

Joint Appendix JA1

APPENDIX JA1 – Definitions

Terms, phrases, words and their derivatives in the Reference Appendices shall be defined as specified in Title 24, Part 6, Section 100.1. Below are additional definitions for terms used in the Reference Appendices.

ACM See Alternative Calculation Method in Section 100.1 of Title 24, Part 6.

ACP See Alternative Component Package.

AFUE See Annual Fuel Utilization Efficiency in Section 100.1 of Title 24, Part 6.

AIR LEAKAGE is a measure of how much outside air comes into a home or building through a manufactured fenestration or exterior door products.

AIR POROSITY is a measure of the air-tightness of infiltration barriers in units of cubic feet per hour per square foot per inch of mercury pressure difference.

AIRFLOW ACROSS THE EVAPORATOR is the rate of airflow, usually measured in cfm across a heating or cooling coil. The efficiency of air conditioners and heat pumps is affected by the airflow across the evaporator (or condenser in the case of a heat pump).

ALTERNATIVE CALCULATION METHOD (ACM) REFERENCE MANUAL or ACM REFERENCE MANUAL contains the specific procedures to implement Sections 140.1 and 150.1 of Title 24, Part 6 of the California Code of Regulations in Compliance Software.

ALTERNATIVE COMPONENT PACKAGE is a set of building measures whose aggregate calculated energy use is less than or equal to the maximum allowed Energy Budget.

ANSI C78.377 is the American National Standards Institute document titled “Specifications for the Chromaticity of Solid State Lighting Products.” (ANSI C78.377-2017).

ANSI C79.1 is the American National Standards Institute document titled “Nomenclature for Glass Bulbs Intended for Use with Electric Lamps.” (ANSI C79.1-2002).

ANSI C82.2 is the American National Standard for Lamp Ballasts –Method of Measurement for Fluorescent Lamp Ballasts (ANSI C82.2-2002(R2016)).

ANSI C82.77 is the American National Standard for Harmonic Emission Limits - Related Power Quality Requirements for Lighting Equipment (ANSI C82.77-2002).

APPLIANCE STANDARDS are the Standards contained in the Appliance Efficiency Regulations.

APPROVED as to an energy code compliance provider or home energy rating system, means reviewed and approved by the Commission under the Building Energy Efficiency Standards, Title 24, Part 1, Section 10-103.3.

APPROVED BY THE COMMISSION means approval under Section 25402.1 of the Public Resources Code.

APPROVED CALCULATION METHOD is compliance software, or alternative component packages, or exceptional methods approved under Section 10-109.

AREAL HEAT CAPACITY See Heat Capacity.

AHRI is the Air-Conditioning, Heating and Refrigeration Institute.

AHRI 210/240 is the Air-conditioning, Heating, and Refrigeration Institute document titled "Performance Rating of Unitary Air-Conditioning and Air-Source Heat Pump Equipment," 2008 (ANSI/AHRI Standard 210/240-2017 with Addenda 1).

AHRI 310/380 is the Air-Conditioning, Heating, and Refrigeration Institute document titled "Standard for Packaged Terminal Air-Conditioners and Heat Pumps (CSA-C744-17)," 2017 (AHRI 310/380-2017).

AHRI 340/360 is the Air-Conditioning, Heating and Refrigeration Institute document titled "Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment," 2019 (AHRI Standard 340/360-(I-P) 2019).

AHRI 365 is the Air-Conditioning, Heating and Refrigeration Institute document titled "Commercial and Industrial Unitary Air-Conditioning Condensing Units," 2009 (ANSI/AHRI Standard 365 (I-P)-2009).

AHRI 390 is the Air-Conditioning, Heating and Refrigeration Institute document titled "Performance Rating of Single Package Vertical Air-Conditioners and Heat Pumps," 2003 (ANSI/AHRI Standard 390-2003).

AHRI 400 is the Air-Conditioning, Heating and Refrigeration Institute document titled "Liquid to Liquid Heat Exchangers," 2015 (ANSI/AHRI Standard 400 (I-P)-2015).

AHRI 460 is the Air-Conditioning, Heating and Refrigeration Institute document titled "Performance Rating of Remote Mechanical-Draft Air-Cooled Refrigerant Condensers," 2005 (ANSI/AHRI Standard 460-2005).

AHRI 550/590 is the Air-Conditioning, Heating and Refrigeration Institute document titled "Performance Rating of Water Chilling Packages Using the Vapor Compression Cycle," 2020 (AHRI Standard 550/590(I-P)-2020).

AHRI 560 is the Air-Conditioning, Heating and Refrigeration Institute document titled "Absorption Water Chilling and Water Heating Packages," 2000 (AHRI Standard 560-2000).

AHRI 680 is the Air-Conditioning, Heating and Refrigeration Institute document titled "Performance Rating of Residential Air Filter Equipment," 2017 (AHRI Standard 680 (I-P)-2017).

AHRI 1230 is the Air-Conditioning, Heating and Refrigeration Institute document titled "Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment," 2014 (AHRI Standard 1230-2014) with Addendum 1.

AMCA is the Air Movement and Control Association.

ANSI/AMCA 220 is the Air Movement and Control Association document titled "Laboratory Methods of Testing Air Curtain Units for Aerodynamic Performance Rating," 2021 (ANSI/AMCA Standard 220-21).

ANSI/ASA S12.55-2012 is the American National Standard document titled "Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure – Precision methods for anechoic rooms and hemi-anechoic rooms," 2012 (ANSI/ASA S12.55-2012).

ASHRAE is the American Society of Heating, Refrigerating, and Air-conditioning Engineers.

ASHRAE CLIMATIC DATA FOR REGION X is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "ASHRAE Climatic Data for Region X, Arizona, California, Hawaii and Nevada," Publication SPCDX, 1982 and "Supplement," 1994.

ASHRAE GUIDELINE 36 is the American Society of Heating, Refrigerating and Air Conditioning Engineers document titled "High Performance Sequences of Operation for HVAC Systems". 2021 (ASHRAE Guideline 36-2021).

ASHRAE HANDBOOK, APPLICATIONS VOLUME is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "ASHRAE Handbook: Heating, Ventilating, and Air-Conditioning Applications" (I-P)(2019).

ASHRAE HANDBOOK, EQUIPMENT VOLUME is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "ASHRAE Handbook: Heating, Ventilating, and Air-Conditioning Systems and Equipment" (I-P)(2020).

ASHRAE HANDBOOK, FUNDAMENTALS VOLUME is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "ASHRAE Handbook: Fundamentals" (I-P)(2017).

ASHRAE STANDARD 52.2 is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size," 2017 (ANSI/ASHRAE Standard 52.2-2017).

ASHRAE STANDARD 55 is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "Thermal Environmental Conditions for Human Occupancy," 2020 (ASHRAE Standard 55-2020).

