Version 2.4
BuildingSync	DOE/NREL official name for the project formerly known as BEDES Audit Use Case (AUC)
CAST	Commercial Asset Score Tool
CEC	California Energy Commission
CEC Proposition 39	California Energy Commission Proposition 39
CENSUS	United States Census Bureau http://www.census.gov/
CMS	Centers for Medicare and Medical Services http://www.cms.gov/
CTS	Compliance Tracking System- FEMP's system that hold EISA compliance data for various agencies
EIA	U;S. Energy Information Administration http://www.eia.gov/
ENERGY STAR	EnergyPlus Simulation Software (US Department of Energy/NREL)
EPA	U.S. Environmental Protection Agency
ePB	eProjectBuilder- FEMP's system that houses ESPC data
EPLUS	Energyplus Simulation Software (US Department of Energy/NREL)
ESPM	EPA ENERGY STAR Qualified Home Program New Construction Requirements Portfolio Manager
FGDC	Federal Geographic Data Committee - United States Thoroughfare, Landmark, and Postal Address Data Standard (https://www.fgdc.gov/standards/projects/FGDC-standards-projects/street-address/index_html)
Food Service Survey	http://www.rfmaonline.com/?page=TestPageFSSurveyGG
HES-SF	Home Energy Saver, Single Family
HPXML	Home Performance XML HPXML_BPI-2200-S-2013-Standard-for-Home-Performance-Related-Data-Collection_20131115.pdf
IBC/ASTM	International Building Code and ASTM International
IBPS-USA	International Building Performance Simulation Association - USA Affiliate. http://www.bembook.ibpsa.us/index.php?title=Convective_heat_transfer
LBNL	Definition created from original thinking by LBNL staff as well as researching multiple sources to come up with final wording.
NAICS	U.S. Census Bureau: North American Industry Classification System http://www.census.gov/eos/www/naics/
NFRC	National Fenestration Rating Council NFRC 600-2010 Glossary and Terminology
NREL	National Renewable Energy Laboratory
OSHA	U.S. Occupational Safety and Health Administration

References for Definition Sources	
PG&E	PG& E Food Service Technology Center http://www.fishnick.com
RESO	Real Estate Standards Organization Publishes the Real Estate Transaction Standard (RETS) Data Dictionary http://www.reso.org/rets
Solar Cells	http://aerostudents.com/files/solarCells/CH5SolarCellConversionEfficiencyLimits.pdf
USGBC	U.S. Green Building Council LEED Requirements

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