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# EFFICIENCY STANDARDS
# CALIFORNIA CODE OF REGULATIONS
# TITLE 24, PART 6

# SUBCHAPTER 1
# ALL OCCUPANCIES—GENERAL PROVISIONS

## SECTION 100.0 – SCOPE

(a) **Buildings Covered.** The provisions of Part 6 apply to all buildings:

1. That are of Occupancy Group A, B, E, F, H, I, M, R, S, or U; and
2. For which an application for a building permit or renewal of an existing permit is filed (or is required by law to be filed) on or after the effective date of the provisions, or which are constructed by a governmental agency; and
3. That are:
   A. Unconditioned; or
   B. Indirectly or directly conditioned ~~by mechanical heating or mechanical cooling~~, or process spaces; ~~or~~
   ~~C. Low rise residential buildings that are heated with a non-mechanical heating system.~~

**EXCEPTION 1 to Section 100.0(a)**: Qualified historic buildings, as regulated by the California Historic Building Code (Title 24, Part 8). Lighting in qualified historic buildings shall comply with the applicable requirements in Section 140.6(a)3Q.

**EXCEPTION 2 to Section 100.0(a)**: Building departments, at their discretion, may exempt temporary buildings, temporary outdoor lighting or temporary lighting in an unconditioned building, or structures erected in response to a natural disaster. Temporary buildings or structures shall be completely removed upon the expiration of the time limit stated in the permit.

**EXCEPTION 3 to Section 100.0(a)**: Buildings in Occupancy Group I-3 and I-4.

(b) **Parts of Buildings Regulated.** The provisions of Part 6 apply to the building envelope, space-conditioning systems, water-heating systems, pool and spas, solar ready buildings, indoor lighting systems of buildings, outdoor lighting systems, electrical power distribution systems, and signs located either indoors or outdoors, in buildings that are:

1. Covered by Section 100.0(a); and
2. Set forth in TABLE 100.0-A.

(c) **Habitable Stories.**

1. All conditioned space in a story shall comply with Part 6 whether or not the story is a habitable space.
2. All unconditioned space in a story shall comply with the lighting requirements of Part 6 whether or not the story is a habitable space.

(d) **Outdoor Lighting and Indoor and Outdoor Signs.** The provisions of Part 6 apply to outdoor lighting systems and to signs located either indoors or outdoors as set forth in TABLE 100.0-A.

(e) **Sections Applicable to Particular Buildings.** TABLE 100.0-A and this subsection list the provisions of Part 6 that are applicable to different types of buildings covered by Section 100.0(a).

1. **All buildings.** Sections 100.0 through 110.12~~110.10~~ apply to all buildings.

   **EXCEPTION to Section 100.0(e)1**: Spaces or requirements not listed in TABLE 100.0-A.

2. **Newly constructed buildings.**
   A. **All newly constructed buildings.** Sections 110.0 through 110.12~~110.10~~ apply to all newly constructed buildings within the scope of Section 100.0(a). In addition, newly constructed buildings shall meet the requirements of Subsections B, C, D or E, as applicable.

B. **Nonresidential, high-rise residential, and hotel/motel buildings** that are mechanically heated or mechanically cooled.

i. Sections applicable. Sections 120.0 through 140.8 apply to newly constructed nonresidential buildings, high-rise residential buildings, and hotels/motels that are mechanically heated or mechanically cooled.

ii. Compliance approaches. In order to comply with Part 6 newly constructed nonresidential buildings, high-rise residential buildings, and hotels/motels that are mechanically heated or mechanically cooled must meet the requirements of:

a. Mandatory measures: The applicable provisions of Sections 120.0 through 130.5; and

b. Either:

(i) Performance approach: Section 140.1; or

(ii) Prescriptive approach: Sections 140.2 through 140.9~~8~~.

C. **Unconditioned nonresidential buildings and process space.** Sections 110.9, 110.10, 120.6, 130.0 through 130.5, 140.3(c), 140.6, 140.7, and 140.8 apply to all newly constructed unconditioned buildings and 140.1, and 140.3(c), for process spaces within the scope of Section 100.0(a).

D. **Low-rise residential buildings.**

i. Sections applicable. Sections 150.0 through 150.1 apply to newly constructed low-rise residential buildings.

ii. Compliance approaches. In order to comply with Part 6 newly constructed low-rise residential buildings must meet the requirements of:

a. Mandatory measures: The applicable provisions of Sections 110.0 through 110.10, and 150.0; and

b. Either:

(i) Performance approach: Section 150.1(a) and (b); or

(ii) Prescriptive approach: Section 150.1(a) and (c).

**EXCEPTION ~~1~~ to Section 100.0(e)2Diib**: Seasonally occupied agricultural housing limited by state or federal agency contract to occupancy not more than 180 days in any calendar year.

~~**EXCEPTION 2 to Section 100.0(e)2Diib**: Low-rise residential buildings that are heated with a wood heater or another nonmechanical heating system and that use no energy obtained from depletable sources for lighting or water heating.~~

E. **Covered Processes.**

i. Sections applicable. Sections 110.2, 120.6 and 140.9 apply to covered processes.

ii. Compliance approaches. In order to comply with Part 6 covered processes must meet the requirements of:

a. The applicable mandatory measures in Section 120.6; and

b. Either:

(i) The Performance approach requirements of Section 140.1; or

(ii) The Prescriptive approach requirements of Section 140.9.

**Note:** If covered processes do not have prescriptive requirements, then only the applicable mandatory measures in Section 120.6 must be met.

3. **New construction in existing buildings (additions, alterations and repairs).**

A. **Nonresidential, high-rise residential, and hotel/motel buildings.** Section 141.0 applies to new construction in existing nonresidential, high-rise residential, and hotel/motel buildings. New construction in existing buildings includes additions, alterations and repairs. Section 141.0 specifies

requirements that uniquely apply to additions, alterations or repairs to existing buildings, and specify which requirements in other sections also apply. For alterations that change the occupancy classification of the building, the requirements specified in Section 141.0 apply to the occupancy after the alterations.

B. **Low-rise residential buildings.** Section 150.2 applies to new construction in existing low-rise residential buildings. New construction in existing buildings includes additions, alterations and repairs. Section 150.2 specifies requirements that uniquely apply to additions, alterations or repairs to existing buildings, and specify which requirements in other sections also apply. For alterations that change the occupancy classification of the building, the requirements specified in Section 150.2 apply to the occupancy after the alterations.

4. **Installation of insulation in existing buildings.** Section 110.8(d) applies to buildings in which insulation is being installed in existing attics, or on existing water heaters, or existing space conditioning ducts.

5. **Outdoor Lighting.** Sections 110.9, 130.0, 130.2, 130.4, 140.7, and 150.0 apply to newly constructed outdoor lighting systems, and Section 141.0 applies to outdoor lighting that is either added or altered.

6. **Signs.** Sections 130.0, 130.3 and 140.8 apply to newly constructed signs located either indoors or outdoors and Section 141.0 applies to sign alterations located either indoors or outdoors.

(f) **Mixed Occupancy.** When a building is designed and constructed for more than one type of occupancy (residential and nonresidential), the space for each occupancy shall meet the provisions of Part 6 applicable to that occupancy.

**EXCEPTION 1 to Section 100.0(f)**: If one occupancy constitutes at least 80 percent of the conditioned floor area of the building, the entire building envelope, HVAC, and water heating may be designed to comply with the provisions of Part 6 applicable to that occupancy, provided that the applicable lighting requirements in Sections 140.6 through 140.8 or 150.0(k) are met for each occupancy and space and mandatory measures in Sections 110.0 through 130.5, and 150.0 are met for each occupancy and space.

**EXCEPTION 2 to Section 100.0(f)**: If one occupancy constitutes at least 90 percent of the combined conditioned plus unconditioned floor area of the building, the entire building indoor lighting may be designed to comply with only the lighting provisions of Part 6 applicable to that occupancy.

(g) **Administrative Requirements.** Administrative requirements relating to permit requirements, enforcement by the Commission, locally adopted energy standards, interpretations, claims of exemption, approved calculation methods, rights of appeal, and certification and labeling requirements of fenestration products and roofing products are specified in California Code of Regulations, Title 24, Part 1, Sections 10-101 to 10-114.

(h) **Certification Requirements for Manufactured Equipment, Products, and Devices.** Part 6 limits the installation of manufactured equipment, products, and devices to those that have been certified as specified by sections 110.0 and 110.1.

*TABLE 100.0-A APPLICATION OF STANDARDS*

| Occupancies | Application | Mandatory | Prescriptive | Performance | Additions/Alterations |
|---|---|---|---|---|---|
| General Provisions for All Buildings | | 100.0, 100.1, 100.2, 110.0 | | | |
| Nonresidential, High-Rise Residential, And Hotels/Motels | General | 120.0 | 140.0, 140.2 | 140.0, 140.1 | 141.0 |
| | Envelope (conditioned) | 110.6, 110.7, 110.8,120.7 | 140.3 | | |
| | Envelope (unconditioned process spaces) | N.A. | 140.3(c) | | |
| | HVAC (conditioned) | 110.2, 110.5, 120.1, 120.2, 120.3, 120.4, 120.5, 120.8 | 140.4 | | |
| | Water Heating | 110.3, 120.3, 120.8, 120.9 | 140.5 | | |
| | Indoor Lighting (conditioned, process spaces) | 110.9, 120.8, 130.0, 130.1, 130.4 | 140.3(c), 140.6 | | |
| | Indoor Lighting (unconditioned and parking garages) | 110.9, 120.8, 130.0, 130.1, 130.4 | 140.3(c), 140.6 | N.A. | |
| | Outdoor Lighting | 110.9, 130.0, 130.2, 130.4 | 140.7 | | |
| | Electrical Power Distribution | 110.11, 130.5 | N.A. | | |
| | Pool and Spa Systems | 110.4, 110.5, 150.0(p) | N. A. | | 141.0 |
| | Solar Ready Buildings | 110.10 | N.A. | | 141.0(a) |
| Covered Processes[1] | Envelope, Ventilation, Process Loads | 110.2, 120.6 | 140.9 | 140.1 | 120.6, 140.9 |
| Signs | Indoor and Outdoor | 130.0, 130.3 | 140.8 | N.A. | 141.0, 141.0(b)2H |
| Low-Rise Residential | General | 150.0 | 150.1(a, c) | 150.1(a), 150.1(b) | 150.2(a), 150.2(b) |
| | Envelope (conditioned) | 110.6, 110.7, 110.8, 150(a), 150.0(b), 150.0(c), 150.0(d), 150.0(e), 150.0(g), 150.0(q) | | | |
| | HVAC (conditioned) | 110.2, 110.5, 150.0(h), 150.0(i), 150.0(j), 150.0(m), 150.0(o) | | | |
| | Water Heating | 110.3, 150.0(j, n) | | | |
| | Indoor Lighting (conditioned, unconditioned and parking garages) | 110.9, 130.0, 150.0(k) | | | |
| | Outdoor Lighting | 110.9, 130.0,150.0(k) | | | |
| | Pool and Spa Systems | 110.4, 150.0(p) | N. A. | N.A. | 150.2(a), 150.2(b) |
| | Solar Ready Buildings | 110.10 | N. A. | N.A. | N.A. |

[1] Nonresidential, high-rise and hotel/motel buildings that contain covered processes may conform to the applicable requirements of both occupancy types listed in this table.

**NOTE:** Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code. Reference: Sections 25402, 25402.1, 25402.4, 25402.5, and 25402.8, Public Resources Code

# SECTION 100.1 – DEFINITIONS AND RULES OF CONSTRUCTION

(a) **Rules of Construction.**

1. Where the context requires, the singular includes the plural and the plural includes the singular.
2. The use of "and" in a conjunctive provision means that all elements in the provision must be complied with, or must exist to make the provision applicable. Where compliance with one or more elements suffices, or where existence of one or more elements makes the provision applicable, "or" (rather than "and/or") is used.
3. "Shall" is mandatory and "may" is permissive.

(b) **Definitions.** Terms, phrases, words and their derivatives in Part 6 shall be defined as specified in Section 100.1. Terms, phrases, words and their derivatives not found in Section 100.1 shall be defined as specified in the "Definitions" chapters of Title 24, Parts 1 through 5 of the California Code of Regulations. Where terms, phrases, words and their derivatives are not defined in any of the references above, they shall be defined as specified in *Webster's Third New International Dictionary of the English Language, Unabridged* (1961 edition, through the 2002 addenda), unless the context requires otherwise.

**ACCA** is the Air Conditioning Contractors of America.

**ACCA MANUAL J** is the Air Conditioning Contractors of America document titled "Manual J - Residential Load Calculation" (ANSI/ACCA 2 Manual J – ~~2006~~2016).

**ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE** is a description of test procedures in the Reference Nonresidential Appendices that includes equipment and systems to be tested, functions to be tested, conditions under which the test shall be performed, the scope of the tests, results to be obtained, and measurable criteria for acceptable performance.

**ACCESSIBLE** is having access thereto, but which first may require removal or opening of access panels, doors, or similar obstructions.

**ADDITION** is any change to a building that increases conditioned floor area and conditioned volume. See also "newly conditioned space." Addition is also any change that increases the floor area and volume of an unconditioned building of an occupancy group or type regulated by Part 6. Addition is also any change that increases the illuminated area of an outdoor lighting application regulated by Part 6.

**ADIABATIC PAD** is a material located before the heat transfer surface o-f an adiabatic condenser, which precools the ambient air by becoming fully wetted during pre-cool mode operation.

**AGRICULTURAL BUILDING** is a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. It is not a structure that is a place of human habitation, a place of employment where agricultural products are processed, treated or packaged, or a place used by the public.

**AIR BARRIER** is a combination of interconnected materials and assemblies joined and sealed together to provide a continuous barrier to air leakage through the building envelope that separates conditioned from unconditioned space, or that separates adjoining conditioned spaces of different occupancies or uses.

**AIR CONDITIONER** is an appliance that supplies cooled and dehumidified air to a space for the purpose of cooling objects within the space.

**AIR-COOLED AIR CONDITIONER** is an air conditioner using an air-cooled condenser.

**AIR-HANDLING UNIT or AIR HANDLER** is a blower or fan that distributes supply air to a room, space, or area.

**AIR FILTER, AIR FILTER EQUIPMENT, or AIR FILTER DEVICE** is air-cleaning equipment used for removing particulate matter from the air.

**AIR FILTER MEDIA** is the part of the air filter equipment which is the actual particulate removing agent.

**AIR-TO-AIR HEAT EXCHANGER** is a device which will reduce the heat losses or gains that occur when a building is mechanically ventilated, by transferring heat between the conditioned air being exhausted and outside air being supplied.

**AIR-SOURCE HEAT PUMP** is an appliance that consists of one or more factory-made assemblies, that includes an indoor conditioning coil, a compressor, and a refrigerant-to-air heat exchanger, and that provides heating and cooling functions.

**ALTERATION** is any change to a building's water-heating system, space-conditioning system, lighting system, electrical power distribution system, or envelope that is not an addition. Alteration is also any change that is regulated by Part 6 to an outdoor lighting system that is not an addition. Alteration is also any change that is regulated by Part 6 to signs located either indoors or outdoors. Alteration is also any change that is regulated by Part 6 to a covered process that is not an addition. (See also "fenestration alteration".)

**ALTERED COMPONENT** is a component that has undergone an alteration ~~and is subject to all applicable Standards requirements~~.

**ALTERNATIVE CALCULATION METHODS (ACM)** are compliance softwares, or alternative component packages, or exceptional methods approved by the Commission under Section 10-109. ACMs are also referred to as Compliance Software.

**ALTERNATIVE CALCULATION METHODS (ACM) APPROVAL MANUAL** are the documents establishing the requirements for Energy Commission approval of Compliance Software used to demonstrate compliance with the Building Energy Efficiency Standards for Residential and Nonresidential Buildings currently adopted by the Energy Commission.