ASHRAE STANDARD 62.2 is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "Ventilation and Acceptable Indoor Air Quality in Residential Buildings," 2022 (ANSI/ASHRAE Standard 62.2-2022).

ASHRAE STANDARD 193 is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "Method of Test for Determining the Airtightness of HVAC Equipment," R2014 (ANSI/ASHRAE Standard 193-RA2014).

ASTM E2357 is the American Society for Testing and Materials document titled, "Standard Test Method for determining air leakage Rate of air barrier assemblies" 2018 (ASTM E2357-18).

AUTO REPAIR See Nonresidential Functional Area or Type of Use.

AUTOMATIC is capable of operating without human intervention.

BACK is the back side of the building as one faces the front façade from the outside (see Front). This designation is used on the Certificate of Compliance (CF-1R form) to indicate the orientation of fenestration (e.g., Back-West).

BATTERY ENERGY STORAGE SYSTEM (BESS) is a stationary equipment that receives electrical energy and then utilizes batteries to store that energy for later use to supply electrical energy when needed. The BESS consists of one or more modules, a power conditioning system, and balance of plant components.

BRITISH THERMAL UNIT (BTU) is the amount of heat needed to raise the temperature of one pound of water one degree Fahrenheit.

BTU/H is the amount of heat in Btu that is removed or added during one hour. Used for measuring heating and cooling equipment output.

BUILDER is the general contractor responsible for construction.

BUILDING ENERGY EFFICIENCY STANDARDS are the California Building Energy Efficiency Standards as set forth in the California Code of Regulations, Title 24, Part 6, also known as the California Energy Code.

BUILDING LOCATION DATA is the specific outdoor design temperatures shown in Reference Joint Appendix JA2 used in calculating heating and cooling loads for the particular location of the building.

BUILDING OWNER is the owner of the building or dwelling unit.

BUILDING PERMIT is an electrical, plumbing, mechanical, building, or other permit or approval, that is issued by an enforcement agency, and that authorizes any construction that is subject to Part 6.

BUILDING TYPES is the classification of buildings defined by the CBC and applicable to the requirements of the Building Energy Efficiency Standards.

CALIFORNIA ELECTRICAL CODE is the 2019 California Electrical Code.

CALIFORNIA ENERGY CODE See Building Energy Efficiency Standards.

CALIFORNIA ENERGY COMMISSION Is the California State Energy Resources Conservation and Development Commission.

CALIFORNIA FLEXIBLE INSTALLATION (CFI) is a set of criteria that allows a PV system to be modeled under the performance method without providing more specific orientations and tilts.

CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC) RULE 21 is the CPUC rule that describes the interconnection, operating and metering requirements for generation facilities to be connected to a utility's distribution system.

CBC is the 2019 California Building Code.

CEILING is the interior upper surface of a space separating it from an attic, plenum, indirectly or directly conditioned space or the roof assembly, which has a slope less than 60 degrees from horizontal.

CERTIFICATE OF COMPLIANCE is a document with information required by the Commission that is prepared by the Documentation Author that indicates whether the building includes measures that require field verification and diagnostic testing.

CERTIFICATE OF INSTALLATION is a document with information required by the Commission that is prepared by the builder or installer verifying that the measure was installed to meet the requirements of the Standards.

CERTIFICATE OF VERIFICATION is a document with information required by the Commission that is prepared by the ECC Rater to certify that measures requiring field verification and diagnostic testing comply with the requirements.

CERTIFICATION is certification by the manufacturer to the Commission, as specified the Appliance Efficiency Regulations, that the appliance complies with the applicable standard for that appliance. The term certification is also used in other ways in the standards. Many of the compliance forms are certificates, whereby installers, testers and others certify that equipment was correctly installed and/or tested.

CERTIFIED as to a home energy rater, is having been found by a certified home energy rating provider to have successfully completed the requirements established by that home energy rating provider.

CIE 53 is the International Commission on Illumination (Commission Internationale de l'Eclairage) document titled "Methods of Characterizing the Performance of Radiometers and Photometers," (CIE 053-1982).

COLOR RENDERING INDEX (CRI) is a measure of the degree of color shift that objects undergo when illuminated by the lighting source as compared with the color of the same objects when illuminated by a reference source of comparable color temperature. CRI is calculated according to CIE 13.3.

COMPLIANCE CYCLING CAPACITY is the cycling capacity in kWh of the BESS that is programmed during the installation/commissioning of the system. Once programmed, the ratio between compliance cycling capacity and usable capacity shall be maintained for the life of the BESS.

COMPARTMENTALIZATION is when a dwelling unit enclosure area, including walls, ceilings, and floors shared with exterior spaces or adjacent spaces in the building including but not limited to neighboring units, corridors, and elevator shafts, is constructed to prevent air leakage.

CORRELATED COLOR TEMPERATURE (CCT) is the absolute temperature of a blackbody whose chromaticity most nearly resembles that of the light source.

CODES, CFR is the Code of Federal Regulations.

CLTD is the Cooling Load Temperature Difference.

COMBINATION SPACE-HEATING AND WATER-HEATING APPLIANCE is an appliance that is designed to provide both space heating and water heating from a single primary energy source.

COMBINED HYDRONIC SPACE/WATER HEATING SYSTEM is a system which both domestic hot water and space heating is supplied from the same water heating equipment. Combined hydronic space heating may include both radiant floor systems and convective or fan coil systems.

COMPLIANCE APPROACH is any one of the allowable methods by which the design and construction of a building may be demonstrated to be in compliance with Part 6. The compliance approaches are the performance compliance approach and the prescriptive compliance approach. The requirements for each compliance approach are set forth in §100.0(e)2 of Part 6.

COMPLIANCE DOCUMENTS are any of the documentation specified in §10-103(a) utilized to demonstrate compliance with Part 6 (i.e. Certificate of Compliance, Certificate of Installation, Certificate of Acceptance, and Certificate of Verification).

COMPLIANCE OPTION is a method or procedure for demonstrating compliance with Title 24, Part 6 and Part 11, Division 4.2 and 5.2 of the California Code of Regulations through modifications of approved calculation methods.

CONDITIONED FOOTPRINT is a projection of all conditioned space on all floors to a vertical plane. The conditioned footprint area may be equal to the first floor area, or it may be greater, if upper floors project over lower floors. One way to think of the conditioned footprint area is as the area of the largest conditioned floor in the building plus the conditioned floor area of any projections from other stories that extend beyond the outline of that largest floor.

CONSTRUCTION LAYERS are roof, wall and floor constructions which represent an assembly of layers. Some layers are homogeneous, such as gypsum board and plywood sheathing, while other layers are non-homogeneous such as the combination of wood framing and cavity insulation typical in many buildings.