**ANNUAL FUEL UTILIZATION EFFICIENCY (AFUE)** is a measure of the percentage of heat from the combustion of gas or oil which is transferred to the space being heated during a year, as determined using the applicable test method in the Appliance Efficiency Regulations or Section 110.2.

**ANNUNCIATED** is a type of visual signaling device that indicates the on, off, or other status of a load~~.~~

**ANSI** is the American National Standards Institute.

**ANSI C82.6-2015~~2005~~** is the American National Standards Institute document titled "Ballasts for High-Intensity Discharge Lamps – Methods of Measurement." (ANSI C82.6-~~2005~~2015)

**ANSI/AMCA STANDARD 500-D** is the American National Standards Institute / Air Movement and Control Association document titled "Laboratory Methods of Testing Dampers For Rating". (ANSI/AMCA 500-D-2012)

**ANSI/IES RP-16-17~~10~~** is the document coauthored by the American National Standards Institute and the Illuminating Engineering Society of North America, Recommended Practice titled "Nomenclature and Definitions for Illuminating Engineering"

**ANSI Z21.10.3** is the American National Standards Institute document titled "Gas Water Heaters - Volume III, Storage Water Heaters With Input Ratings Above 75,000 Btu Per Hour," 2011 (ANSI Z21.10.3-2017~~2011~~/CSA 4.3-2017~~2011~~).

**ANSI Z21.13** is the American National Standards Institute document titled "Gas-Fired Low Pressure Steam and Hot Water Boilers," ~~2010~~2017 (ANSI Z21.13-~~2010~~2017/CSA 4.9-2017~~2010~~).

**ANSI Z21.40.4A** is the American National Standards Institute document titled "Addenda 1 to ANSI Z21.40.4-~~1996~~1996/CGA 2.94-M96, Performance Testing and Rating of Gas-Fired, Air Conditioning and Heat Pump Appliances," 1998 (ANSI Z21.40.4-1998 (R2017)/CGA 2.94A-M98(R2017)).

**ANSI Z21.47** is the American National Standards Institute document titled "Gas-Fired Central Furnaces," ~~2006~~2016 (ANSI Z21.47-~~2006~~2016/CSA 2.3-~~2006~~2016).

**ANSI Z83.8** is the American National Standards Institute document titled "American National Standard/CSA Standard For Gas Unit Heaters, Gas Packaged Heaters, Gas Utility Heaters and Gas-Fired Duct Furnaces," ~~2009~~ 2016 (ANSI Z83.8 -~~2009~~2016/CSA 2.6-~~2009~~2016).

**ANSI Z9.5** is the American National Standards Institute document titled "Laboratory Ventilation," 2012 (ANSI/ASSE Z9.5-2012).

**APPLIANCE EFFICIENCY REGULATIONS** are the regulations in Title 20, Sections 1601 et seq. of the California Code of Regulations.

**APPROVED CALCULATION METHOD** (See "alternative calculation methods")

**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 210/240-2008 with Addenda 1 and 2).

**ANSI/AHRI/CSA 310/380** is the Air-Conditioning, Heating, and Refrigeration Institute document titled "Standard for Packaged Terminal Air-Conditioners and Heat Pumps (CSA-C744-~~04~~17)," 2004 (ANSI/AHRI/CSA Standard 310/380-~~2004~~2017).

**AHRI 320** is the Air-Conditioning, Heating, and Refrigeration Institute document titled "Water-Source Heat Pumps," 1998 (AHRI Standard 320-1998).

**AHRI 325** is the Air-Conditioning, Heating, and Refrigeration Institute document titled "Ground Water-Source Heat Pumps," 1998 (ARI Standard 325-1998).

**ANSI/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," ~~2007~~ 2015 (ANSI/AHRI Standard 340/360-~~2007~~ 2015~~with Addenda 1 and 2~~).

**ANSI/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).

**ANSI/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 (I-P)-2003).

**ANSI/AHRI 400** is the Air-Conditioning, Heating, and Refrigeration Institute document titled "Liquid to Liquid Heat Exchangers," ~~2001~~ 2015 (ANSI/AHRI Standard 400 (I-P)-~~2001~~2015)~~ with addenda 1 and 2~~.

**ANSI/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," ~~2011~~ 2015 (AHRI Standard 550/590-(I-P)-201~~4~~5) with Addendum 1.

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

**AHRI 680** is the Air-Conditioning, Heating, and Refrigeration Institute document titled "Performance Rating of Residential Air Filter Equipment," ~~2009~~ 2015 (ANSI/AHRI Standard 680-2015).

**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," ~~2010~~ 2014 (AHRI Standard 1230-~~2010~~2014) with Addendum 1.

**AIR, INFILTRATION** is outdoor air that enters a building or space through openings in the building or space envelope due to negative pressure in the space or building relative to the exterior of the building envelope.

**AIR, MAKEUP** is outdoor air that is intentionally conveyed by openings or ducts into the building from the outside; is supplied to the vicinity of an exhaust hood; and replaces air, vapor and contaminants being exhausted by the exhaust hood. Makeup air is generally filtered and fan-forced, and it may be heated or cooled. Makeup air may be delivered through openings or ducts integral to the exhaust hood.

**AIR, REPLACEMENT** is air that is used to replace air removed from a building through an exhaust system. Replacement air may be derived from one or more of the following: makeup air, portions of supply air, transfer air, or infiltration air.

**AIR, SUPPLY** is air entering a space from an air-conditioning, heating, or ventilating system for the purpose of comfort conditioning. Supply air is generally filtered, fan-forced, and heated, cooled, humidified or dehumidified as necessary to maintain specified temperature and humidity conditions.

**AIR, TRANSFER** is air transferred, whether actively by fans or passively by pressure differentials, from one room to another within a building through openings in the room envelope.

> **AIR, AVAILABLE TRANSFER** is that portion of total outdoor ventilation air that is not required to satisfy other exhaust needs or to maintain pressurization of other spaces and that is transferable according to Section 120.1(g).

**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 HANDBOOK, APPLICATIONS VOLUME** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "ASHRAE Handbook: Heating, Ventilating, and Air-Conditioning Applications" (~~2011~~2015).

**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" (~~2008~~2016).

**ASHRAE HANDBOOK, FUNDAMENTALS VOLUME** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "ASHRAE Handbook: Fundamentals" (~~2009~~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," ~~2012~~ 2017 (ANSI/ASHRAE Standard 52.2-~~2012~~2017).

**ASHRAE STANDARD 55** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled " Thermal Environmental Conditions for Human Occupancy," ~~2010~~ 2017 (ASHRAE Standard 55-~~2010~~2017).

**ASHRAE STANDARD 62.1** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled **"**Ventilation for Acceptable Indoor Air Quality", 2016 (ANSI/ASHRAE Standard 62.1-2016, including Addenda k).

**ASHRAE STANDARD 62.2** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "Ventilation and Acceptable Indoor Air Quality in ~~Low-Rise~~ Residential Buildings," ~~2010~~ 2016 (ANSI/ASHRAE Standard 62.2-~~2010~~ 2016 including ANSI/ASHRAE Addenda b, d, k, l, q, ~~c, e, g, h, i~~ and ~~l~~ s to ANSI/ASHRAE 62.2-~~2010~~ 2016 published in the ~~2011~~ 2017 supplement~~), and ANSI/ASHRAE Addendum j to ANSI/ASHRAE Standard 62.2-2010 published in March, 2012, and ANSI/ASHRAE Addendum n to ANSI/ASHRAE Standard 62.2-2010 published in February, 2012)~~.

**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," ~~2010~~ RA2014 (ANSI/ASHRAE Standard 193-~~2010~~RA2014).

**ASME** is the American Society of Mechanical Engineers.

**ASME A17.1/CSA B44** is the American Society of Mechanical Engineers document titled "Handbook on Safety Code for Elevators and Escalators" ~~2013~~ 2016 (ASME Standard A17.1/CSAB44-~~2013~~2016).

**ASME A112.18.1/CSA B125.1** is the American Society of Mechanical Engineers document titled "Plumbing Fixture Fittings" ~~2011~~ 2012 (ASME Standard A112.18.1-~~2011~~2012/CSA B125.1-~~11~~12).

**ASTM** is the American Society for Testing and Materials International.

**ASTM C55** is the American Society for Testing and Materials document titled "Standard Specification for Concrete Brick," ~~2014~~ 2017 (ASTM C55-~~14~~17).

**ASTM C177** is the American Society for Testing and Materials document titled "Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus," 2013 (ASTM C177-13).

**ASTM C272** is the American Society for Testing and Materials document titled "Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions," ~~2012~~ 2016 (ASTM C272-~~12~~16).

**ASTM C335/C335M** is the American Society for Testing and Materials document titled "Standard Test Method for Steady-State Heat Transfer Properties of ~~Horizontal~~ Pipe Insulation," ~~2010~~ 2017 (ASTM C335/C335M-~~10~~17).

**ASTM C518** is the American Society for Testing and Materials document titled "Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus," ~~2010~~ 2017 (ASTM C518-~~10~~17).

**ASTM C731** is the American Society for Testing and Materials document titled "Standard Test Method for Extrudability, After Package Aging of Latex Sealants," ~~2010~~ 2015 (ASTM C731-~~10~~15).

**ASTM C732** is the American Society for Testing and Materials document titled "Standard Test Method for Aging Effects of Artificial Weathering on Latex Sealants," ~~2006~~ 2017 (ASTM C732-17~~06~~ (~~2012~~2017).

**ASTM C836** is the American Society of Testing and Materials document titled, "Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course," ~~2012~~ 2016 (ASTM C836/C836M-~~12~~16).

**ASTM C1167** is the American Society for Testing and Materials document titled "Standard Specification for Clay Roof Tiles," 2011 (ASTM C1167-11).

**ASTM C1371** is the American Society for Testing and Materials document titled "Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers," ~~2010~~ 2015 (ASTM C1371-~~04a(2010~~2015).

**ASTM C1492** is the American Society for Testing and Materials document entitled "Standard Specification for Concrete Roof Tile," ~~2009~~ 2016 (ASTM C1492-03(~~2009~~2016)).

**ASTM C1549** is the American Society for Testing and Materials document entitled, "Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer,"~~2014~~ 2016 (ASTM C1549- ~~09~~ 16 (~~2014~~2016).

**ASTM C1583** is the American Society of Testing and Materials document titled, "Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method)," 2013 (ASTM C1583/c1583M-13).

**ASTM D448** is the American Society for Testing and Materials document titled, "Standard Classification for Sizes of Aggregate for Road and Bridge Construction,"~~2012~~ 2017 (ASTM D448-12(2017)).

**ASTM D522** is the American Society of Testing and Materials document titled, "Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings," ~~2013~~ 2017 (ASTM D522/D522M-17~~13~~).

**ASTM D822** is the American Society of Testing and Materials document titled, "Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings," 2013 (ASTM D822/D822M-13).

**ASTM D1003** is the American Society for Testing and Materials document titled "Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics," 2013 (ANSI/ASTM D1003-13).

**ASTM D1653** is the American Society of Testing and Materials document titled, "Standard Test Methods for Water Vapor Transmission of Organic Coating Films," 2013 (ASTM D1653-13).

**ASTM D1863** is the American Society for Testing and Materials document titled, "Standard Specification for Mineral Aggregate Used on Built-Up Roofs,"2011 (ASTM D1863/D1863M-05 (2011)).

**ASTM D2370** is the American Society of Testing and Materials document titled, "Standard Test Method for Tensile Properties of Organic Coatings," ~~2010~~ 2016 (ASTM D2370-98 (~~2010~~2016)).

**ASTM D2824** is the American Society of Testing and Materials document titled "Standard Specification for Aluminum-Pigmented Asphalt Roof Coatings, Nonfibered, Asbestos Fibered, and Fibered without Asbestos," 2013 (ASTM D2824/D2824M-13).

**ASTM D3468** is the American Society of Testing and Materials document titled, "Standard Specification for Liquid-Applied Neoprene and Chlorosulfonated Polyethylene Used in Roofing and Waterproofing," 2013 (ASTM D3468/D3468M-99 (2013)).

**ASTM D3805** is the American Society of Testing and Materials document titled "Standard Guide for Application of Aluminum-Pigmented Asphalt Roof Coatings," ~~1997~~ 2016 (ASTM D3805/D3805M-~~97~~ 16 (~~2009~~2016)).

**ASTM D4798** is the American Society for Testing and Materials document titled "Standard Test Method for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon-Arc Method)," ~~2011~~ 2016 (ASTM D4798/D4798M-~~11~~16).

**ASTM D5870** is the American Society of Testing and Materials document titled, "Standard Practice for Calculating Property Retention Index of Plastics," ~~2011~~ 2016 (ASTM D5870-~~11~~16).

~~**ASTM D6083** is the American Society of Testing and Materials document titled, "Standard Specification for Liquid Applied Acrylic Coating Used in Roofing," 2005 (ASTM D6083-05e1).~~

**ASTM D6694** is the American Society of Testing and Materials document titled, "Standard Specification for Liquid-Applied Silicone Coating Used in Spray Polyurethane Foam Roofing," ~~2013~~ 2015 (ASTM D6694/D6694M-~~08~~ 15 (~~2013~~2015).

~~**ASTM D6848** is the American Society of Testing and Materials document titled "Standard Specification for Aluminum-Pigmented Emulsified Asphalt Used as a Protective Coating for Roofing," 2002 (ASTM D6848-02).~~

**ASTM E96** is the American Society for Testing and Materials document titled "Standard Test Methods for Water Vapor Transmission of Materials," ~~2014~~ 2016 (ASTM E96/E96M-~~14~~16).

**ASTM E283** is the American Society for Testing and Materials document titled "Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen," 2012 (ASTM E283-04(2012)).

**ASTM E408** is the American Society for Testing and Materials document titled, "Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques," 2013 (ASTM E408-13).

**ASTM E779** is the American Society for Testing and Materials document titled, "Standard Test Method for Determining Air Leakage Rate by Fan Pressurization," 2010 (ASTM E779-10).

**ASTM E903** is the American Society for Testing and Materials document titled, "Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres,"2012 (ASTM E903-12(2012)).

**ASTM E972** is the American Society for Testing and Materials document titled, "Standard Test Method for Solar Photometric Transmittance of Sheet Materials Using Sunlight,"1996 (ASTM E972-96(2013)).

**ASTM E1175** is the American Society for Testing and Materials document titled, "Standard Test Method for Determining Solar or Photopic Reflectance, Transmittance, and Absorptance of Materials Using a Large Diameter Integrating Sphere,"2015 (ASTM E1175-87(2015)).

**ASTM E1677** is the American Society for Testing and Materials document titled, "Standard Specification for an Air Retarder (AR) Material or System for Low-Rise Framed Building Walls," 2011 (ASTM E1677-11).

**ASTM E1918** is the American Society for Testing and Materials document entitled, "Standard Test Method for Measuring Solar reflectance of Horizontal and Low-Sloped Surfaces in the Field,"~~2015~~ 2016 (ASTM E1918-~~06~~16(~~2015~~2016) ).

**ASTM E1980** is the American Society for Testing and Materials document titled, "Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surface," 2011 (ASTM E1980-11)

**ASTM E2178** is the American Society for Testing and Materials document titled, "Standard Test Method for Air Permeance of Building Materials," 2013 (ASTM E21778-13).

**ASTM E2357** is the American Society for Testing and Materials document titled, "Standard Test Method for determining air leakage of air barrier assemblies" ~~2011~~ 2017 (ASTM E2357-~~11~~17).

~~**ASTM E2357** is the American Society for Testing and Materials document titled, "Standard Test Method for determining air leakage of air barrier assemblies" 2011 (ASTM E2357-11).~~

**ATTIC** is an enclosed space directly below the roof deck and above the ceiling beams.

**AUTOMATIC** is capable of operating without human intervention.

**AUTOMATED TELLER MACHINE (ATM)** is any electronic information processing device which accepts or dispenses currency in connection with a credit, deposit, or convenience account without involvement by a clerk.

**BACK-UP COMPRESSORS** are those compressors not used to meet peak compressed air loads. Back-up compressors are physically connected to the compressed air piping system and can be automatically controlled to turn on if one of the online compressors fails. Back-up compressors do not normally operate.

**BATTERY SYSTEM, STATIONARY STORAGE.** A rechargeable energy storage system consisting of electrochemical storage batteries, battery chargers, controls, and associated electrical equipment designed to provide electrical power to a building. The system is typically used to provide standby or emergency power, and uninterruptable power supply, load shedding, load sharing or similar capabilities.

**BELOW-GRADE WALL** is the portion of a wall, enclosing conditioned space that is below the grade line.

**BUBBLE POINT** is the liquid saturation temperature of a refrigerant at a specified pressure.

**BUILDING** is any structure or space covered by Section 100.0 of the Building Energy Efficiency Standards.

**BUILDING COMMISSIONING** is a systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.

**BUILDING ENVELOPE** is the ensemble of exterior and demising partitions of a building that enclose conditioned space.

**CALL CENTER** is a phone center that handles large number of phone calls including but not limited to help desk, customer and sales support, technical support, emergency response, telephone answering service, and inbound and outbound telemarketing.

**CASCADE REFRIGERATION SYSTEM** is a type of refrigeration system that uses a low-stage refrigeration system where the heat rejected from condensing the low-stage refrigerant is absorbed using a heat-exchanger by a separate high-stage refrigeration system, and the ultimate heat rejection to ambient air is accomplished by the high-stage refrigeration system.

**CENTRAL FAN-INTEGRATED VENTILATION SYSTEM** is a central forced air heating and/or cooling system which is intended to operate on a regular basis to bring in outdoor ventilation air and/or distribute air around the home for comfort and ventilation even when heating and cooling are not needed.

**CERTIFIED TO THE ENERGY COMMISSION** means, when used in association with appliances, certified under Section 1606 of Title 20 of the California Code of Regulations; and otherwise means certified by the manufacturer in a declaration, executed under penalty of perjury under the laws of the State of California, that all the information provided pursuant to the certification is true, complete, accurate and in compliance with all applicable provisions of Part 6; and if applicable that the equipment, product, or device was tested under the applicable test method specified in Part 6.

**CERTIFYING ORGANIZATION** is an independent organization recognized by the Commission to certify manufactured devices for performance values in accordance with procedures adopted by the Commission.

**CIE 13.3** is the International Commission on Illumination (Commission Internationale de l'Eclairage) document titled "Method of Measuring and Specifying Colour Rendering Properties of Light Sources," 1995 (CIE 13.3-1995).

**CIE 15** is the International Commission on Illumination (Commission Internationale de l'Eclairage) document titled "Technical Report: Colorimetry," 2004 (CIE 15:2004).

**CLIMATE ZONES** are the 16 geographic areas of California for which the Commission has established typical weather data, prescriptive packages and energy budgets. Climate zones are defined by ZIP code and listed in Reference Joint Appendix JA2 FIGURE 100.1-A is an approximate map of the 16 Climate Zones.

**CLOSED-CIRCUIT COOLING TOWER** is a cooling tower that utilizes indirect contact between a heated fluid, typically water or glycol, and the cooling atmosphere to transfer the source heat load through sensible heat, latent heat, and mass transfer indirectly to the air, essentially combining a heat exchanger and cooling tower into an integrated and relatively compact device.

**CODES, CALIFORNIA HISTORICAL BUILDING CODE** is the California Historical Building Code, California Code of Regulations, Title 24, Part 8 and Part 2 (Chapter 34).

**CODES, CBC** is the 201~~0~~6 California Building Code.

**CODES, CEC** is the 201~~0~~6 California Electric Code.

**CODES, CMC** is the 201~~0~~6 California Mechanical Code.

**CODES, CPC** is the 201~~0~~6 California Plumbing Code.

**COEFFICIENT OF PERFORMANCE (COP), COOLING,** is the ratio of the rate of net heat removal to the rate of total energy input, calculated under designated operating conditions and expressed in consistent units, as determined using the applicable test method in the Appliance Efficiency Regulations or Section 110.2.

**COEFFICIENT OF PERFORMANCE (COP), HEATING,** is the ratio of the rate of net heat output to the rate of total energy input, calculated under designated operating conditions and expressed in consistent units, as determined using the applicable test method in the Appliance Efficiency Regulations or Section 110.2.

**COEFFICIENT OF PERFORMANCE (COP), HEAT PUMP** is the ratio of the rate of useful heat output delivered by the complete heat pump unit (exclusive of supplementary heating) to the corresponding rate of energy input, in consistent units and as determined using the applicable test method in Appliance Efficiency Regulations or Section 110.2.

**COMBUSTION AIR POSITIVE SHUT-OFF** is a means of restricting air flow through a boiler combustion chamber during standby periods, used to reduce standby heat loss. A flue damper and a vent damper are two examples of combustion air positive shut-off devices.

**COMBUSTION EFFICIENCY** is a measure of the percentage of heat from the combustion of gas or oil that is transferred to the medium being heated or lost as jacket loss.

**COMMERCIAL BOILER** is a type of boiler with a capacity (rated maximum input) of 300,000 Btus per hour (Btu/h) or more and serving a space heating or water heating load in a commercial building.

**COMMISSION** is the California State Energy Resources Conservation and Development Commission, which is also referred to as the California Energy Commission.

**COMPLEX MECHANICAL SYSTEMS:** are systems that include 1) fan systems each serving multiple thermostatically controlled zones; or 2) built-up air handler systems (non-unitary or non-packaged HVAC equipment); or 3) hydronic or steam heating systems; or 4) hydronic cooling systems. Complex mechanical systems are NOT the following: (a1) unitary or packaged equipment listed in Tables 110.2-A, 110.2-B, 110.2-C, and or 110.2-E that each serves one zone, or (b2) two-pipe, heating only systems serving one or more zones.

**COMPLIANCE SOFTWARE** is software that has been approved pursuant to Section 10-109 of Part 1 of Title 24 of the California Code of Regulations, to demonstrate compliance with the performance approach of Part 6.

**COMPRESSED AIR SYSTEM** is a system of at least one compressor providing compressed air at 40 psig or higher.

**COMPUTER ROOM** is a room within a building whose primary function is to house electronic equipment and that has a design equipment power density exceeding 20 watts/$ft^2$ (215 watts/$m^2$) of conditioned floor area.

**CONDENSER** is a refrigeration component that condenses refrigerant vapor by rejecting heat to air mechanically circulated over its heat transfer surface

**CONDENSER, ADIABATIC** is a condenser that has the ability to use two heat transfer processes in series as accomplished by a single factory-made unit. The first heat transfer process is the pre-cooling of the entering air by lowering the entering air drybulb temperature. The second heat transfer process is forced-air circulation cooling over the heat transfer surface of the condenser.

**DRY MODE** is an operating condition of an adiabatic condenser wherein the only means of heat transfer is accomplished through forced-air circulation over the heat transfer surface of the condenser without any pre-cooling of the entering air.

**PRE-COOL MODE** is an operating condition of an adiabatic condenser wherein the entering air is pre-cooled.

**CONDENSER SPECIFIC EFFICIENCY** is the full load condenser Total Heat of Rejection (THR) capacity at standardized conditions divided by the fan input electric power (including but not limited to spray pump electric input power for evaporative condensers) at 100 percent rated fan speed.

**CONDITIONED FLOOR AREA (CFA)** is the floor area (in square feet) of enclosed conditioned space on all floors of a building, as measured at the floor level of the exterior surfaces of exterior walls enclosing the conditioned space.

**CONDITIONED SPACE** is an enclosed space within a building that is either directly conditioned or indirectly conditioned.

**CONDITIONED SPACE, DIRECTLY** 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-ft², ~~unless the space conditioning system is designed for process space or process load~~. Directly conditioned space does not include process space. (See ~~"process load" and~~ "process space.")

**CONDITIONED SPACE, INDIRECTLY** 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.

**CONDITIONED VOLUME** is the total volume (in cubic feet) of the conditioned space within a building.

**CONTINUOUS INSULATION (c.i.)** is insulation that is continuous across all assemblies that separate conditioned from unconditioned space. It is installed on the exterior or interior or is integral to any opaque surface of the building envelope and has no thermal bridges other than fasteners and necessary service openings.

**CONTROLLED ATMOSPHERE** is an airtight space maintained at reduced oxygen levels for the purpose of reducing respiration of perishable product in long term storage.

**COOLER** is a space to be capable of operation at a temperature greater than or equal to 28°F but less than 55°F.

**COOL ROOF** is a roofing material with high thermal emittance and high solar reflectance, or low thermal emittance and exceptionally high solar reflectance as specified in Part 6 that reduces heat gain through the roof.

**COOLING EQUIPMENT** is equipment used to provide mechanical cooling for a room or rooms in a building.

**CRAWL SPACE** is a space immediately under the first floor of a building adjacent to grade.

**CRRC-1** is the Cool Roof Rating Council document titled "Product Rating Program Manual."

**CTI** is the Cooling Technology Institute.

**CTI ATC-105** is the Cooling Technology Institute document titled "Acceptance Test Code for Water Cooling Towers," 2000 (CTI ATC-105-00).

**CTI ATC-105S(11)** is the Cooling Technology Institute document titled "Acceptance Test Code for Closed-Circuit Cooling Towers," 2011 (CTI ATC-105-11).

CTI ATC-106 is the Cooling Technology Institute document titled "Acceptance Test Code for Mechanical Draft Evaporative Vapor Condensers", 2011 (CTI ATC-106 (11)).

**CTI STD-201** is the Cooling Technology Institute document titled "Standard for Thermal Performance Certification of Evaporative Heat Rejection Equipment," ~~2011~~ 2015 (CTI STD-201-~~11~~15).

**CURRENT AIR DEMAND** is the actual cubic feet per minute (acfm) of total air flow necessary for end uses in a compressed air system.

**C-VALUE** (also known as C-factor) is the time rate of heat flow through unit area of a body induced by a unit temperature difference between the body surfaces, in Btu (hr x ft² x °F). It is not the same as K-value or K-factor.

**CYCLES OF CONCENTRATION** is the number of times the concentration of total dissolved solids (TDS) in cooling tower water is multiplied relative to the TDS in the makeup water. Because evaporation of pure water leaves dissolved solids behind in the system water, TDS increases over time as the tower operates. The number of times the dissolved minerals are concentrated is relative to the TDS in the makeup water. For example, five cycles of concentration represents five times the concentration of solids in the cooling tower system water relative to the TDS in the makeup water entering the tower.

**DATA CENTER** is a building whose primary function is to house computer room(s).

**DAYLIT ZONE** is the floor area under skylights or next to windows. Types of Daylit Zones include Primary Sidelit Daylit Zone, Secondary Sidelit Daylit Zone, and Skylit Daylit Zone.

**DEADBAND** is the temperature range within which the HVAC system is neither calling for heating or cooling.

**DECORATIVE GAS APPLIANCE** is a gas appliance that is designed or installed for visual effect only, cannot burn solid wood, and simulates a fire in a fireplace.

**DEGREE DAY, HEATING,** is a unit, based upon temperature difference and time, used in estimating fuel consumption and specifying nominal annual heating load of a building. For any one day, when the mean temperature

is less than 65°F, there exist as many degree days as there are Fahrenheit degrees difference in temperature between the mean temperature for the day and 65°F. The number of degree days for specific geographical locations are those listed in the Reference Joint Appendix JA2. For those localities not listed in the Reference Joint Appendix JA2, the number of degree days is as determined by the applicable enforcing agency.

**DEMAND FLEXIBILITY MEASURE** is a measure that reduces TDV energy consumption using communication and control technology to shift electricity use across hours of the day to decrease energy use onpeak or increase energy use offpeak, including but not limited to battery storage, or HVAC or water heating load shifting.

**DEMAND RESPONSE** is short-term changes in electricity usage by end-use customers from their normal consumption patterns. Demand response may be in response to:

a. changes in the price of electricity; or

b. participation in programs or services designed to modify electricity use

   i. in response to wholesale market prices, or

   ii. when system reliability is jeopardized.

**DEMAND RESPONSE PERIOD** is a period of time during which electricity loads are modified in response to a demand response signal.

**DEMAND RESPONSE SIGNAL** is a signal ~~sent by the local utility, Independent System Operator (ISO), or designated curtailment service provider or aggregator, to a customer,~~that indicat~~inge~~s a price or a request to modify electricity consumption~~,~~ for a limited time period.

**DEMAND RESPONSIVE CONTROL** is an automatic ~~kind of~~ control that is capable of receiving and automatically responding to a demand response signal.

**DEMISING PARTITION** is a wall, fenestration, floor, or ceiling that separates conditioned space from enclosed unconditioned space.

**DESIGN CONDITIONS** are the parameters and conditions used to determine the performance requirements of space-conditioning systems. Design conditions for determining design heating and cooling loads are specified in Section 140.4(b) for nonresidential, high-rise residential, and hotel/motel buildings and in Section 150.0(h) for low-rise residential buildings.

**DESIGN HEAT GAIN RATE** is the total calculated heat gain through the building envelope under design conditions.

**DESIGN HEAT LOSS RATE** is the total calculated heat loss through the building envelope under design conditions.

**DESIGN REVIEW** is an additional review of the construction documents (drawings and specifications) that seeks to improve compliance with existing Title 24 regulations, to encourage adoption of best practices in design, and to encourage designs that are constructible and maintainable. It is an opportunity for an experienced design engineer or architect to look at a project with a fresh perspective in an effort to catch missing or unclear design information and to suggest design enhancements.

**DEW POINT TEMPERATURE** is the vapor saturation temperature at a specified pressure for a substance undergoing phase change from vapor to liquid.

**DIRECT DIGITAL CONTROL (DDC)** is a type of control where controlled and monitored analog or binary data, such as temperature and contact closures, are converted to digital format for manipulation and calculations by a digital computer or microprocessor, then converted back to analog or binary form to control mechanical devices.

**DIRECT-VENT APPLIANCE** or "sealed combustion" appliance is an appliance that is constructed and installed so that air from combustion is derived directly from the outdoors and flue gases are discharged to the outdoors.

**DISPLAY PERIMETER** is the length of an exterior wall in a Group B; Group F, Division 1; or Group M, Occupancy that immediately abuts a public sidewalk, measured at the sidewalk level for each story that abuts a public sidewalk.

**DOMESTIC WATER HEATING SYSTEMS (**see "service water heating")

**DOOR** is an operable opening in the building envelope, including swinging and roll-up doors, fire doors, pet doors and access hatches with less than ~~50~~25 percent glazed area. When that operable opening has ~~50~~25 percent or more glazed area it is a glazed door. See Fenestration: Glazed Door.

**DOOR AREA** is the total rough opening area which includes the door, and when present, the fenestration, and the fenestration frame components in the door frame assembly.

**DUAL-GLAZED GREENHOUSE WINDOWS** are a type of dual-glazed fenestration product which adds conditioned volume but not conditioned floor area to a building.

**DUCT SEALING** is a procedure for installing a space conditioning distribution system that minimizes leakage of air from or to the distribution system. Minimum specifications for installation procedures, materials, diagnostic testing and field verification are contained in the Reference Residential Appendix RA3 and Reference Nonresidential Appendix NA1.

**DUCT SYSTEM** is all the ducts, duct fittings, plenums and fans when assembled to form a continuous passageway for the distribution of air.

**DUCTED SYSTEM** is an air conditioner or heat pump, either a split system or single-packaged unit, that is designed to be permanently installed equipment and delivers conditioned air to an indoor space through a duct.

**DWELLING** is a building that contains one or two dwelling units used, intended or designed to be used, rented, leased, let or hired out to be occupied for living purposes.