CONTINUOUS AIR BARRIER See Air Barrier.

CONTROLLED VENTILATION CRAWL SPACE (CVC) is a crawl space in a residential building where the side walls of the crawlspace are insulated rather than the floor above the crawlspace. A CVC has automatically controlled crawl space vents. Credit for a CVC is permitted for low-rise residential buildings that use the performance approach to compliance.

COOL ROOF RATING COUNCIL (CRRC) is a not-for-profit organization designated by the Commission as the Supervisory Entity with responsibility to rate and label the reflectance and emittance of roof products.

COOLING COIL AIRFLOW Is the air flow through the evaporator (indoor) coil of a direct expansion air conditioning unit in cooling mode. The air flow is expressed in cubic feet per minute (CFM) or liter per second (L/S) of standard air (standard air has a density of 0.075 lb/ft³).

COOLING LOAD is the rate at which heat must be extracted from a space to maintain a desired room condition.

COOLING LOAD TEMPERATURE DIFFERENCE (CLTD) is an equivalent temperature difference used for calculating the instantaneous external cooling loads across a wall or roof. The cooling load is the CLTD x U-factor x Area.

COP See Coefficient of Performance in Section 100.1 of Title 24, Part 6.

COURTYARD is an open space through one or more floor levels surrounded by walls within a building.

CRRC See Cool Roof Rating Council.

CUSTOM ENERGY BUDGET See Energy Budget.

CYCLING CAPACITY is the battery energy storage capacity in kWh available for daily cycling.

DATA REGISTRY is a web service with a user interface and database maintained by a Registration Provider that complies with the applicable requirements in Reference Joint Appendix JA7, with guidance from the Data Registry Requirements Manual, and provides for registration of residential or nonresidential compliance documentation used for demonstrating compliance with Part 6.

RESIDENTIAL DATA REGISTRY is a data registry that is maintained by an ECC Provider that provides for registration when required by Part 6 of all residential compliance documentation and the nonresidential Certification of Verification.

NONRESIDENTIAL DATA REGISTRY is a data registry that is maintained by the Registration Provider approved by the Commission that provides for registration, when required by Part 6, of all nonresidential documentation, excluding all Certificates of Acceptance recorded by an acceptance test technician certification provider (10-103.1 and 10-103.2). However, nonresidential data registries may not provide for registration of nonresidential Certificate of Verification.

DATA REGISTRY REQUIREMENTS MANUAL is a document that provides additional detailed guidance regarding the functional and technical aspects of the Data Registry requirements given in Reference Joint Appendix JA7.

DEMISING WALL is a wall that is a demising partition.

DENSITY is the mass per unit volume of a construction material as documented in an ASHRAE handbook, a comparably reliable reference or manufacturer's literature.

DEPLETABLE SOURCES is energy obtained from electricity purchased from a public utility, or energy obtained from burning coal, oil, natural gas, or liquefied petroleum gases.

DIRECTLY CONDITIONED SPACE is an enclosed space that is provided with wood heating, is provided with mechanical heating that has a capacity exceeding 10 Btu/(hr.×ft.²), or is provided with mechanical cooling that has a capacity exceeding 5 Btu/(hr.×ft.²), unless the space-conditioning system is designed and thermostatically controlled to maintain a process environment temperature less than 55°F or to maintain a process environment temperature greater than 90°F for the whole space that the system serves, or unless the space-conditioning system is designed and controlled to be

incapable of operating at temperatures above 55°F or incapable of operating at temperatures below 90°F at design conditions.

DIVIDERS are wood, aluminum or vinyl glazing dividers including mullions, muntins, munnions and grilles. Dividers may truly divide lights, be between the panes, or be applied to the exterior or interior of the glazing.

DOCUMENTATION AUTHOR is a person who prepares a Title 24, Part 6 document that must subsequently be reviewed and signed by a responsible person in order to certify compliance with Part 6.

DOMINANT OCCUPANCY is the occupancy type in mixed occupancy buildings with the greatest percentage of total conditioned floor area.

DUCT LOSSES is heat transfer into or out of a space conditioning system duct through conduction or leakage.

ENERGY CODE COMPLIANCE (ECC) PROGRAM is the program for field verification and diagnostic testing for residential construction as set forth in Section 10-103.3 to verify that newly constructed buildings and additions and alterations to existing buildings comply with the requirements of the Energy Code.

ECC-PROVIDER is an organization approved by the Commission to administer the ECC program pursuant to the requirements of Section 10-103.3.

ECC-RATER is a person trained, tested, and certified by an ECC-Provider to perform field verification and diagnostic testing for the ECC program pursuant to the requirements of Section 10-103.3.

ECC-RATER COMPANY is an organization certified by an ECC-Provider to offer field verification and diagnostic testing services by the ECC-Rater Company's ECC-Raters for the ECC program pursuant to the requirements of Section 10-103.3.

VERIFIED ECC-RATER is an ECC-Rater that has achieved the status of "Verified" as set forth in Section 10-103.3(d)5B.

ENTIRELY NEW OR REPLACEMENT DUCT SYSTEMS installed as part of an alteration of a dwelling unit's space conditioning system(s) shall be constructed of at least 75% new duct material and may include reused parts from the dwelling unit's existing duct system (e.g. registers, boots, air handler, coil, plenums, duct material, etc.) but only if the reused parts are accessible and they can be sealed to prevent leakage.

EDGE OF GLASS is the portion of fenestration glazing that is within two and one half inches of the spacer.

EER and EER2 See Energy Efficiency Ratio and Energy Efficiency Ratio 2 in Section 100.1 of Title 24, Part 6.

ELECTRIC HEATING is an electrically powered heating source, such as electric resistance, heat pumps with no auxiliary heat or with electric auxiliary heat, solar with electric back-up, etc.

ELECTRIC RESISTANCE HEATING is a heating system that converts electric energy directly into heat energy by passing a current through an electric resistance. Electric resistance heat is inherently less efficient than gas as a heating energy source because it

must account for losses associated with generation from depletable fossil fuels and transmission to the building site.

ENERGY EFFICIENCY STANDARDS See Building Energy Efficiency Standards.

ENERGY STAR Start Time Test Method is the ENERGY STAR program document entitled “ENERGY STAR Program Requirements for Lamps Version 1.0 – Start Time Test Method – Final” (August-2013).

ENERGY STAR Ambient Temperature Life Test Method is the ENERGY STAR program document entitled “ENERGY STAR Program Requirements for Lamps Version 1.0 - Ambient Temperature Life Test Method – Final” (August-2013).

ENERGY STAR Elevated Temperature Light Output Ratio Test Method is the ENERGY STAR program document entitled “ENERGY STAR Program Requirements for Lamps Version 1.0 – Elevated Temperature Light Output Ratio Test Method – Final” (August-2013).