**DWELLING UNIT** is a single unit providing complete, independent living facilities for one or more persons including access permanent provisions for living, sleeping, eating, cooking and sanitation.

**EAST-FACING** (See "orientation.")

**ECONOMIZER, AIR,** is a ducting arrangement, including dampers, linkages, and an automatic control system that allows a cooling supply fan system to supply outside air to reduce or eliminate the need for mechanical cooling.

**ECONOMIZER, WATER,** is a system by which the supply air of a cooling system is cooled directly or indirectly by evaporation of water, or other appropriate fluid, in order to reduce or eliminate the need for mechanical cooling.

**Electrical Power Distribution Systems.** The following definitions are intended to apply to Section 130.5 only:

**EQUIPMENT**. A general term, including devices, luminaires, apparatus, machinery, and the like used as a part of, or in connection with, an electrical installation.

**PLUG LOAD**is the energy consumed by any appliances or electronic device that is plugged into a receptacle or receptacle outlet. Plug loads are not related to general lighting, heating, ventilation, cooling, and water heating, domestic and service water system, renewable power, information technology equipment, computer room electronic equipment, and electric vehicle charging.

**ELECTRICAL METERING** is a device or system for measuring the electrical power and energy supplied to a customer or premise(s).

**LOW VOLTAGE DRY-TYPE DISTRIBUTION TRANSFORMER** is a distribution transformer that has an input voltage of 600 volts or less, that is air-cooled, and that does not use oil as a coolant.

**SERVICE** is the conductors and equipment for delivering electric energy from the serving utility to the wiring system of the premise served.

**SERVICE EQUIPMENT** is the necessary equipment, usually consisting of a circuit breaker(s) or switch(es) and fuse(s) and their accessories, connected to the load end of service conductors to a building or other structure, or an otherwise designated area, and intended to constitute the main control and cutoff of the supply.

**ELECTRONICALLY-COMMUTATED MOTOR** is a brushless DC motor with a permanent magnet rotor that is surrounded by stationary motor windings, and an electronic controller that varies rotor speed and direction by sequentially supplying DC current to the windings.

**EMITTANCE, THERMAL** is the ratio of the radiant heat flux emitted by a sample to that emitted by a blackbody radiator at the same temperature.

**ENCLOSED SPACE** is space that is substantially surrounded by solid surfaces, including walls, ceilings or roofs, doors, fenestration areas, and floors or ground.

**ENERGY BUDGET** is the maximum energy consumption~~s~~, based on~~amount of~~ Time Dependent Valuation (TDV) energy, that a proposed building, or portion of a building, can be designed to consume, calculated using Commission-approved compliance software as specified by the Alternative Calculation Method Approval Manual~~with the approved procedures specified in Part 6~~. The Energy Budget for newly constructed, low-rise residential buildings is expressed in terms of the Energy Design Rating.

**ENERGY COMMISSION** is the California State Energy Resources Conservation and Development Commission.

**ENERGY DESIGN RATING (EDR)** is a way to express the energy consumption of a building as a rating score index where a score of 100 represents the energy consumption of the building built to the specifications of the Residential Energy Services (RESNET) reference home characterization of the 2006 International Energy Conservation Code (IECC) with Title 24, Part 6 modeling assumptions, and a score of 0 (zero) represents a building that has zero net energy consumption. The EDR is calculated using Commission-approved compliance software as specified by the Alternative Calculation Method Approval Manual.

**ENERGY DESIGN RATING, ENERGY EFFICIENCY** is an Energy Design Rating based on the TDV energy consumption of a building that results from the building's energy efficiency characteristics, calculated using Commission-approved compliance software as specified by the Alternative Calculation Methods Approval Manual.

**ENERGY DESIGN RATING, SOLAR ELECTRIC GENERATION AND DEMAND FLEXIBILITY** is the reduction in TDV energy consumption of a building expressed in terms of an Energy Design Rating reduction that results from the combination of the building's solar electric generation system and demand flexibility measures.

**ENERGY DESIGN RATING, TOTAL** is the total Energy Design Rating for the building that is determined by subtracting the Solar Electric Generation System and Demand Flexibility Energy Design Rating from the Energy Efficiency Energy Design Rating.

**ENERGY EFFICIENCY RATIO (EER)** is the ratio of net cooling capacity (in Btu/hr) to total rate of electrical energy input (in watts), of a cooling system under designated operating conditions, as determined using the applicable test method in the Appliance Efficiency Regulations or Section 110.2.

**ENERGY FACTOR (EF)** of a water heater is a measure of overall water heater efficiency, as determined using the applicable test method in the Appliance Efficiency Regulations.

**ENERGY MANAGEMENT CONTROL SYSTEM (EMCS)** is an ~~computerized~~ automated control system ~~designed to~~that regulates the energy consumption of a building by controlling the operation of energy consuming systems~~, such as the heating, ventilation and air conditioning (HVAC), lighting, and water heating systems~~, and is capable of monitoring ~~environmental and system~~ loads~~,~~ and adjusting ~~HVAC~~ operations in order to optimize energy usage and respond to demand response signals.

**ENERGY OBTAINED FROM DEPLETABLE SOURCES** is electricity purchased from a public utility, or any energy obtained from coal, oil, natural gas, or liquefied petroleum gases.

**ENERGY OBTAINED FROM NONDEPLETABLE SOURCES** is energy that is not energy obtained from depletable sources.

**ENFORCEMENT AGENCY** is the city, county, or state agency responsible for issuing a building permit.

**ENTIRE BUILDING** is the ensemble of all enclosed space in a building, including the space for which a permit is sought, plus all existing conditioned and unconditioned space within the structure.

**ENVELOPE** (See "building envelope")

**EXFILTRATION** is uncontrolled outward air leakage from inside a building, including leakage through cracks and interstices, around windows and doors, and through any other exterior partition or duct penetration.

**EXTERIOR FLOOR/SOFFIT** is a horizontal exterior partition, or a horizontal demising partition, under conditioned space. For low-rise residential occupancies, exterior floors also include those on grade.

**EXTERIOR PARTITION** is an opaque, translucent, or transparent solid barrier that separates conditioned space from ambient air or space. For low-rise residential occupancies, exterior partitions also include barriers that separate conditioned space from unconditioned space, or the ground.

**EXTERIOR ROOF/CEILING** is an exterior partition, or a demising partition, that has a slope less than 60 degrees from horizontal, that has conditioned space below, and that is not an exterior door or skylight.

**EXTERIOR ROOF/CEILING AREA** is the area of the exterior surface of exterior roof/ceilings.

**EXTERIOR WALL** is any wall or element of a wall, or any member or group of members, which defines the exterior boundaries or courts of a building and which has a slope of 60 degrees or greater with the horizontal plane. An exterior wall or partition is not an exterior floor/soffit, exterior door, exterior roof/ceiling, window, skylight, or demising wall.

**EXTERIOR WALL AREA** is the area of the opaque exterior surface of exterior walls.

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

**FACTORY** is build, structure or space designated as Factory Group F that is used for assembling, disassembling, fabricating, finishing, manufacturing, packaging, repair or processing operations.

**FACTORY ASSEMBLED COOLING TOWERS** are cooling towers constructed from factory-assembled modules either shipped to the site in one piece or put together in the field.

**FENESTRATION:** Includes the following:

**ACE** is an NFRC-Approved Calculation Entity that conducts calculations of fenestration product ratings for certification authorization using the NFRC Component Modeling approach and issues label certificates to Specifying Authorities for product certification authorization in accordance with NFRC requirements.

~~**ALTERATION** is any change to an existing building's exterior fenestration product that is not a repair (see Fenestration Repair) that:~~

~~i. Replaces existing fenestration in an existing wall or roof with no net area added; or~~

~~ii. Replaces existing fenestration and adds new net area in the existing wall or roof; or~~

~~iii. Adds a new window that increases the net fenestration area to an existing wall or roof.~~

**ALTERED COMPONENT** is a new fenestration component that has undergone an alteration other than a repair and is subject to all applicable Standards requirements.

**BAY WINDOW** is a combination assembly which is composed of three or more individual windows either joined side by side or installed within opaque assemblies and which projects away from the wall on which it is installed. Center windows, if used are parallel to the wall on which the bay is installed, the end panels or two side windows are angled with respect to the center window. Common angles are 30° and 45°, although other angles may be employed.

**CLERESTORY GLAZING** is any portion of exterior vertical glazing greater than eight feet per floor -above the finished floor of a space.

**CMA** (component modeling approach) is a fenestration product certification program from the National Fenestration Rating Council (NFRC) that enables energy-related performance ratings for nonresidential fenestration products, including the thermal performance U-factor, Solar Heat Gain Coefficient, and Visible Transmittance.

**CMAST** (Component Modeling Approach Software Tool) is an NFRC approved software which allows a user to create a fenestration product "virtually," and generate its energy-related performance ratings, including the thermal performance U-factor, Solar Heat Gain Coefficient, and Visible Transmittance.

**CURTAIN WALL/STOREFRONT** is an external nonbearing wall intended to separate the exterior nonconditioned and interior conditioned spaces. It also consists of any combination of framing materials, fixed glazing, opaque glazing, operable windows, or other in-fill materials.

**GLAZED DOOR** is an exterior door having a glazed area of ~~50~~25 percent or greater of the area of the door. Glazed doors shall meet fenestration product requirements. See: Door.

**DUAL-GLAZED GREENHOUSE WINDOWS** is a double glass pane separated by an air or other gas space which adds conditioned volume but not conditioned floor area to a building.

**DYNAMIC GLAZING SYSTEMS** are glazing systems that have the ability to reversibly change their performance properties, including U-factor, Solar Heat Gain Coefficient (SHGC), and/or Visible Transmittance (VT) between well-defined end points. These may include, but are not limited to chromogenic glazing systems and integrated shading systems (defined below). Dynamic Glazing systems do not include internally mounted or externally mounted shading devices that attach to the window framing/glazing that may or may not be removable.

**CHROMOGENIC GLAZING** is a class of switchable glazing which includes active materials (e.g. electrochromic) and passive materials (e.g. photochromic and thermochromic) permanently integrated into the glazing assembly. Their primary function is to switch reversibly from a high transmission state to a low transmission state with associated changes in VT and SHGC.

**INTEGRATED SHADING SYSTEM** is a class of fenestration products including an active layer: e.g. shades, louvers, blinds or other materials permanently integrated between two or more glazing layers. The U-factor and/or SHGC and VT of the insulating glass assembly can be altered by reversibly changing the enclosed active layer.

**FENESTRATION ALTERATION** is any change to an existing building's exterior fenestration product that is not a repair (see Fenestration Repair) that:

i. Replaces existing fenestration in an existing wall or roof with no net area added; or

ii. Replaces existing fenestration and adds new net area in the existing wall or roof; or

iii. Adds a new window that increases the net fenestration area to an existing wall or roof.

**FENESTRATION AREA** is the rough opening area of any fenestration product. ~~for windows is the total window rough opening area which includes the fenestration, fenestration frame components in the exterior walls and roofs.~~

**FENESTRATION PRODUCT** is any transparent or translucent material plus any sash, frame, mullions and dividers, in the facade of a building, including, but not limited to, windows, sliding glass doors, french doors, skylights, curtain walls, dynamic glazing, garden windows and glass block.

**FENESTRATION REPAIR** is the reconstruction or renewal for the purpose of maintenance of any fenestration product, component or system and shall not increase the preexisting energy consumption of the repaired fenestration product, component, system, or equipment. Replacement of any component, system, or equipment for which there are requirements in the Standards are considered an alteration (see Fenestration, Alterations) and not a repair and is subject to the requirements of Part 6 of the Standards.

**FIELD-FABRICATED** is a fenestration product whose frame is made at the construction site of standard dimensional lumber or other materials that were not previously cut, or otherwise formed with the specific intention of being used to fabricate a fenestration product. Field fabricated does not include site-built fenestration.

**FIN** is an opaque surface, oriented vertically and projecting outward horizontally from an exterior vertical surface.

**FIN OFFSET** is the horizontal distance from the edge of exposed exterior glazing at the jamb of a window to the fin.

**FIN PROJECTION** is the horizontal distance, measured outward horizontally, from the surface of exposed exterior glazing at the jamb of a window to the outward edge of a fin.

**FIXED** is fenestration that is not designed to be opened or closed.

**GREENHOUSE or GARDEN WINDOW** is a window unit that consists of a three-dimensional, five-sided structure generally protruding from the wall in which it is installed. Operating sash may or may not be included.

**HORIZONTAL SLATS**, when referring to a daylighting device, is a set of adjacent surfaces located directly adjacent to vertical fenestration, oriented horizontally and projecting horizontally from its interior or exterior vertical surface.

**LIGHT SHELF** is an adjacent, opaque surfaced daylighting device located at the sill of clerestory glazing, oriented horizontally and projecting horizontally from an interior or exterior vertical surface.

**MANUFACTURED** or **KNOCKED DOWN PRODUCT** is a fenestration product constructed of materials which are factory cut or otherwise factory formed with the specific intention of being used to fabricate a fenestration product. Knocked down or partially assembled products may be sold as a fenestration product when provided with temporary and permanent labels as described in Section 10-111; or as a site-built fenestration product when not provided with temporary and permanent labels as described in Section 10-111.

**NFRC 100** is the National Fenestration Rating Council document titled "NFRC 100: Procedure for Determining Fenestration Product U-factors." (2017)

**NFRC 200** is the National Fenestration Rating Council document titled "NFRC 200: Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence." (~~2014~~2017).

**NFRC 202** is the National Fenestration Rating Council document titled "NFRC 202: Procedures for Determining Translucent Fenestration Product Visible Transmittance at Normal Incidence." (~~2014~~2017).

**NFRC 203** is the National Fenestration Rating Council document titled "NFRC 203: Procedure for Determining Visible Transmittance of Tubular Daylighting Devices." (~~2014~~2017).

**NFRC 400** is the National Fenestration Rating Council document titled "NFRC 400: Procedure for Determining Fenestration Product Air Leakage." (~~2014~~2017).

**OPERABLE SHADING DEVICE** is a device at the interior or exterior of a building or integral with a fenestration product, which is capable of being operated, either manually or automatically, to adjust the amount of solar radiation admitted to the interior of the building.

**RELATIVE SOLAR HEAT GAIN COEFFICIENT (RSHGC)** is the ratio of solar heat gain through a fenestration product (corrected for external shading) to the incident solar radiation. Solar heat gain includes directly transmitted solar heat and absorbed solar radiation, which is then reradiated, conducted, or convected into the space.

**SITE-BUILT** is fenestration designed to be field-glazed or field assembled units using specific factory cut or otherwise factory formed framing and glazing units, that are manufactured with the intention of being assembled at the construction site. These include storefront systems, curtain walls, and atrium roof systems.

**SKYLIGHT ROOF RATIO (SRR)** is the ratio of the skylight area to the gross exterior roof area.

**SOLAR HEAT GAIN COEFFICIENT (SHGC)** is the ratio of the solar heat gain entering the space through the fenestration area to the incident solar radiation. Solar heat gain includes directly transmitted solar heat and absorbed solar radiation, which is then reradiated, conducted, or convected into the space.

**SPANDREL** is opaque glazing material most often used to conceal building elements between floors of a building so they cannot be seen from the exterior, also known as "opaque in-fill systems".

**TINTED GLASS** is colored glass by incorporation of a mineral admixture resulting in a degree of tinting. Any tinting reduces both visible and radiant transmittance.

**VERTICAL FENESTRATION** is all fenestration other than skylights and doors.

**VISIBLE REFLECTANCE** is the reflectance of light at wavelengths from 410 to 722 namometers.

**VISIBLE TRANSMITTANCE (VT)** is the ratio (expressed as a decimal) of visible light that is transmitted through a glazing fenestration. The higher the VT rating, the more light is allowed through a window.