ENERGY STAR Elevated Temperature Life Test Method is the ENERGY STAR program document entitled “ENERGY STAR Program Requirements for Lamps Version 1.0 – Elevated Temperature Life Test Method – Final” (August-2013).

ENERGY STAR Product Specification for Lamps Noise Recommended Practice is the ENERGY STAR program document entitled, “ENERGY STAR Program Requirements for Lamps Version 1.0 – Noise Recommended Practice – Final” (August-2013).

EVAPORATIVE COOLER provides cooling to a building by either direct contact with water (direct evaporative cooler), no direct contact with water (indirect evaporative cooler), or a combination of direct and indirect cooling (indirect/direct evaporative cooler). The credit offered for evaporative coolers depends on building type and climate.

EXCEPTIONAL METHOD is a method for estimating the energy performance of building features that cannot be adequately modeled using the public domain computer programs and that is approved by the Executive Director.

EXECUTIVE DIRECTOR is the Executive Director of the Commission.

EXPOSED THERMAL MASS is mass that is directly exposed (uncovered) to the conditioned space of the building. Concrete floors that are covered by carpet are not considered exposed thermal mass.

CENTER OF GLASS U-FACTOR is the U-factor for the glass portion only of vertical or horizontal fenestration and is measured at least two and one half inches from the frame. Center of glass U-factor does not consider the U-factor of the frame.

FAÇADE is the contiguous exterior of a building surface, but not limited to fenestration products.

SIDE FINS are vertical shading elements mounted on either side of a glazed opening that can protect the glazing from lateral low angle sun penetration.

LOW-E COATING is a low emissivity metallic coating applied to glazing in fenestration products. See Soft Coat and Hard Coat.

- (a) **HARD COAT** is a low emissivity metallic coating applied to the glass, which will be installed in a fenestration product, through a pyrolytic process (at or near the melting point of the glass so that it bonds with the surface layer of glass). Hard coatings are less susceptible to oxidation and scratching as compared to soft coats. Hard coatings generally do not have as low emissivity as soft coats.
- (b) **SOFT COAT** is a low emissivity metallic coating applied to glass, which will be installed in a fenestration product through a sputter process where molecules of metals such as stainless steel or titanium are sputtered onto the surface of glass. Soft coats generally have lower emissivity than hard coats.

OPERABLE is fenestration that is designed to be opened or closed.

SOLAR HEAT GAIN COEFFICIENT, CENTER OF GLAZING (SHGC_c) is the SHGC for the center of glazing area.

SOLAR HEAT GAIN COEFFICIENT, TOTAL FENESTRATION PRODUCT (SHGC or SHGCT) is the SHGC for the total fenestration product.

U-FACTOR, CENTER OF GLAZING (U_c) is the U-Factor for the center of glazing area.

U-FACTOR, TOTAL FENESTRATION PRODUCT (U_t) is the U-Factor for the total fenestration product.

VISIBLE TRANSMITTANCE, CENTER OF GLAZING (VTC) the VT for the center of glazing area.

VISIBLE TRANSMITTANCE, TOTAL FENESTRATION PRODUCT (VT or VT_t) is the VT for the total fenestration product.

WINDOW FILM is fenestration attachment products which consist of a flexible adhesive-backed polymer film which may be applied to the interior or exterior surface of an existing glazing system.

FIELD-ASSEMBLED BESS is a BESS with a combination of battery energy storage modules and inverter components that are installed to operate as a system in the field, and the combination has more than one model number.

FIELD TECHNICIAN is a person who performs acceptance tests in accordance with the specifications in Reference Nonresidential Appendix NA-7 and reports the results of the acceptance tests on the Certificate of Acceptance document, in accordance with the requirements of §10-103(a)4.

FOSSIL FUELS are fuels which are derived from natural gas, coal, oil and liquefied petroleum products. These are generally nonrenewable resources, although natural gas may also be produced by other means, such as biomass conversion.

FRAMED PARTITION OR ASSEMBLY is a partition or assembly constructed using separate structural members spaced not more than 32 inches on center.

FRAMING EFFECTS is the effect on the overall U-factor due to the type and amount of framing in walls, roofs/ceilings and floors. For compliance, fixed values for wood framing percentages are assumed when calculating U-factors.

FRAMING PERCENTAGE is the fraction of the surface of a partition that is framing as compared to that portion which is cavity.

FRONT is the primary entry side of the building (front facade) used as a reference in defining the orientation of the building or unit plan. The orientation of the front facade may not always be the same as that for the front door itself.

FUME HOOD SASH OBSTRUCTION SENSOR detects obstructions in the sash opening and prevents the automatic closing when obstructions are present.

GAP WIDTH is the distance between lites in multi-glazed systems. This is typically measured from inside surface to inside surface, though some manufacturers may report “overall” insulated glass (IG) width, which is measured from outside surface to outside surface.

GAS INFILLS are air, argon, krypton, CO₂, SF₆, or a mixture of these gasses between the panes of glass in insulated glass units.

GEOTHERMAL HEAT PUMP See Ground Source Heat Pump.

GLAZING AREA See Fenestration Area in Section 100.1 of Title 24, Part 6.

GRID HARMONIZATION STRATEGIES are measures that harmonize customer owned distributed energy resource assets with the grid to maximize self-utilization of PV array output, and limit grid exports to periods beneficial to the grid and the ratepayer.

GRILLES See Dividers.

GROUND FLOOR AREA is the slab-on-grade area of a slab-on-grade building and the conditioned footprint area of a raised floor building (for compliance with the low-rise residential standards).

GROUND SOURCE HEAT PUMP is a heat pump that uses the earth as a source of energy for heating and a sink for energy when cooling. Some systems pump water from an aquifer in the ground and return the water to the ground after transferring heat from or to the water. A few systems use refrigerant directly in a loop of piping buried in the ground. Those heat pumps that use either a water loop or pump water from an aquifer have efficiency test methods that are accepted by the Energy Commission. These efficiency values are certified to the Energy Commission by the manufacturer and are expressed in terms of heating Coefficient of Performance (COP) and cooling Energy Efficiency Ratio or Energy Efficiency Ratio 2 (EER/EER2).

HOOD is a device designed to capture and contain cooking effluent including, grease, smoke, steam, heat, and vapor until it is exhausted through a duct or recirculating system. Hoods are categorized as Type 1 or Type 2:

TYPE I HOOD is a hood used for collecting and removing convective heat, grease particulate, condensable vapor, and smoke. It includes listed grease filters, baffles, or extractors for removing the grease and a fire-suppression system. Type I hoods are installed over cooking appliances, such as ranges, fryers, griddles, broilers, and ovens, that produce smoke or grease-laden vapors. For Type I hoods, the following types of hoods are commonly available:

WALL-MOUNTED CANOPY HOOD is mounted against a wall above a single appliance or a line of appliances, or it may be free-standing with a vertical back panel extending from the rear of the appliance(s) to the hood. It typically extends beyond the front and sides of the appliance(s) on all open sides. The wall acts as a back panel, forcing replacement air to be drawn across the front and/or side(s) of the cooking appliance, thus increasing the effectiveness of the hood to capture and contain effluent generated by the cooking operations.

SINGLE ISLAND CANOPY HOOD is placed over a single appliance or line of appliances. It is open on all sides and overhangs the front, rear, and sides of the appliance(s). A single island canopy is more susceptible to cross-drafts and requires a greater exhaust airflow than an equivalent sized wall-mounted canopy to capture and contain effluent generated by the cooking operations.

DOUBLE ISLAND CANOPY HOOD is placed over back-to-back appliances or lines of appliances. It is open on all sides and overhangs the front and the sides of the appliance(s). It may have a wall panel between the backs of the appliances.

BACKSHELF or PROXIMITY HOOD is a low-proximity hood, or a wall-mounted sidewall hood that:

- (a) is positioned lower in height and depth than a canopy hood;
- (b) is set back from the front of the appliance;
- (c) is closed to the rear of the appliances by (a) a panel when the appliance is freestanding, or (b) a panel or wall when the appliance is wall mounted; and
- (d) is located above the cooking surface.

This style of hood can be constructed with partial end panels to increase its effectiveness in capturing the effluent generated by the cooking operations.

EYEBROW HOOD is mounted directly to the face or top of an appliance above the opening(s) or door(s) from which effluent is emitted, overhanging the front of the opening(s) to capture the effluent.

PASS-OVER HOOD is a back shelf hood constructed and installed low enough to allow food to be passed over the top.

TYPE II HOOD is a type of hood that collects and removes steam, heat, and products of combustion where grease or smoke is not present. It may or may not have grease filters or baffles and is not required to have a fire-suppression system.

HORIZONTAL GLAZING See Skylight in Section 100.1 of Title 24, Part 6.

HOTEL/MOTEL is a building or buildings that has six or more guest rooms or a lobby serving six or more guest rooms, where the guest rooms are intended or designed to be used, or which are used, rented, or hired out to be occupied, or which are occupied for sleeping purposes by guests, and all conditioned spaces within the same building envelope. Hotel/motel includes all conditioned spaces which are (1) on the same property as the hotel/motel, (2) served by the same central heating, ventilation, and air-conditioning system as the hotel/motel, and (3) integrally related to the functioning of the

hotel/motel as such, including, but not limited to, exhibition facilities, meeting and conference facilities, food service facilities, lobbies, and laundries. Hotel/motel also includes the following:

- A building of Occupancy Group R-1,

- Vacation timeshare properties and hotel or motel buildings of Occupancy Group R-2, and

- The following types of Occupancy Group R-3:

 - Congregate residences for transient use,

 - Boarding houses of more than 6 guests, and

 - Alcohol or drug abuse recovery homes of more than 6 guests.

HSPF and HSPF2 See Heating Seasonal Performance Factor and Heating Seasonal Performance Factor 2 in Section 100.1 of Title 24, Part 6.

HYDRONIC COOLING SYSTEM is any cooling system which uses water or a water solution as a source of cooling or heat rejection, including chilled water systems (both air and water-cooled) as well as water-cooled or evaporatively cooled direct expansion systems, such as water source (water-to-air) heat pumps.

HYDRONIC SPACE HEATING SYSTEM is a system that uses water-heating equipment, such as a storage tank water heater or a boiler, to provide space heating. Hydronic space heating systems include both radiant floor systems and convective or fan coil systems. See Combined Hydronic Space/Water Heating System.

ANSI/IES LS-1-20 is an American National Standard as authored by the Illuminating Engineering Society and titled "Nomenclature and Definitions for Illuminating Engineering." (ANSI/IES LS-1-20).

IES LM-51 is the Illuminating Engineering Society document titled, "Electrical and Photometric Measurements of High Intensity Discharge Lamps." (ANSI/IES LM-51-20).

IES LM-65 is the Illuminating Engineering Society document titled, "Approved Method: Life Testing of Single-Based Fluorescent Lamps." (ANSI/IES LM-65-20 R2023).

IES LM-66 is the Illuminating Engineering Society document titled, "Electrical and Photometric Measurements of Single-Ended Compact Fluorescent Lamps." (ANSI/IES LM66-20).

IES LM-79 is the Illuminating Engineering Society document titled, "Approved Method: Optical and Electrical Measurement of Solid-State Lighting Products." (ANSI/IES LM-79-19).

IG UNIT, See "Insulating Glass Unit."

INDEPENDENT IDENTITY is having no financial interest in, and not advocating or recommending the use of any product or service as a means of gaining increased business with firms or persons specified in Section 10-103.3. (Financial Interest is an ownership interest, debt agreement, or employer/employee relationship. Financial interest does not include ownership of less than 5 percent of the outstanding equity securities of a publicly traded corporation).

NOTE: The definitions of "independent entity" and "financial interest," together with Section 10-103.3, prohibit conflicts of interest between ECC-Providers and ECC-Raters, or between Providers/Raters and builders/subcontractors.

INDIRECTLY CONDITIONED SPACE is enclosed space, including, but not limited to, unconditioned volume in atria, that (1) is not directly conditioned space; and (2) either (a) has a thermal transmittance area product (UA) to directly conditioned space exceeding that to the outdoors or to unconditioned space and does not have fixed vents or openings to the outdoors or to unconditioned space, or (b) is a space through which air from directly conditioned spaces is transferred at a rate exceeding three air changes per hour.

INDUSTRIAL EQUIPMENT is manufactured equipment used in industrial processes.

INFILTRATION CONTROLS are measures taken to control the infiltration of air. (Mandatory Infiltration control measures include weather-stripping, caulking, and sealing in and around all exterior joints and openings).

INSTALLER means the builder's subcontractor or the person installing the equipment.

INSULATING GLASS UNIT is a self-contained unit, including the glazings (lites or panes of glass), spacer(s), films (if any), gas infills, and edge caulking, installed in fenestration products. It does not include the frame.

INSULATION is a material that limits heat transfer. Insulating material of the types and forms listed in Section 110.8(a) may be installed only if the manufacturer has certified that the insulation complies with the Standards for Insulating Material, Title 24, Part 12, Chapter 12-13 of the California Code of Regulations. (Movable insulation is designed to cover windows and other glazed openings part of the time to reduce heat loss and heat gain.)

INTEGRATED BESS is a BESS that contains both battery energy storage and inverter components and has a single model number.