**WINDOW** is fenestration that is not a skylight and that is an assembled unit consisting of a frame and sash component holding one or more pieces of glazing.

**WINDOW AREA** is the area of the surface of a window, plus the area of the frame, sash, and mullions.

**WINDOW HEAD HEIGHT** is the height from the floor to the top of the ~~window~~vertical fenestration.

**WINDOW WALL RATIO (WWR)** is the ratio of the window area to the gross exterior wall area.

**FIELD ERECTED COOLING TOWERS** are cooling towers which are custom designed for a specific application and which cannot be delivered to a project site in the form of factory assembled modules due to their size, configuration, or materials of construction.

**FIREPLACE** is a hearth and fire chamber, or similar prepared place, in which a fire may be made and which is built in conjunction with a flue or chimney, including but not limited to factory-built fireplaces, masonry fireplaces, and masonry heaters as further clarified in the CBC.

**FLOOR/SOFFIT TYPE** is a type of floor/soffit assembly having a specific heat capacity, framing type, and U-factor.

**FLUID COOLER** is a fan-powered heat rejection device that includes a water or glycol circuit connected by a closed circulation loop to a liquid-cooled refrigerant condenser, and may be either evaporative-cooled, air-cooled, or a combination of the two.

**FLUX** is the rate of energy flow per unit area.

**FOOD PREPARATION EQUIPMENT** is cooking equipment intended for commercial use, including coffee machines, espresso coffee makers, conductive cookers, food warmers including heated food servers, fryers, griddles, nut warmers, ovens, popcorn makers, steam kettles, ranges, and cooking appliances for use in commercial kitchens, restaurants, or other business establishments where food is dispensed.

**FREEZER** is a space designed to be capable of operation at less than 28°F.

**GAS COOLER** is a refrigeration component that reduces the temperature of a refrigerant vapor by rejecting heat to air mechanically circulated over its heat transfer surface. Used by a CO2 refrigeration system in transcitical mode, and normally also capable of operating in subcritical mode.

**GAS COOLING EQUIPMENT** is cooling equipment that produces chilled water or cold air using natural gas or liquefied petroleum gas as the primary energy source.

**GAS HEATING SYSTEM** is a system that uses natural gas or liquefied petroleum gas as a fuel to heat a conditioned space.

**GAS LOG** is a self-contained, free-standing, open-flame, gas-burning appliance consisting of a metal frame or base supporting simulated logs, and designed for installation only in a vented fireplace.

**GLAZING** (See "fenestration product")

**GLOBAL WARMING POTENTIAL (GWP)** is the radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time.

**GLOBAL WARMING POTENTIAL VALUE (GWP Value)** is the 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 1995), or its Fourth Assessment A-3 Report (AR4) (IPCC, 2007). Both the 1995 IPCC SAR values and the 2007 IPCC AR4 values are published in table 2.14 of the 2007 IPCC AR4. The SAR GWP values are found in column "SAR (100-yr)" of Table 2.14.; the AR4 GWP values are found in column "100 yr" of Table 2.14."

**GOVERNMENTAL AGENCY** is any public agency or subdivision thereof, including, but not limited to, any agency of the state, a county, a city, a district, an association of governments, or a joint power agency.

**GROSS EXTERIOR ROOF AREA** is the sum of the skylight area and the exterior roof/ceiling area.

**GROSS EXTERIOR WALL AREA** is the sum of the window area, door area, and exterior wall area.

**HABITABLE SPACE** is space in a building for living, sleeping, eating or cooking, excluding spaces that are designed for human occupancy but only occupied occasionally and for short periods of time:. Bbathrooms, toilets, hallways, storage areas, closets, or utility rooms and similar areas are not considered habitable spaces. (See also "occupiable space".)

**HABITABLE STORY** is a story that contains habitable space in which humans may work or live in reasonable comfort, and that has at least 50 percent of its volume above grade.

**HEALTHCARE FACILITY** is any building or portion thereof licensed pursuant to California Health and Safety Code Division 2, Chapter 1, §1204 or Chapter 2, §1250.

**HEAT CAPACITY (HC)** or thermal capacity, is the measurable physical quantity that characterizes the amount of heat required to change a substance's temperature by a given amount..

**HEAT PUMP** is an appliance, that consists of one or more assemblies; that uses an indoor conditioning coil, a compressor, and a refrigerant-to-outdoor air heat exchanger to provide air heating; and that may also provide air cooling, dehumidifying, humidifying, circulating, or air cleaning.

**HEATED SLAB FLOOR** is a concrete floor either, on-grade, raised, or a lightweight concrete slab topping. Heating is provided by a system placed within or under the slab, and is sometimes referred to as a radiant slab floor.

**HEATING EQUIPMENT** is equipment used to provide mechanical heating for a room or rooms in a building.

**HEATING SEASONAL PERFORMANCE FACTOR (HSPF)** is the total heating output of a central air-conditioning heat pump (in Btu) during its normal use period for heating divided by the total electrical energy input (in watt-hours) during the same period, as determined using the applicable test method in the Appliance Efficiency Regulations.

~~**HI** is the Hydronics Institute of the Gas Appliance Manufacturers Association (GAMA).~~

~~**HI HTG BOILER STANDARD** is the Hydronics Institute document titled "Testing and Rating Standard for Rating Boilers," 1989.~~

**HIGH-RISE RESIDENTIAL BUILDING** is a building, other than a hotel/motel, of Occupancy Group R-2 or R-4 with four or more habitable stories.

**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 also 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.

**HVAC SYSTEM** is a space-conditioning system or a ventilation system.

**IES HB** (See IES Lighting Handbook)

**IES LIGHTING HANDBOOK** is the Illuminating Engineering Society document titled "The IES Lighting Handbook: Reference and Applications, Tenth Edition" (2011).

**IES LM-79-08** is the Illuminating Engineering Society document titled, "IES Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.'

**IES TM-15-11** is the Illuminating Engineering Society document titled, "Luminaire" Classification Systems for Outdoor Luminaires

**INFILTRATION** is uncontrolled inward air leakage from outside a building or unconditioned space, including leakage through cracks and interstices, around windows and doors, and through any other exterior or demising partition or pipe or duct penetration. See AIR BARRIER.

**INTEGRATED ENERGY EFFICIENCY RATIO (IEER)** is a single-number cooling part load efficiency figure of merit calculated as specified by the method described in ANSI/AHRI Standard 340/360/1230 . This metric replaces the IPLV for ducted and non-ducted units.

**INTEGRATED PART LOAD VALUE (IPLV)** is a single-number cooling partload efficiency figure of merit calculated as specified by the method described in ANSI/AHRI Standard 550/590 for use with chillers.

**ISO STANDARD 17025** is the International Organization for Standardization document titled "General Criteria for the Competence of Testing and Calibration Laboratories", 2005 (ANS/ISO/IEC Standard 17025:2005).

**ISO 13256-1** is the International Organization for Standardization document titled "Water-source heat pumps -- Testing and rating for performance -- Part 1: Water-to-air and brine-to-air heat pumps," 1998.

**ISO 13256-2** is the International Organization for Standardization document titled "Water-source heat pumps -- Testing and rating for performance -- Part 1: Water-to-water and brine-to-water heat pumps," 1998.

**LANGELIER SATURATION INDEX** (LSI) is expressed as the difference between the actual system pH and the saturation pH. LSI indicates whether water will precipitate, dissolve, or be in equilibrium with calcium carbonate, and is a function of hardness, alkalinity, conductivity, pH and temperature.

**LARGEST NET CAPACITY INCREMENT** is the largest increase in capacity when switching between combinations of base compressors that is expected to occur under the compressed air system control scheme.

**LIGHTING** definitions:

**Accent Lighting** is directional lighting designed to highlight or spotlight objects. It can be recessed, surface mounted, or mounted to a pendant, stem, or track.

**Chandelier** is a ceiling-mounted, close-to-ceiling, or suspended decorative luminaire that uses glass, crystal, ornamental metals, or other decorative material.

**Color Rendering Index (CRI)** is the ability of a light source to reflect the color of illuminated objects with fidelity relative to ideal or natural light sources of the same color temperature. CRI is calculated according to CIE 13.3

**Correlated Color Temperature (CCT)** is a description of color of light relative to the chromaticity of the radiative emission of heated black body and reported in temperature units of Kelvin according to CIE 15

**Colored light source** is a light source designed and marketed as a colored light source and not designed or marketed for general lighting applications with either of the following characteristics maintained throughout all modes of operation including color changing operation:

(1) A Color Rendering Index (CRI) less than 40, as determined according to the method set forth in CIE Publication 13.3; or

(2) A Correlated Color Temperature less than 2,200 K or greater than 7,000 K as determined according to the method set forth in IES LM-66 or IES LM-79 as appropriate.

**Compact Fluorescent Lamp** is a single-ended fluorescent lamp ~~less than nine inches maximum overall length~~ with a T5 or smaller diameter glass tube that is folded, bent, or bridged.

**Decorative (Lighting/Luminaire)** is lighting or luminaires installed only for aesthetic purposes and that does not serve as display lighting or general lighting.

**Display Lighting** is lighting that provides a higher level of illuminance to a specific area than the level of surrounding ambient illuminance. Types of display lighting include:

**Floor:** supplementary lighting required to highlight features, such as merchandise on a clothing rack, which is not displayed against a wall.

**Wall:** supplementary lighting required to highlight features, such as merchandise on a shelf, which is displayed on perimeter walls.

**Window:** lighting of objects such as merchandise, goods, and artifacts, in a show window, to be viewed from the outside of a space through a window.

**Case:** lighting of small art objects, artifacts, or valuable collections which involves customer inspection of very fine detail from outside of a glass enclosed display case.

**Enclosed Luminaires** are luminaires which contain enclosed lamp compartments where ventilation openings are less than 3 square inches per lamp in the lamp compartment as defined by UL 1598.

**General Lighting** is installed electric lighting that provides a uniform level of illumination throughout an area, exclusive of any provision for special visual tasks or decorative effect, exclusive of daylighting, and also known as ambient lighting.

**GU-24** is the designation of a lamp holder and socket configuration, based on a coding system by the International Energy Consortium, where “G” indicates the broad type of two or more projecting contacts, such as pins or posts, “U” distinguishes between lamp and holder designs of similar type but that are not interchangeable due to electrical or mechanical requirements, and “24” indicates 24 millimeters center to center spacing of the electrical contact posts.

**Illuminance** is the area density of the luminous flux incident at a point on a surface.

**Illumination** is light incident on a surface of body, or the general condition of being illuminated.

**Inseparable Solid State Lighting (SSL) Luminaire** is a luminaire featuring solid state lighting components such as LEDs and driver components which cannot be easily removed or replaced by the end user, thus requiring replacement of the entire luminaire. Removal of solid state lighting components may require the cutting of wires, use of a soldering iron, or damage to or destruction of the luminaire.

**Institutional Tuning** is the process of adjusting the maximum light output of lighting systems to support visual needs or save energy. Institutional tuning differs from personal tuning in that the control strategy is implemented at the institutional rather than the individual user level, and maximum light level adjustments are available only to authorized personnel.

**Lamp** is an electrical appliance that produces optical radiation for the purpose of visual illumination, designed with a base to provide an electrical connection between the lamp and a luminaire, ~~designed with a base to provide an electrical connection between the lamp and a luminaire,~~ and designed to be installed into a luminaire.~~,~~ A lamp is not a luminaire and is not a LED retrofit kit ~~by means of a lamp-holder integral to the luminaire~~.

**Landscape Lighting** is a type of outdoor lighting that is recessed into or mounted on the ground, paving, or raised deck, which is mounted less than 42 inches above grade or mounted onto trees or trellises, and that is intended to be aimed only at landscape features.

**Lantern** is an outdoor luminaire that uses an electric lamp to replicate the appearance of a pre-electric lantern, which used a flame to generate light.

**Light** is the luminous equivalent of power and is properly called luminous flux.

**Lighting**, or illumination, is the application of light to achieve some practical or aesthetic effect.

**Light Emitting Diode (LED)** is a p-n junction solid state diode whose radiated output is a function of its physical construction, material used and exciting current. The output may be in the near ultraviolet, the visible or in the infrared regions of the spectrum.

**LED Light Engine** is an integrated assembly comprised of LED packages, LED components, LED arrays, LED modules, or LED driver, and other optical, thermal, mechanical and electrical components. The device is intended to connect directly to the branch circuit through a custom connector compatible with the LED luminaire for which it was designed and does not use an ANSI standard base. (IES RP-16-~~10~~17).

**LED Retrofit Kit** is a solid state lighting product intended to replace existing light sources and systems, including incandescent and fluorescent light sources, in previously installed luminaires that already comply with safety standards. These kits replace the existing light source and related electrical components, and are classified or certified to UL 1598C. They may employ an ANSI standard lamp base, either integral or connected to the retrofit by wire leads. LED retrofit kit does not include self-ballasted lamps.

**Non-integrated LED lamp** is an assembly composed of a light emitting diode (LED) array (module) or LED packages (components), and an ANSI standard base. The device is intended to connect to the LED driver of an LED luminaire through an ANSI standard lamp-holder (socket). The device cannot be connected directly to the branch circuit. ~~an assembly comprised of an LED array (module) or LED packages (components) and ANSI standard base. The device is intended to connect to the LED driver of an LED luminaire through an ANSI standard lamp-holder (socket). The device cannot be connected to the branch circuit~~ (ANSI/IES RP-16-17~~10~~).

**Integrated LED lamp** is an integrated assembly composed of light emitting diode (LED) packages (components) or LED arrays (modules), as well as an LED driver, an ANSI standard base, and other optical, thermal, mechanical and electrical components. The device is intended to connect directly to the branch circuit through a corresponding ANSI standard lamp-holder (socket). ~~an integrated assembly comprised of LED packages (components) or LED arrays (modules), LED driver, ANSI standard base and other optical, thermal, mechanical and electrical components. The device is intended to connect directly to the branch circuit via a corresponding ANSI standard lamp-holder (socket)~~ (ANSI/IES RP-16-17~~10~~).

**Low Voltage** is less than 90 volts.

**Lumen Maintenance** is a strategy used to provide a precise, constant level of lighting from a lighting system regardless of the age of the lamps or the maintenance of the luminaires.

**Luminaire** is a complete lighting unit consisting of a light source such as a lamp or lamps, together with the parts that distribute the light, position and protect the light source and connect it to the power supply.

**Luminance** is the luminous intensity of the source or surface divided by the area of the source or surface seen by the observer.

**Luminous Efficacy** is a measure of the luminous efficiency of a light source. It is the quotient of the total luminous flux emitted by the total light source power input, expressed in lm/W.

**Luminous Flux** is visually evaluated radiant flux and defines "light" for purposes of lighting design and illuminating engineering.

**Marquee Lighting** is a permanent lighting system consisting of one or more rows of many small lamps, including light emitting diodes (LEDs) lamps, tungsten lamps, low pressure discharge lamps or fiber optic lighting, attached to a canopy.

**Narrow Band Spectrum** is a limited range of wavelengths (nm) concentric to a dominant peak wavelength in the visible spectrum. The limited range of wavelength shall be within 20 nm on either side of the peak wavelength at 50 percent of the peak wavelength's relative spectral power, and within 75 nm on either side of the peak wavelength at 10 percent of the peak wavelength's relative spectral power.

**Ornamental Lighting** for compliance with Part 6 is the following:

**Luminaires** installed outdoor which are rated for ~~100~~ 30 watts or less that are post-top luminaires, lanterns, pendant luminaires, chandeliers, and marquee lighting, not providing general lighting or task lighting.

**Decorative Luminaires** installed indoor that are chandeliers, sconces, lanterns, neon and cold cathode, light emitting diodes, theatrical projectors, moving lights, and light color panels, not providing general lighting or task lighting.