INTERIOR PARTITION is an interior wall or floor/ceiling that separates one area of conditioned space from another within the building envelope.

IPLV See Integrated Part Load Value.

ISO 3745:2012 is the International Organization for Standardization document titled "Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure – Precision methods for anechoic rooms and hemi-anechoic rooms," 2012 (ISO 3745:2012).

ISO 7574-4:1985 is the International Organization for Standardization document titled "Acoustics - Statistical methods for determining and verifying stated noise emissions values of machinery and equipment – Part 4: Methods for stated values of batches of machines," 1985 (ISO 7574-4:1985).

ISO/IEC 17011 is the International Organization for Standardization and the International Electrotechnical Commission document titled "Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies." (EN ISO/IEC 17011:2017).

ISO/IEC 17020 is the International Organization for Standardization and the International Electrotechnical Commission document titled “General criteria for the operation of various types of bodies performing inspection.” (EN ISO/IEC 17020:2012).

ISO/IEC 17025 is the International Organization for Standardization and the International Electrotechnical Commission document titled “General requirements for the competence of testing and calibration laboratories.” (ISO/IEC Standard 17025:2017).

ISOLATION DEVICE is a device that prevents the conditioning of a zone or group of zones in a building while other zones of the building are being conditioned.

KNEE WALL is a sidewall separating conditioned space from attic space under a pitched roof. Knee walls should be insulated as an exterior wall as specified by the chosen method of compliance.

LEFT SIDE is the left side of the building as one faces the front facade from the outside. This designation is used on the Certificate of Compliance and other compliance documentation.

Decorative Lamp is a lamp with a candle-like or globe shape envelope including shapes B, BA, C, CA, DC, G, and F as defined in ANSI C79.1-, and with at least 5 percent of its total flux radiated in the 110 deg – 180 deg zone of vertical angles, as measured from the nadir, when the lamp is oriented in a base up position.

Omnidirectional lamp is a general service replacement lamp with an ANSI standard base that emits the majority of light produced in an even distribution. Omnidirectional lamps shall have 80 percent of the luminous intensity measured values (candelas) vary by no more than 35 percent from the average of all measured values in the 0 deg to 130 deg zone. All measured values (candelas) in the 0 deg to 130 deg zone shall vary by no more than 60 percent from the average of all measured values in that zone. No less than 5 percent of total flux (zonal lumens) shall be emitted in the 130 deg to 180 deg zone. Omnidirectional lamps can be standard; having an ANSI standard lamp shape of A, BT, P, PS, S or T, or omnidirectional lamps can have a non-standard shape, such as a self-ballasted compact fluorescent that utilize a bare spiral.

LIQUID LINE is the refrigerant line that leads from the condenser to the evaporator in a split system air conditioner or heat pump. The refrigerant in this line is in a liquid state and is at an elevated temperature. This line should not be insulated.

LISTED is in accordance with Article 100 of the California Electrical Code.

Long-term System Cost (LSC) is the present value of costs to California's energy system over a period of 30 years. LSC does not represent a prediction of individual utility bills.

LOW-GWP REFRIGERANT is a compound used as a heat transfer fluid or gas that is: (A) any compound or blend of compounds, with a GWP Value less than 150; and (B) U.S. EPA Significant New Alternatives Policy (SNAP)-approved; and (C) not an ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, §82.3 (as amended March 10, 2009).

LOW-RISE ENCLOSED SPACE is an enclosed space located in a building with 3 or fewer stories.

LOW-RISE RESIDENTIAL BUILDING is a building, other than a hotel/motel that is Occupancy Group:

R-2, multifamily, with three stories or less; or

R-3, single family; or

U-building, located on a residential site.

LOW-SLOPED ROOF is a roof that has a ratio of rise to run of less than 2:12.

LPG is liquefied petroleum gas. Propane is one type of LPG.

MAKEUP AIR is outdoor air deliberately brought into the building from the outside and supplied to the vicinity of an exhaust hood to replace air, vapor, and contaminants being exhausted. Makeup air is generally filtered and fan-forced, and it may be heated or cooled depending on the requirements of the application. Makeup air may be delivered through outlets integral to the exhaust hood or through outlets in the same room. (see Stds.)

MANDATORY MEASURES CHECKLIST is a form used by the building plan checker and field inspector to verify compliance of the building with the prescribed list of mandatory features, equipment efficiencies and product certification requirements. The documentation author indicates compliance by initialing, checking, or marking N/A (for features not applicable) in the boxes or spaces provided for the designer.

MANUAL is capable of being operated by personal intervention.

MANUFACTURED DEVICE is any heating, cooling, ventilation, lighting, water heating, refrigeration, cooking, plumbing fitting, insulation, door, fenestration product, or any other appliance, device, equipment, or system subject to §110.0 through §110.9 of Part 6.

MEDICAL AND CLINICAL CARE See Nonresidential Functional Area or Type of Use.

MIXED OCCUPANCY BUILDING is a building designed and constructed for more than one type of occupancy, such as a three story building with ground floor retail and second and third floor residential apartments.

MODEL is a single floor plan of a dwelling unit design. To be considered the same model; dwelling units shall be in the same subdivision or multifamily housing development and have the same energy designs and features, including the same floor area and volume. For multifamily buildings, variations in the exterior surface areas caused by the location of dwelling units within the building do not cause dwelling units to be considered different models.

NOTE: For purposes of establishing sampling groups, variations in the basic floor plan layout, energy design, compliance features, zone floor area, or zone volume, that do not change the features to be tested, the heating or cooling capacity of the HVAC unit(s), or the number of HVAC units specified for each dwelling unit, shall not cause dwelling units to be considered different models.

MOVABLE SHADING DEVICE See Operable Shading Device in Section 100.1 of Title 24, Part 6.

MULLION is a vertical framing member separating adjoining window or door sections. See Dividers.

MULTIFAMILY BUILDING is any of the following:

A building of Occupancy Group R-2, other than a hotel/motel building or timeshare property;

A building of Occupancy Group R-3 that is a nontransient congregate residence, other than boarding houses of more than 6 guests and alcohol or drug abuse recovery homes of more than 6 guests; or

A building of Occupancy Group R-4.

MULTIFAMILY DWELLING UNIT is a dwelling unit of occupancy type R, as defined by the CBC, sharing a common wall and/or ceiling/floor with at least one other dwelling unit.

MULTIPLE ZONE is a supply fan (and optionally a return fan) with heating and/or cooling heat exchangers (e.g. DX coil, chilled water coil, hot water coil, furnace, electric heater) that serves more than one thermostatic zone. Zones are thermostatically controlled by features including but not limited to variable volume, reheat, recool and concurrent operation of another system.

MUNTINS See Dividers.

NEMA LE 7 is the National Electrical Manufacturers Association document titled "Recessed Luminaires intended for Contact with Expanding Polyurethane Foam Insulation," (NEMA LE 7-2015).

NEMA SSL 7A is the National Electrical Manufacturers Association document titled "Phase Cut Dimming for Solid State Lighting: Basic Compatibility," 2015 (NEMA SSL 7A-2015).

NFRC is the National Fenestration Rating Council. This is a national organization of fenestration product manufacturers, glazing manufacturers, manufacturers of related materials, utilities, state energy offices, laboratories, home builders, specifiers (architects), and public interest groups.

NOTE: This organization is designated by the Commission as the Supervisory Entity, which is responsible for rating the U-factors and solar heat gain coefficients of manufactured fenestration products (i.e., windows, skylights, glazed doors) that must be used in compliance calculations. See also Fenestration Area and Fenestration Product.

NONDEPLETABLE SOURCES is defined as energy that is not obtained from depletable sources. Also referred to as renewable energy, including solar and wind power. See Energy Obtained from Nondepletable Sources.

NONDUCTED SYSTEM Is an air conditioner or heat pump that is designed to be permanently installed equipment and directly heats or cools air within the conditioned space using one or more indoor coils that are mounted on room walls and/or ceilings. The unit may be of a modular design that allows for combining multiple outdoor coils and compressors to create one overall system.

NSHP GUIDEBOOK is the New Solar Homes Partnership Guidebook, currently adopted by the Energy Commission.

OUTDOOR SALES CANOPY is a canopy specifically to cover and protect an outdoor sales area.

OUTSIDE AIR See Outdoor Air.

PACKAGED AIR CONDITIONER OR HEAT PUMP is an air conditioner or heat pump that combines both the condenser and air handling capabilities in a single enclosure or package.

PARALLEL FAN-POWERED TERMINAL UNIT is a terminal unit that combines a VAV damper in parallel with a fan that only runs when the terminal unit is providing heating to the space.

PARTY PARTITION is a wall, floor, or ceiling that separates the conditioned spaces of two different tenants.

PERM is equal to 1 grain of water vapor transmitted per 1 square foot per hour per inch of mercury pressure difference.

PLENUM is an air compartment or chamber, including uninhabited crawl space, areas above a ceiling or below a floor, including air spaces below raised floors of computer/data processing centers, or attic spaces, to which one or more ducts are connected and which forms part of either the supply-air, return-air or exhaust air system, other than the occupied space being conditioned.

PROGRAMMING LIBRARY is a collection of programming logic used for controlling HVAC equipment with direct digital control systems.

PROPOSED DESIGN BUILDING is a proposed building being modeled using rules described in the Alternative Calculation Method Manual. In order for a building to comply with the standards, the proposed building energy use must be less than or equal to the Standard Design Building energy use and meet the mandatory requirements in the Title 24 Building Energy Efficiency Standards.

PUBLIC ADVISER is the Public Adviser of the Commission.

REAR See Back.

RECORD DRAWINGS are drawings that document the as installed location and performance data on all lighting and space conditioning system components, devices, appliances and equipment, including but not limited to wiring sequences, control sequences, duct and pipe distribution system layout and sizes, space conditioning system

terminal device layout and air flow rates, hydronic system and flow rates, and connections for the space conditioning system. Record drawings are sometimes called “as built” drawings.

RECOVERY EFFICIENCY is one measure of the efficiency of water heaters. It is required for water heating energy calculations for some types of water heaters. It is a measure of the percentage of heat from combustion of gas or oil which is transferred to the water. For non-storage type water heaters, the recovery efficiency is really a thermal efficiency.

REFERENCE COMPUTER PROGRAM is the reference method against which other methods are compared. For the Nonresidential Standards, the reference computer program is DOE 2.1E. For the low-rise Residential Standards the reference computer program is CALRES.

REFERENCE JOINT APPENDICES Are the Reference Joint Appendices published by the Commission.

REFERENCE NONRESIDENTIAL APPENDICES Are the Nonresidential Appendices published by the Commission.

REFERENCE RESIDENTIAL APPENDICES Are the Residential Appendices published by the Commission.

REFRIGERANT CHARGE is to the amount of refrigerant that is installed or “charged” into an air conditioner or heat pump. The refrigerant is the working fluid. It is compressed and becomes a liquid as it enters the condenser. The hot liquid is cooled in the condenser and flows to the evaporator where it released through the expansion valve. When the pressure is released, the refrigerant expands into a gas and cools. Air is passed over the evaporator to provide the space cooling. When an air conditioner or heat pump has too much refrigerant (overcharged) the compressor may be damaged. When an air conditioner has too little refrigerant (undercharged), the efficiency of the unit is reduced. A thermostatic expansion valve (TXV) can mitigate the impact of improper refrigerant charge.

REGISTERED DOCUMENT means the document has been submitted to a residential or nonresidential data registry for retention, and the data registry has assigned a unique registration number to the document.

REGISTRATION PROVIDER is an organization that administers a data registry service that conforms to the requirements of Reference Joint Appendix JA-7.

RESERVE LEVEL is the battery energy storage capacity in excess of the compliance cycling capacity, is available for other functions, and is not subject to the control requirements in section JA 12.3.3.

RIGHT SIDE is the right side of the building as one faces the front facade from the outside (see Front). This designation is used to indicate the orientation of fenestration and other surfaces, especially in model homes that are constructed in multiple orientations.

R-VALUE is the measure of the thermal resistance of insulation or any material or building component expressed in (ft²-hr °F)/Btu.

SASH ZONE PRESENCE SENSOR is an occupancy sensor that detects people in the area near the fume hood sash for automatic closure controls.

SC See Shading Coefficient in Section 100.1 of Title 24, Part 6.

SHOWER HEAD is a fixture for directing the spray of water in a shower. A shower head may incorporate one or more sprays, nozzles or openings. All components that are supplied standard together and function from one inlet (i.e., after the mixing valve) form a single shower head.

SINGLE FAMILY BUILDING is any of the following:

- A residential building of Occupancy Group R-3 with two or less dwelling units;

- A building of Occupancy Group R-3, other than a multifamily building or hotel/motel building;

- A townhouse;

- A building of Occupancy Group R-3.1; or

- A building of Occupancy Group U when located on a residential site.

SINGLE ZONE is an HVAC system with a supply fan (and optionally a return fan) and heating and/or cooling heat exchangers (e.g. DX coil, chilled water coil, hot water coil, furnace, electric heater) that serves a single thermostatic zone. This system may or may not be constant volume.

SLAB-ON-GRADE is an exterior concrete floor in direct contact with the earth below the building.

SOLAR REFLECTANCE See Reflectance in Section 100.1 of Title 24, Part 6.