**Pendant (Suspended)** - A luminaire that is hung from a ceiling by supports.

**Permanently Installed lighting** consists of luminaires that are affixed to land, within the meaning of Civil Code Section 658 and 660, except as provided below. Permanently installed luminaires may be mounted inside or outside of a building or site. Permanently installed luminaires may have either plug-in or hardwired connections for electric power. Examples include track and flexible lighting systems; lighting attached to walls, ceilings, columns, inside or outside of permanently installed cabinets, internally illuminated cabinets, mounted on poles, in trees, or in the ground; attached to ceiling fans and integral to exhaust fans. Permanently installed lighting does not include portable lighting or lighting that is installed by the manufacturer in exhaust hoods for cooking equipment, refrigerated cases, food preparation equipment, and scientific and industrial equipment.

**Portable Lighting** is lighting, with plug-in connections for electric power, that is: table and freestanding floor lamps; attached to modular furniture; workstation task luminaires; luminaires attached to workstation panels; attached to movable displays; or attached to other personal property.

**Post Top Luminaire** is an outdoor luminaire that is mounted directly on top of a lamp-post.

**Precision Lighting** is task lighting for commercial or industrial work that illuminates low contrast, finely detailed, or fast moving objects.

**Radiant Power** is the time-rate-flow of radiant energy.

**Radiant Energy** is energy travelling in the form of electromagnetic waves. It is measured in units of energy such as joules or kilowatt hours.

**Recessed Luminaire** is a luminaire that is mounted in the ceiling or behind a wall or other surface with the opening of the luminaire flush with the surface.

**Sconce** is a wall mounted decorative accent luminaire.

**Solid State Lighting (SSL)** is a family of light sources that includes: semiconductor light emitting diodes (LEDs); and organic light emitting diodes (OLEDs).

**Driver,** when used in relation to solid state lighting, is a device comprised of a power source and solid state lighting control circuitry designed to operate solid state lighting.

**Source (light)** is the general term used to reference a source of light. It can refer variously to an electric lamp, a light emitting diode (LED), an entire luminaire with lamp and optical control, or fenestration for daylighting.

**Special Effects Lighting** is lighting installed to give off luminance instead of providing illuminance, which does not serve as general, task, or display lighting.

**Task Lighting** is lighting that is not general lighting and that specifically illuminates a location where a task is performed.

**Temporary Lighting** is a lighting installation, with plug-in connections, that does not persist beyond 60 consecutive days or more than 120 days per year.

**Track Lighting** is a system that includes luminaires and a track, rails, or cables that both mount the system, and deliver electric power. Track lighting includes the following types:

**Line-Voltage Track Lighting** is equipped with luminaires that, use line-voltage lamps or that are equipped with integral transformers at each luminaire.

**Low-Voltage Track Lighting** is equipped with remote transformers for use with low-voltage equipment along the entire length of track.

**Track Lighting Integral Current Limiter** consists of a current limiter integral to the end-feed housing of a manufactured line-voltage track lighting system.

**Track Lighting Supplementary Overcurrent Protection Panel** is a panelboard containing Supplementary Overcurrent Protection Devices as defined in Article 100 of the California Electrical Code, and used only with line voltage track lighting.

**Track Mounted Luminaires** are luminaires designed to be attached at any point along a track lighting system. Track mounted luminaires may be line-voltage or low-voltage.

**Tuning** is the ability to set maximum light levels at a lower level than full lighting power.

**LIGHTING CONTROLS** consist of the following:

**Astronomical Time-Switch Control** is ~~an Automatic Time Switch Control~~a lighting control that controls lighting based on the time of day and astronomical events such as sunset and sunrise, accounting for geographic location and calendar date.

**Automatic Daylight Control** uses one or more photosensors to detect changes in daylight illumination and then automatically adjusts the luminous flux of the electric lighting system in response.

**Automatic Multi-Level Daylight Control** adjusts the luminous flux of the electric lighting system in either a series of steps or by continuous dimming in response to available daylight. This kind of control uses one or more photosensors to detect changes in daylight illumination and then automatically adjusts the electric lighting levels in response.

**Automatic Scheduling Control** is a time-based lighting control ~~device or system~~ that is capable of being programmed to reduce or turn off ~~outdoor luminaire~~lighting power for a portion of the night and to turn off lighting power for the day.

**Automatic Time Switch Control** controls lighting based on the time of day.

**Captive-Key Override** is a type of lighting control in which the key that activates the override cannot be released when the lights are in the on position.

**Countdown Timer Switch** turns lighting or other loads ON when activated using one or more selectable count-down time periods and then automatically turns lighting or other loads OFF when the selected time period had elapsed.

**Dimmer** is a lighting control that varies the luminous flux of the electric lighting system by changing the power used by or delivered to that lighting system.

**Dimmer, Full-Range,** or Continuous Dimmer, means a dimmer that varies the luminous flux of the electric lighting system over a continuous range from the device's maximum light output to the device's minimum light output without visually apparent abrupt changes in light level between the various steps.

**Dimmer, Stepped** varies the luminous flux of the electric lighting system in one or more predetermined discrete steps between maximum light output and OFF with changes in light level between adjacent steps being visually apparent.

**Dimmer, Forward Phase Cut,** varies the luminous flux of the electric lighting system in which a portion of the alternating current voltage waveform supplying to the light source is removed.

**Lighting Control, Self Contained** is a unitary lighting control module that requires no additional components to be a fully functional lighting control.

**Lighting Control System** requires two or more components to be installed in the building to provide all of the functionality required to make up a fully functional and compliant lighting control.

**Multi-Level Astronomical Time Switch** is an Astronomical Time Switch Control that reduces lighting power in multiple steps.

**Multi-Level Lighting Control** reduces power going to a lighting system in multiple steps.

**Multiscene Programmable Control** allows for two or more pre-defined lighting settings, in addition to all-OFF, for two or more groups of luminaires to suit multiple activities in the space.

**NEMA SSL 7A** is the National Electrical Manufacturers Association document titled "Phase Cut Dimming for Solid State Lighting: Basic Compatibility," ~~2013~~2015. (NEMA SSL 7A-~~2013~~2015).

**Occupant Sensing Controls** automatically control levels of illumination, allow for manual operation, and consist of the following types:

**Motion Sensor** is used outdoors, automatically reduces lighting power or turns lights OFF after an area is vacated of occupants, and automatically turns the lights ON when the area is occupied.

**Occupant Sensor** is used indoors, ~~and~~ automatically reduces lighting power or turns lights OFF after an area is vacated of occupants, and is capable of automatically turning the lighting load ON when an area is occupied.

**Partial-ON Occupant or /Motion Sensor** automatically turns lights OFF after an area is vacated of occupants and is capable of automatically or manually turning ON part of the lighting load when an area is occupied.

**Partial-OFF Occupant or /Motion Sensor** automatically dims the lighting or turns OFF part of the lighting load after an area is vacated of occupants, and is capable of automatically turning ON the lighting load or restoring it to full when an area is occupied.

**Vacancy Sensor** automatically turns lights OFF after an area is vacated of occupants but requires lights to be turned ON manually.

**Part-Night Outdoor Lighting Control** is a light sensing and time-based lighting control device or system that is programmed to reduce or turn off the lighting power to an outdoor luminaire for a portion of the night.

**Photo Control** automatically turns lights ON and OFF, or automatically adjusts lighting levels, in response to the amount of daylight that is available. A Photo Control may also be one component of a field assembled lighting system, the component having the capability to provide a signal proportional to the amount of daylight to a Lighting Control System to dim or brighten the electric lights in response.

**Shut-off Controls** is any lighting control capable of automatically shutting OFF the lighting in a space when the space is typically unoccupied.

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

**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~~2017).

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

R-2, ~~multi-family~~multifamily, with three habitable stories or less; or

R-3, single family; or

U-building, located on a residential site.

**LPG** is liquefied petroleum gas.

~~**MAKEUP AIR** is outdoor air that is intentionally conveyed by openings or ducts into the building from the outside; is supplied to the vicinity of an exhaust hood; and replaces air, vapor and contaminants being exhausted by the exhaust hood. Makeup air is generally filtered and fan-forced, and it may be heated or cooled. Makeup air may be delivered through openings or ducts integral to the exhaust hood.~~

**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 Sections 110.0 through 110.9 of Part 6.

**MANUFACTURED or KNOCKED DOWN PRODUCT** is a fenestration product constructed of materials that are factory cut or otherwise factory formed with the specific intention of being used to fabricate a fenestration product. Knocked down or partially assembled products may be sold as a fenestration product when provided with temporary and permanent labels as described in Section 10-111, or as a site-built fenestration product when not provided with temporary and permanent labels as described in Section 10-111.

**MECHANICAL COOLING** is lowering the temperature within a space using refrigerant compressors or absorbers, desiccant dehumidifiers, or other systems that require energy ~~from depletable sources~~ to directly condition the space. In nonresidential, high-rise residential, and hotel/motel buildings, cooling of a space by direct or indirect evaporation of water alone is not considered mechanical cooling.

**MECHANICAL HEATING** is raising the temperature within a space using electric resistance heaters, fossil fuel burners, heat pumps, or other systems that require energy ~~from depletable sources~~ to directly condition the space.

**MERV** is the minimum efficiency reporting value as determined by ASHRAE Standard 52.2 Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size.

**METAL BUILDING** is a complete integrated set of mutually dependent components and assemblies that form a building, which consists of a steel-framed superstructure and metal skin. This does not include structural glass or metal panels such as in a curtainwall system.

**MICROCHANNEL CONDENSER** is an air-cooled condenser for refrigeration systems which utilizes multiple small parallel gas flow passages in a flat configuration with fin surfaces bonded between the parallel gas passages.

**MINISPLIT AIR CONDITIONERS AND HEAT PUMPS** are air conditioner or heat pump systems that have a single outdoor section and one or more indoor sections. The indoor sections cycle on and off in unison in response to a single indoor thermostat.

**MODELING ASSUMPTIONS** are the conditions (such as weather conditions, thermostat settings and schedules, internal gain schedules, etc.) that are used for calculating a building's annual energy consumption as specified in the Alternative Calculation Methods (ACM) Approval Manuals.

**MULTIPLE-SPLIT AIR CONDITIONERS AND HEAT PUMPS** are air conditioner or heat pump systems that have two or more indoor sections. The indoor sections operate independently and can be used to condition multiple zones in response to multiple indoor thermostats.

**MULTIPLE ZONE SYSTEM** is an air distribution system that supplies air to more than one Space Conditioning Zone, each of which has one or more devices (such as dampers, cooling coils, and heating coils) that regulate airflow, cooling, or heating capacity to the zone.

**NATURAL GAS AVAILABILITY.** For newly constructed buildings, natural gas is available if a gas service line can be connected to the site without a gas main extension. For addition and alteration, natural gas is available if a gas service line is connected to the existing building.

**NEEA** is the Northwest Energy Efficiency Alliance.

**NEEA ADVANCED WATER HEATER SPECIFICATION** is the Northwest Energy Efficiency Alliance (NEEA) specification version 6.0 for heat pump water heaters.

**NET EXHAUST FLOW RATE** is the exhaust flow rate for a hood, minus any internal discharge makeup air flow rate.

**NEWLY CONDITIONED SPACE** is any space being converted from unconditioned to directly conditioned or indirectly conditioned space. Newly conditioned space must comply with the requirements for an addition. See Section 141.0 for nonresidential occupancies and Section 150.2 for residential occupancies.

**NEWLY CONSTRUCTED BUILDING** is a building that has never been used or occupied for any purpose.

**NONDUCTED SYSTEM** is an air conditioner or heat pump that: is permanently installed; directly heats or cools air within the conditioned space; and uses one or more indoor coils that are mounted on walls or ceilings within the conditioned space. The system may be of a modular design that allows for combining multiple outdoor coils and compressors to create one unified system.

~~**NFRC 100** is the National Fenestration Rating Council document titled "NFRC 100: Procedure for Determining Fenestration Product U-factors." (2011; NFRC 100 includes procedures for site fenestration formerly included in a separate document, NFRC 100-SB).~~

~~**NFRC 200** is the National Fenestration Rating Council document titled "NFRC 200: Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence." (2011).~~

~~**NFRC 202** is the National Fenestration Rating Council document titled "NFRC 202: Procedures for Determining Translucent Fenestration Product Visible Transmittance at Normal Incidence." (2011).~~

~~**NFRC 203** is the National Fenestration Rating Council document titled "NFRC 203: Procedure for Determining Visible Transmittance of Tubular Daylighting Devices." (2012).~~

~~**NFRC 400** is the National Fenestration Rating Council document titled "NFRC 400: Procedure for Determining Fenestration Product Air Leakage." (2010).~~

**NONRESIDENTIAL BUILDING** is any building which is identified in the California Building Code Table; Description of Occupancy as Group A, B, E, F, H, I, M, or S; and is a U; as defined by Part 2 of ~~Title24~~ Title 24 of the California Code or Regulation.
**NOTE:** Requirements for high-rise residential buildings and hotels/motels are included in the nonresidential sections of Part 6.

**NONRESIDENTIAL BUILDING OCCUPANCY TYPES** are building types in which a minimum of 90 percent of the building floor area functions as one of the following, which do not qualify as any other Building Occupancy Types more specifically defined in Section 100.1, and which do not have a combined total of more than 10 percent of the area functioning of any Nonresidential Function Areas specifically defined in Section 100.1:

~~**Auditorium** **Assembly Building** is a public building with meeting halls in which people gather for civic, social, or recreational activities. These include civic centers, convention centers and auditoriums~~ ~~a minimum of 90 percent of the building floor area are rooms with fixed seating that are primarily used for public meetings or gatherings~~.

~~**Classroom Building** is a building for an educational institution in which a minimum of 90 percent of the building floor area are classrooms or educational laboratories.~~

**Commercial and Industrial Storage Building** is a building ~~for which a minimum or 90 percent of the building~~with building floor area~~s is~~ used for storing items.

~~**Convention Center Building** is a building in which a minimum of 90 percent of the building floor area are rooms for meetings and conventions, which have neither fixed seating nor fixed staging.~~

**Financial Institution Building** is a building ~~in which a minimum of 90 percent of the building~~with floor area~~s are rooms~~ used ~~for~~ by an institution which collects funds from the public and places them in financial assets, such as deposits, loans, and bonds.

~~**General Commercial and Industrial Work**~~**Industrial/Manufacturing Facility Building** is a building ~~in which a minimum of 90 percent of the~~with building floor area ~~are rooms~~ used for performing a craft, assembly or manufacturing operation.

**Grocery Store Building** is a building ~~in which a minimum of 90 percent of the~~with building floor area~~s is~~ used ~~sales floor~~ for the display and ~~the~~ sale of food~~stuffs~~.

**Gymnasium Building** is a building with building floor areas used for physical exercises and recreational sport events and activities.

**Library Building** is a building ~~in which a minimum of 90 percent of the~~with building floor area ~~are rooms use~~ used ~~as~~ for ~~a~~ repository of literary materials, ~~kept~~ and for reading ~~or~~ reference such as books, periodicals, newspapers, pamphlets and prints.

~~**Medical Buildings and Clinic Buildings** are non "I" occupancy buildings in which a minimum of 90 percent of the building floor area are rooms where medical or clinical care is provided, does not provide overnight patient care, and is used to provide physical and mental care through medical, dental, or psychological examination and treatment.~~

**Office Building** is a building of CBC Group B Occupancy ~~in which a minimum of 90 percent of the~~with building floor area<u>s</u> ~~are rooms~~ in which business, clerical or professional activities are conducted.

**Parking Garage Building** is a building ~~in which a minimum of 90 percent of the~~with building floor area<u>s</u> ~~is~~ <u>used for</u> ~~the purpose of~~ parking vehicles, ~~which~~ <u>and</u> consists of at least a roof over the parking area enclosed with walls on all sides. The building includes areas for vehicle maneuvering to reach designated parking spaces. If the roof of a parking structure is also used for parking, the section without an overhead roof is considered an outdoor parking lot instead of a parking garage.