SPACER, ALUMINUM is a metal channel that is used either against the glass (sealed along the outside edge of the insulated glass unit), or separated from the glass by one or more beads of caulk, which is used to separate panes of glass in an insulated glass unit.

SPACER, INSULATING is a non-metallic, relatively non-conductive material, usually of rubber compounds, that is used to separate panes of glass in an insulated glass unit.

SPACER, OTHER is a wood, fiberglass, or composite material that is used as a spacer between panes of glass in insulated glass units.

SPACER, SQUIGGLE is a flexible material, usually butyl, formed around a thin corrugated aluminum strip that is used as a spacer in insulated glass units.

SPECIFIC HEAT is the quantity of heat that must be added to a unit mass of a material to increase its temperature by one degree. Typical units are Btu/°F-lb.

SPLIT SYSTEM AIR CONDITIONER OR HEAT PUMP is an air conditioner or heat pump that has physically separate condenser and air handling units that work together as a single cooling system.

STANDARDS See Building Energy Efficiency Standards.

STANDBY LOSS, BTU/HR is the heat lost per hour from the stored water above room temperature. It is one of the measures of efficiency of water heaters required for water heating energy calculations for some types of water heaters. This standby loss is expressed as Btu/hr.

STANDBY LOSS, PERCENT is the ratio of heat lost per hour to the heat content of the stored water above room temperature. It is one of the measures of efficiency of water heaters required for water heating energy calculations for some types of water heaters. Standby loss is expressed as a percentage.

STORAGE, COOL is a storage area within a refrigerated warehouse where space temperatures are maintained between 32° F and 55° F.

SUBORDINATE OCCUPANCY is any occupancy type, in mixed occupancy buildings, that is not the dominant occupancy. See Dominant Occupancy, Mixed Occupancy.

SUCTION LINE is the refrigerant line that leads from the evaporator to the condenser in a split system air conditioner or heat pump. This line is insulated since it carries refrigerant at a low temperature.

SUSPENDED FILMS are low-e coated plastic films stretched between the elements of the spacers between panes of glazing; acts as a reflector to slow the loss of heat from the interior to the exterior.

SYSTEM is a combination of equipment, controls, accessories, interconnecting means, or terminal elements by which energy is transformed to perform a specific function, such as space conditioning, service water heating, or lighting.

THERMAL BREAK WINDOW FRAME is metal fenestration frames that are not solid metal from the inside to the outside, but are separated in the middle by a material, usually urethane, with a lower conductivity.

THERMAL CONDUCTIVITY is the quantity of heat that will flow through a unit area of the material per hour when the temperature difference through the material is one degree.

THERMAL EMITTANCE See Emittance, Thermal.

TITLE 24 is all of the building standards and associated administrative regulations published in Title 24 of the California Code of Regulations. The Building Energy Efficiency Standards are contained in Part 6. Part 1 contains the administrative regulations for the building standards.

U-FACTOR is the overall coefficient of thermal transmittance of a fenestration, wall, floor, or roof/ceiling component, in Btu/(hr × ft² × °F), including air film resistance at both surfaces.

U-FACTOR, CENTER OF GLAZING (U_c) is the U-factor for the center of glazing area.

U-FACTOR, TOTAL FENESTRATION PRODUCT (U_t) is the U-factor for the total fenestration product.

UIMC See Unit Interior Mass Capacity.

UL 1574 is the Underwriters Laboratories document titled "Track Lighting Systems," 2016.

UL 1598 is the Underwriters Laboratories document titled "Standard for Luminaires," 2020.

UL 181 is the Underwriters Laboratories document titled "Standard for Factory-Made Air Ducts and Air Connectors," 2017.

UL 181A is the Underwriters Laboratories document titled "Standard for Closure Systems for Use With Rigid Air Ducts and Air Connectors," 2017.

UL 181B is the Underwriters Laboratories document titled "Standard for Closure Systems for Use With Flexible Air Ducts and Air Connectors," 2017.

UL 723 is the Underwriters Laboratories document titled "Standard for Test for Surface Burning Characteristics of Building Materials," 2018.

UL 2108 is the Underwriters Laboratories document titled "Low Voltage Lighting Systems," 2019.

UL DATA ACCEPTANCE PROGRAM (DAP) is an Underwriters Laboratory program that utilizes work conducted by a client as well as third-party test facilities in accordance with national and international accreditation criteria to facilitate the conduct of investigations of products. Among the types UL uses are Witnessed Test Data Program (WTDP) where UL witnesses the tests being conducted, Client Test Data Program (CTDP) which is where the client conducts the test and submits the data for UL review, and Third Party Test Data Program (TPTDP) where testing is conducted by another testing organization for clients and submitted to UL for review.

USABLE CAPACITY is the battery energy storage capacity in kWh that a manufacturer allows to be used for charging and discharging.

U-VALUE See U-factor.

VAPOR RETARDER CLASS is a measure of the ability of a material or assembly to limit the amount of moisture that passes through the material or assembly. Vapor retarder class shall be defined using the desiccant method with Procedure A of ASTM E96 as follows:

Class I: 0.1 perm or less

Class II: $0.1 < \text{perm} < 1.0$ perm

Class III: $1.0 < \text{perm} < 10$ perm

VENTILATION AIR is that portion of supply air which comes from outside plus any recirculated air that has been treated to maintain the desired quality of air within a designated space. See also Outside Air.

VINYL WINDOW FRAME is a fenestration frame constructed with a polyvinyl chloride (PVC) which has a lower conductivity than metal and a similar conductivity to wood.

VISUAL QUALITY STANDARD FOR APPLIED WINDOW FILM is an International Window Film Association document titled "Visual Quality Standard for Applied Window Film," 2015.

WEATHERSTRIPPING is a specially designed strip, seal or gasket attached to doors and windows to prevent infiltration and exfiltration through cracks around the openings. Weatherstripping is one of the mandatory requirements for all new residential construction. See Infiltration, Exfiltration.

WEIGHTED AVERAGING is an arithmetic technique for determining an average of differing values for the members of a set by weighting each value by the extent to which the value occurs. In some cases when two or more types of a building feature, material or construction assembly occur in a building, a weighted average of the different types may be sufficiently accurate to represent the energy impact of each type considered separately.

WEST-FACING See Orientation.

WINDOW TYPE is a window assembly having a specific solar heat gain coefficient, relative solar heat gain, and U-factor.

ZONAL CONTROL is the practice of dividing a residence into separately controlled HVAC zones. This may be done by installing multiple HVAC systems that condition a specific part of the building, or by installing one HVAC system with a specially designed distribution system that permits zonal control. The Energy Commission has approved an alternative calculation method for analyzing the energy impact of zonally controlled space heating and cooling systems. To qualify for compliance credit for zonal control, specific eligibility criteria specified in the Residential ACM Manual must be met