**Religious Facility Building** is a building ~~in which a minimum of 90 percent of the~~<u>with building</u> floor area<u>s</u> ~~in the building floor area are rooms~~<u>used</u> for assembly of people to worship.

**Restaurant Building** is a building ~~in which a minimum of 90 percent of the~~with building floor area<u>s</u> ~~are rooms~~ in which food and drink are prepared and served to customers in return for money.

<u>**Retail Store Building** is a building with building floor areas used for the display and sale of merchandise except food.</u>

**School Building** is a building ~~in which a minimum of 90 percent of the building floor area is~~ used ~~for~~ <u>by</u> an educational institution<u>.</u>~~, but in which less than 90 percent of the building floor area is~~<u>The building floor area can include</u> classrooms or educational laboratories, and may include an auditorium, gymnasium, kitchen, library, multi-purpose room, cafeteria, student union, or workroom. A maintenance or storage building is not a school building.

<u>**Sports Arena Building** is a building with building floor areas used for public viewing of sporting events and activities. Sports arenas are classified according to the number of spectators they are able to accommodate, as follows:

Class I Facility is used for competition play for 5000 or more spectators.

Class II Facility is used for competition play for up to 5000 spectators.

Class III Facility is used for competition play for up to 2000 spectators.

Class IV Facility is normally used for recreational play and there is limited or no provision for spectators.</u>

<u>**Motion Picture Theater Building** is a building with building floor areas used for showing motion pictures to audiences.</u>

<u>**Performance Arts Theater Building** is a building with building floor areas used for showing performing arts that include plays, music or dance to audiences.</u>

~~**Theater Building** is a building in which a minimum of 90 percent of the building floor area are rooms having tiers of rising seats or steps for the viewing of motion pictures, or dramatic performances, lectures, musical events and similar live performances.~~

**NONRESIDENTIAL COMPLIANCE MANUAL** is the manual developed by the Commission, under Section 25402.1(e) of the Public Resources Code, to aid designers, builders, and contractors in meeting the energy efficiency requirements for nonresidential, high-rise residential, and hotel/motel buildings.

**NONRESIDENTIAL FUNCTION AREAS** are those areas, rooms, and spaces within Nonresidential Buildings which fall within the following particular definitions, and are defined according to the most specific definition:

**Aisle Way** is the passage or walkway between storage racks permanently anchored to the floor in a Commercial or Industrial Storage Building, where the racks are used to store materials such as goods and merchandise.

**Atrium** is a large-volume indoor space created by openings between two or more stories but is not used for an enclosed stairway, elevator hoistway, escalator opening, or utility shaft for plumbing, electrical, air-conditioning or other equipment.

<u>**Audience Seating Area** is a room or area with fixed seats for public meetings or gatherings.</u>

**Auditorium ~~Room~~ Area** is a room or area with a stage and fixed seats used for public meetings or gatherings.

**Auto Repair ~~Bay~~ / Maintenance Area** is ~~a room or~~an area used to repair or maintain automotive equipment and/or vehicles.

**Beauty Salon Area** is a room or area in which the primary activity is manicures, pedicures, facials, or the cutting or styling of hair.

**Civic Meeting Place Area** is a space in a government building designed or used for public debate, discussion, or public meetings of governmental bodies.

**Classroom, Lecture, Training, Vocational ~~Room~~ Area** is a room or area where an audience or class receives instruction.

**Commercial and Industrial Storage Area** includes the following:~~is a room or area used for storing of items such as goods and merchandise.~~

**Warehouse** is a room or areas used for storing of items such as goods, ~~and~~ merchandise and materials.

**Shipping & Handling** is a room or areas used for packing, wrapping, labelling and shipping out goods, ~~and~~ merchandise and materials.

**Commercial and Industrial Storage Area (refrigerated)** is a room or area used for storing items where mechanical refrigeration is used to maintain the space temperature at 55° F or less.

**Convention, Conference, Multipurpose and Meeting ~~Centers~~ Area** are rooms or areas that are designed or used for meetings, conventions or events, and that have neither fixed seating nor fixed staging.

**Copy Room** is a room or area used for copying, scanning, or binding documents.

**Corridor Area** is a passageway or route into which compartments or rooms open.

**Dining** Areas include the following:~~is a room or area where meals that are served to the customers will be consumed.~~

**Bar/Lounge and Fine Dining: Bar/Lounge** is a room or area with wait staff serve patrons with~~s~~ liquor, cocktails, wine and beer in a relaxed atmosphere, usually with tables and chairs.

**Fine Dining** is a room or area with wait staff serve patrons with meals ~~and~~in an elegant and formal atmosphere.

**Cafeteria/Fast Food** is a room or area where customers pick up their food at a counter and there is little or no wait staff or table service.

**Family Dining** is a room or area with wait staff serve patrons with meals in a causal atmosphere.

**Electrical/Mechanical/Telephone Room** is a room in which the building's electrical switchbox or control panels, telephone switchbox, and/or HVAC controls or equipment is located.

**Exercise/Fitness Center ~~or~~ and Gymnasium Area** is a room or area equipped for gymnastics, exercise equipment, or indoor athletic activities.

~~**Exhibit, Museum Area** is a room or area in a museum that has for its primary purpose exhibitions, having neither fixed seating nor fixed staging. An exhibit does not include a gallery or other place where art is for sale. An exhibit does not include a lobby, conference room, or other occupancies where the primary function is not exhibitions.~~

**Financial Transaction Area** is a room or area used by an institution which collects funds from the public and places them in financial assets, such as deposits, loans and bonds, and includes tellers, work stations, and customers' waiting areas; to complete financial transactions. Financial transaction areas do not include private offices, hallways, restrooms, or other support areas.

**General Commercial and Industrial Work Area** is a room or area in which an art, craft, assembly or manufacturing operation is performed. Lighting installed in these areas is classified as follows:

**High bay**: Where the luminaires are 25 feet or more above the floor.

**Low bay**: Where the luminaires are less than 25 feet above the floor.

**Precision**: Where visual tasks of small size or fine detail such as electronics assembly, fine woodworking, metal lathe operation, fine hand painting and finishing, egg processing operations, or tasks of similar visual difficulty are performed.

**Healthcare Facilities** may have a room or area as follows:

**Exam/Treatment Room** is a room or area that does not provide overnight patient care and that is used to provide physical and mental care through medical, dental, or psychological examination and treatment, including laboratories and treatment spaces.

**Imaging Room** is a diagnostic room and area for application and review of results from imaging technologies including x-ray, ultrasound, computerized tomography (CT), and magnetic resonance imaging (MRI).

**Medical Supply Room** is a room or area used for storing medical supplies.

**Nursery** is a room or area for providing medical care for newly born infants.

**Nurse's Station** is a room or area where health care staff work when not directly interacting with patients.

**Operating Room** is a room or area where surgical operations are carried out in a sterile environment. This category also applies to veterinary operating rooms.

**Patient Room** is a room or area that occupied by one or more patients during a stay in a healthcare facility or hospital.

**Physical Therapy Room** is a room or area for providing physical therapy treatment.

**Recovery Room** is a room or area which is equipped with apparatus for meeting postoperative emergencies and in which surgical patients are kept during the immediate postoperative period for care and recovery from anesthesia.

~~**Grocery Sales Area** is a room or area that has as its primary purpose the sale of foodstuffs requiring additional preparation prior to consumption.~~

**Hotel Function Area** is a hotel room or area such as a hotel ballroom, meeting room, exhibit hall or conference room, together with pre-function areas and other spaces ancillary to its function.

**Kitchen/Food Preparation Area** is a room or area with cooking facilities ~~or an area~~or ~~-~~where food is prepared.

~~**Laboratory, Scientific** is a room or area where research, experiments, and measurement in medical and physical sciences are performed requiring examination of fine details. The area may include workbenches, countertops, scientific instruments, and associated floor spaces. Scientific laboratory does not refer to film, computer, and other laboratories where scientific experiments are not performed.~~

**Laundry Area** is a room or area primarily designed or used for laundering activities.

**Library Area** is a room or area primarily designed or used as a repository for literary materials, such as books, periodicals, newspapers, pamphlets and prints, kept for reading or reference.

**Reading Area i**s a room or area in a library containing tables, chairs, or desks for patrons to use for the purpose of reading books and other reference documents. Library reading areas include reading, circulation, and checkout areas. Reading areas do not include private offices, meeting, photocopy, or other rooms not used specifically for reading by library patrons.

**Stack Area i**s a room or area in a library with grouping of shelving sections. Stack aisles include pedestrian paths located in stack areas.

~~**Lobby, Hotel i**s the contiguous area in a hotel/motel between the main entrance and the front desk, including reception, waiting and seating areas.~~

**Main Entry Lobby** is the contiguous area in buildings ~~other than~~including hotel/motel that is directly located by the main entrance of the building through which persons must pass, including any ancillary reception, waiting and seating areas.

**Locker ~~or Dressing~~ Room** is a room or area for changing clothing, sometimes equipped with lockers.

**Lounge/Breakroom or Waiting Area** is a room or area in ~~a public place such as a hotel, airport, club, or bar, designated for~~which people ~~to~~ sit, wait and relax.

**Mall** is a roofed or covered common pedestrian area within a mall building that serves as access for two or more tenants.

~~**Medical and Clinical Care Area** is a non "I" occupancy room or area in a building that does not provide overnight patient care and that is used to provide physical and mental care through medical, dental, or psychological examination and treatment, including, but not limited to, laboratories and treatment spaces.~~

**Multipurpose Room** is a room which can be used for multipurpose activities such as meetings, instructional activities and social gatherings. Multipurpose rooms are typically found in offices, schools, convention centers, and assisted living facilities.

**Museum** Areas include the following:

**Exhibit/Display** is a room or area in a museum that has for its primary purpose exhibitions, having neither fixed seating nor fixed staging. An exhibit does not include a gallery or other place where art is for sale. An exhibit does not include a lobby, conference room, or other occupancies where the primary function is not exhibitions.

**Restoration Room** is a room or area in which the primary function is the care ~~or exhibit~~ of works of artistic, historical, or scientific value. ~~A museum~~A restoration does not include a gallery or other place where art is for sale. ~~A museum~~A restoration does not include a lobby, conference room, or other occupancies where the primary function is not the care or exhibit of works of artistic, historical, or scientific value.

**Office Area** is a room, area in a building of CBC Group B Occupancy in which business, clerical or professional activities are conducted.

~~**Open Area** is a warehouse facility term describing a large unobstructed area that is typically used for the handling and temporary storage of goods.~~

**Parking Garage Areas** include the following:

**Parking ~~Areas~~ Zone** ~~are the areas of~~ in a Parking Garage is used for the purpose of parking and maneuvering of vehicles on a single floor. Parking areas include sloping floors of a parking garage. Parking areas do not include Daylight Transition Zones, Dedicated Ramps, or the roof of a Parking Garage, which may be present in a Parking Garage.

**Daylight ~~Transition~~ Adaptation Zone** in a Parking Garage is the interior path of travel for vehicles to enter a parking garage as needed to transition from exterior daylight levels to interior light levels. Daylight Transition Zones only include the path of vehicular travel and do not include adjacent Parking Areas.

**Dedicated Ramps** in Parking Garages are driveways specifically for the purpose of moving vehicles between floors of a parking garage and which have no adjacent parking. Dedicated ramps do not include sloping floors of a parking structure, which are considered Parking Areas.

**Pharmacy Area** is a room or area where medicinal drugs are dispensed and sold, usually in a retail store.

**Religious Worship Area** is a room or area in which the primary function is for an assembly of people to worship. Religious worship does not include classrooms, offices, or other areas in which the primary function is not for an assembly of people to worship.

**Restroom** is a room providing personal facilities such as toilets and washbasins.

**Retail Sales Areas** include the following:

**Grocery Sales** is a room or area that has as its primary purpose about the sale of foodstuffs requiring additional preparation prior to consumption.

**Retail Merchandise Sales ~~Area~~** is a room or area in which the primary activity is the sale of merchandise.

**Fitting Room** is a room or area that the retail customers try out clothing before purchasing.

**Server Room** is a room smaller than 500 square feet, within a larger building, in which networking equipment and Information Technology (IT) server equipment is housed, and a minimum of five IT severs are installed in frame racks.

**Server Aisle** is an aisle of racks of Information Technology (IT) server equipment in a Server Room. While networking equipment may also be housed on these racks, it is largely a room to manage server equipment.

**Playing Area for Sports Arena** is an area where sports are played in front an audience.

**Scientific Laboratory Area** is a room or area where research, experiments, and measurement in medical and physical sciences are performed requiring examination of fine details. The area may include workbenches, countertops, scientific instruments, and associated floor spaces. Scientific laboratory does not refer to film, computer, and other laboratories where scientific experiments are not performed.

**Stairs** is a series of steps providing passage for persons from one level of a building to another, including escalators.

**Stairwell** is a vertical shaft in which stairs are located.

**Support Area** is a room or area used as a passageway, utility room, storage space, or other type of space associated with or secondary to the function of an occupancy that is listed in these regulations.

**Tenant Lease Area** is a room or area in a building intended for lease for which a specific tenant is not identified at the time of building permit application.

**Theater Areas** include the following:

**Motion Picture Theater** is an assembly room or area with ~~tiers of rising~~rows of seats ~~or steps~~ for the showing of motion pictures.

**Performance Theater** is an assembly room or area with rows of seats ~~tiers of rising seats or steps~~ for the viewing of dramatic performances, lectures, musical events and similar live performances.

**Transportation Function Areas** include the following: ~~is the ticketing area, waiting area, baggage handling areas, concourse, in an airport terminal, bus or rail terminal or station, subway or transit station, or a marine terminal.~~

**Baggage Area** is a room or area in a transportation facility such as an airport where the travelers reclaim their baggage.

**Ticketing Area** is a room or area in a transportation facility such as an airport or a train station where travelers purchase tickets, check in baggage, or inquire about travel information.

**Videoconferencing Studio** is a room or area with permanently installed videoconferencing cameras, audio equipment, and playback equipment for both audio-based and video-based two-way communication between local and remote sites.

~~**Vocational Area** is a room or area used to provide training in a special skill to be pursued as a trade.~~

~~**Waiting Area** is an area other than a hotel lobby or main entry lobby normally provided with seating and used for people waiting.~~

~~**Wholesale Showroom** is a room or area where samples of merchandise are displayed.~~

**NONSTANDARD PART LOAD VALUE** (NPLV) is a single- number part-load efficiency figure of merit for chillers referenced to conditions other than IPLV conditions. (See "integrated part load value.")

**NORTH-FACING (**See "orientation.")

**OCCUPANCY** is the purpose for which a building or part thereof is used or intended to be used.

**OCCUPANCY, HUMAN** is any occupancy that is intended primarily for human activities.

**OCCUPANCY GROUP** is a classification of occupancy defined in Chapter 3 of the CBC (Title 24, Part 2).

**OCCUPANCY TYPE** is a description of occupancy than is more specific than occupancy group and that relates to determining the amount of lighting, ventilation, or other services needed for that portion of the building.

**OCCUPIABLE SPACE** is any enclosed space that is ~~inside the pressure boundary and~~ intended for human ~~activities~~occupancy, including~~, but not limited to,~~ all habitable spaces as well as~~,~~ bathrooms, toilets, closets, halls, storage and utility areas, ~~and~~ laundry areas, and similar areas that are only occupied occasionally and for short periods of time. (See also "habitable space".)

**OCCUPIED STANDBY MODE** is when a zone is scheduled to be occupied and an occupant sensor indicates zero population within the zone.

**ONLINE CAPACITY** is the total combined capacity in actual cubic feet per minute of compressed air at a given pressure from all online compressors.

**ONLINE COMPRESSORS** are all the compressors that are physically connected to compressed air piping and are available to serve peak load. Online compressors do not include back up compressors whose only purpose is to be available when an online compressor fails.

**OPEN COOLING TOWER** is an open, or direct contact, cooling tower which exposes water directly to the cooling atmosphere, thereby transferring the source heat load from the water directly to the air by a combination of heat and mass transfer.

**OPENADR 2.0a** is the OpenADR Alliance document titled, "OpenADR 2.0 Profile Specification A Profile," 2011.

**OPENADR 2.0b** is the OpenADR Alliance document titled, "OpenADR 2.0 Profile Specification B Profile," 2015.

**OPERABLE FENESTRATION** is designed to be opened or closed.

**OPTIMUM START CONTROLS** are controls that are designed to automatically adjust the start time of a space conditioning system each day with the intent of bringing the space to desired occupied temperature levels at the beginning of scheduled occupancy.

**OPTIMUM STOP CONROLS** are controls that are designed to setup or setback thermostat setpoints before scheduled unoccupied periods based upon the thermal lag and acceptable drift in space temperature that is within comfort limits.

**OSHPD** is the California Office of Statewide Health Planning and Development

**ORIENTATION, CARDINAL** is one of the four principal directional indicators, north, east, south, and west, which are marked on a compass, also called cardinal directions.

**ORIENTATION, EAST-FACING** is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).

**ORIENTATION, NORTH-FACING** is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00' west of north (NW).

**ORIENTATION, SOUTH-FACING** is oriented to within 45 degrees of true south including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).

**ORIENTATION, WEST-FACING** is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).

**OUTDOOR AIR (Outside air)** is air taken from outdoors and not previously circulated in the building.

**OUTDOOR LIGHTING** is electrical lighting used to illuminate outdoor areas.

**OUTDOOR AREAS** are areas external to a building. These include but are not limited to the following areas:

**Building entrance way** is the external area of any operable doorway in or out of a building, including overhead doors. These areas serve any doorway, set of doors (including elevator doors such as in parking garages), turnstile, vestibule, or other form of portal that is ordinarily used to gain access to the building by its users and occupants. Where buildings have separate one-way doors to enter and to leave, this also includes any area serving any doors ordinarily used to leave the building.

**Building façade** is the exterior surfaces of a building, not including horizontal roofing, signs, and surfaces not visible from any public accessible viewing location.

**Canopy** is a permanent structure, other than a parking garage area, consisting of a roof and supporting building elements, with the area beneath at least partially open to the elements. A canopy may be freestanding or attached to surrounding structures. A canopy roof may serve as the floor of a structure above.

**Carport** is a covered, open-sided structure designed or used primarily for the purpose of parking vehicles, having a roof over the parking area. Typically, carports are free-standing or projected from the side of the building and are only two or fewer car lengths deep. A Carport is not a Garage.

**Hardscape** is the area of an improvement to a site that is paved or has other structural features such as curbs, plazas, entries, parking lots, site roadways, driveways, walkways, sidewalks, bikeways, water features and pools, storage or service yards, loading docks, amphitheaters, outdoor sales lots, and private monuments and statuary.

**Outdoor sales frontage** is the portion of the perimeter of an outdoor sales area immediately adjacent to a public street, road, or sidewalk.

**Outdoor sales lot** is an uncovered paved area used exclusively for the display of vehicles, equipment or other merchandise for sale. All internal and adjacent access drives, walkway areas, employee and customer parking areas, vehicle service or storage areas are not outdoor sales lot areas, but are considered hardscape.

**Parking lot** is an uncovered area for the purpose of parking vehicles. Parking lot is a type of hardscape.

**Paved area** is an area that is paved with concrete, asphalt, stone, brick, gravel, or other improved wearing surface, including the curb.

**Principal viewing location** is anywhere along the adjacent highway, street, road or sidewalk running parallel to an outdoor sales frontage.

**Public monuments** are statuary, buildings, structures, and/or hardscape on public land.

**Outdoor Sales canopy** is a canopy specifically to cover and protect an outdoor sales area.

**Stairways and Ramps.** Stairways are one or more flights of stairs with the necessary landings and platforms connecting them to form a continuous and uninterrupted passage from one level to another. An exterior stairway is open on at least one side, except for required structural columns, beams, handrails and guards. The adjoining open areas shall be either yards, courts or public ways. The other sides of the exterior stairway need not be open. Ramps are walking surfaces with a slope steeper than 5 percent.

**Vehicle service station** is a gasoline, natural gas, diesel, or other fuel dispensing station.

**OUTDOOR LIGHTING ZONE** is a geographic area designated by the California Energy Commission in accordance with Part 1, Section 10-114, that determines requirements for outdoor lighting, including lighting power densities and specific control, equipment or performance requirements. Lighting zones are numbered LZ0, LZ1, LZ2, LZ3 and LZ4.

**OVERHANG** is a contiguous opaque surface, oriented horizontally and projecting outward horizontally from an exterior vertical surface.

~~**OVERHANG OFFSET** is the vertical distance from the edge of exposed exterior glazing at the head of a window to the overhang.~~

~~**OVERHANG PROJECTION** is the horizontal distance, measured outward horizontally from the surface of exposed exterior glazing at the head of a window to the outward edge of an overhang.~~

**PART 1** means Part 1 of Title 24 of the California Code of Regulations.

**PART 6** means Part 6 of Title 24 of the California Code of Regulations.

**PART LOAD OPERATION** occurs when a system or device is operating below its maximum rated capacity.

**PARTICLE SIZE EFFICIENCY** is the fraction (percentage) of particles that are captured on air filter equipment as determined during rating tests conducted in accordance with ASHRAE Standard 52.2 or AHRI Standard 680. Particle Size Efficiency is measured in three particle size ranges: 0.3-1.0, 1.0-3.0, 3.0-10 microns.

**POOLS, ANSI/NSPI-5** is the American National Standards Institute and National Spa and Pool Institute document titled “American National Standard for Residential Inground Swimming Pools” 2003 (ANSI/NSPI-5 2003).

**POOLS, AUXILIARY POOL LOADS** are features or devices that circulate pool water in addition to that required for pool filtration, including, but not limited to, solar pool heating systems, filter backwashing, pool cleaners, waterfalls, fountains, and spas.

**POOLS, BACKWASH VALVE** is a diverter valve designed to backwash filters located between the circulation pump and the filter, including, but not limited to, slide, push-pull, multi-port, and full-flow valves.

**POOLS, MULTISPEED PUMP** is a pump capable of operating at two or more speeds and includes two-speed and variable-speed pumps.

**POOLS, NSF/ANSI 50** is the NSF International (formerly National Sanitation Foundation) Standard and American National Standards Institute document titled "Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs" ~~2005~~ 2016 (NSF/ANSI 50 – ~~2005~~2016).

**POOLS, RESIDENTIAL** are permanently installed residential in-ground swimming pools intended for use by a single-family home for noncommercial purposes and with dimensions as defined in ANSI/NSPI-5.

**PRESSURE BOUNDARY** is the primary air enclosure boundary separating indoor and outdoor air. For example, a volume that has more leakage to the outside than to the conditioned space would be considered outside the pressure boundary. Exposed earth in a crawlspace or basement shall not be considered part of the pressure boundary.

**PRIMARY AIRFLOW** is the airflow (cfm or L/s) supplied to the zone from the air-handling unit at which the outdoor air intake is located. It includes outdoor intake air and recirculated air from that air-handling unit but does not include air transferred or air recirculated to the zone by other means.

**PRIMARY STORAGE** is compressed air storage located upstream of the distribution system and any pressure flow regulators.

**PROCESS** is an activity or treatment that is not related to the space conditioning, lighting, service water heating, or ventilating of a building as it relates to human occupancy.

**PROCESS BOILER** is a type of boiler with a capacity (rated maximum input) of 300,000 Btus per hour (Btu/h) or more that serves a process.

**PROCESS, COVERED** ~~are~~ is a process~~es~~ that ~~are~~ is regulated under Part 6, Section 120.6 and 140.9, which ~~are, serving~~ includes computer rooms, data centers, elevators, escalators and moving walkways, laboratories, enclosed parking garages, commercial kitchens, refrigerated warehouses, commercial refrigeration, compressed air systems, and process boilers.

**PROCESS, EXEMPT** is a process that is not a covered process regulated under Part 6.

**PROCESS LOAD** is an energy load resulting from a process.

~~**PROCESS LOAD, COVERED** the energy consumption of and/or the heat generated by a piece of equipment or device that is part of a covered process.~~

~~**PROCESS LOAD, EXEMPT** is the energy consumption of and/or the heat generated by a piece of equipment or device that is part of an exempt process.~~

**PROCESS SPACE** is a nonresidential space that is designed to be thermostatically controlled to maintain a process environment temperature less than 55º F or to maintain a process environment temperature greater than 90º F for the whole space that the system serves, or that is a space with a space-conditioning system designed and controlled to be incapable of operating at temperatures above 55º F or incapable of operating at temperatures below 90º F at design conditions.

**PROPOSED DESIGN BUILDING ~~ENERGY USE~~** is a building that is simulated by Commission-approved compliance software to determine the energy consumption resulting from all of the characteristics and energy consuming features that are actually proposed for a building, as specified by the ~~predicted energy use of proposed building derived from application of the building energy use modeling rules described in the~~ Alternative Calculation Method (ACM) Approval Manual.

**PUBLIC AREAS** are spaces generally open to the public at large, customers or congregation members, or similar spaces where occupants need to be prevented from controlling lights for safety, security, or business reasons.

**R-VALUE** is the measure of the thermal resistance of insulation or any material or building component expressed in $ft^2$-hr-$^o$F/Btu.

**RADIANT BARRIER** is a highly reflective, low emitting material installed at the underside surface of the roof deck and the inside surface of gable ends or other exterior vertical surfaces in attics to reduce solar heat gain.

**RAISED FLOOR** is a floor (partition) over a crawl space, or an unconditioned space, or ambient air.

**READILY ACCESSIBLE** is capable of being reached quickly for operation, repair or inspection, without requiring climbing or removing obstacles, or resorting to access equipment.

**RECOOL** is the cooling of air that has been previously heated by space-conditioning equipment or systems serving the same building.

**RECOVERED ENERGY** is energy used in a building that (1) is recovered from space conditioning, service water heating, lighting, or process equipment after the energy has performed its original function; (2) provides space conditioning, service water heating, or lighting; and (3) would otherwise be wasted.

**REFERENCE APPENDICES** is the support document for the Building Energy Efficiency Standards and the ACM Approval Manuals. The document consists of three sections: the Reference Joint Appendices (JA), the Reference Residential Appendices (RA), and the Reference Nonresidential Appendices (NA).

**REFLECTANCE, SOLAR** is the ratio of the reflected solar flux to the incident solar flux.

**REFRIGERATED CASE** is a manufactured commercial refrigerator or freezer, including but not limited to display cases, reach-in cabinets, meat cases, and frozen food and soda fountain units.

**REFRIGERATED SPACE** is a space constructed for storage or handling of products, where mechanical refrigeration is used to maintain the space temperature at 55° F or less.

**REFRIGERATED WAREHOUSE** is a building or a space greater than or equal to 3,000 square feet constructed for storage or handling of products, where mechanical refrigeration is used to maintain the space temperature at 55° F or less.

**REHEAT** is the heating of air that has been previously cooled by cooling equipment or supplied by an economizer.

**RELOCATABLE PUBLIC SCHOOL BUILDING** is a relocatable building as defined by Title 24, Part 1, Section 4-314, which is subject to Title 24, Part 1, Chapter 4, Group 1.

**REPAIR** is the reconstruction or renewal for the purpose of maintenance of any component, system, or equipment of an existing building. Repairs shall not increase the preexisting energy consumption of the repaired component, system, or equipment. Replacement of any component, system, or equipment for which there are requirements in the Standards is considered an alteration and not a repair.

~~**REPLACEMENT AIR** is air that is used to replace air removed from a building through an exhaust system. Replacement air may be derived from one or more of the following: makeup air, portions of supply air, transfer air, or infiltration air.~~

~~**SUPPLY AIR** is air entering a space from an air-conditioning, heating, or ventilating system for the purpose of comfort conditioning. Supply air is generally filtered, fan-forced, and heated, cooled, humidified or dehumidified as necessary to maintain specified temperature and humidity conditions.~~

~~**TRANSFER AIR** is air transferred, whether actively by fans or passively by pressure differentials, from one room to another within a building through openings in the room envelope.~~

~~**INFILTRATION AIR** is outdoor air that enters a building or space through openings in the building or space envelope due to negative pressure in the space or building relative to the exterior of the building envelope.~~

**RESIDENTIAL BUILDING** (See "high-rise residential building" and "low-rise residential building.")

**RESIDENTIAL COMPLIANCE MANUAL** is the manual developed by the Commission, under Section 25402.1 of the Public Resources Code, to aid designers, builders, and contractors in meeting Energy Efficiency Standards for low-rise residential buildings.

**RESIDENTIAL SPACE TYPE** is one of the following:

**Bathroom** is a room or area containing a sink used for personal hygiene, toilet, shower, or a tub.

**Closet** is a nonhabitable room used for the storage of linens, household supplies, clothing, non-perishable food, or similar uses, and which is not a hallway or passageway.

**Garage** is a nonhabitable building or portion of building, attached to or detached from a residential dwelling unit, in which motor vehicles are parked.

**Kitchen** is a room or area used for cooking, food storage and preparation and washing dishes, including associated counter tops and cabinets, refrigerator, stove, ovens, and floor area.

**Laundry** is a nonhabitable room or space which contains plumbing and electrical connections for a washing machine or clothes dryer.

**Storage building** is a nonhabitable detached building used for the storage of tools, garden equipment, or miscellaneous items.

**Utility room** is a nonhabitable room or building which contains only HVAC, plumbing, or electrical controls or equipment; and which is not a bathroom, closet, garage, or laundry room.

**ROOF** is the outside cover of a building or structure including the structural supports, decking, and top layer that is exposed to the outside with a slope less than 60 degrees from the horizontal.

**ROOF, LOW-SLOPED** is a roof that has a ratio of rise to run of 2:12 or less (9.5 degrees from the horizontal).

**ROOF, STEEP-SLOPED** is a roof that has a ratio of rise to run of greater than 2:12 (9.5 degrees from the horizontal).

**ROOFING PRODUCT** is the top layer of the roof that is exposed to the outside, which has properties including but not limited to solar reflectance, thermal emittance, and mass.

**ROOF RECOVER BOARD** is a rigid type board, installed directly below a low-sloped roof membrane, with or without above deck thermal insulation, to: (a) improve a roof system's compressive strength, (b) physically separate the roof membrane from the thermal insulation, or (c) physically separate a new roof covering from an underlying roof membrane as part of a roof overlay project.

**RUNOUT** is piping that is no more than 12 feet long and connects to a fixture or an individual terminal unit.

**SAE J1772** is the SAE International document titled “SAE Electric Vehicle and Plug in Hybrid Electric Vehicle Conductive Charge Coupler” (SAE J1772_201710).

**SATURATED CONDENSING TEMPERATURE (also known as CONDENSING TEMPERATURE)** is: (a) for single component and azeotropic refrigerants, the saturation temperature corresponding to the refrigerant pressure at the condenser entrance, or (b) for zeotropic refrigerants, the arithmetic average of the Dew Point and Bubble Point temperatures corresponding to the refrigerant pressure at the condenser entrance.

**SCIENTIFIC EQUIPMENT** is measurement, testing or metering equipment used for scientific research or investigation, including but not limited to manufactured cabinets, carts and racks.

**SEASONAL ENERGY EFFICIENCY RATIO (SEER)** is the total cooling output of an air conditioner in Btu during its normal usage period for cooling divided by the total electrical energy input in watt-hours during the same period, as determined using the applicable test method in the Appliance Efficiency Regulations.

**SERVICE WATER HEATING** is heating of water for sanitary purposes for human occupancy, other than for comfort heating.

**SHADING** is the protection from heat gains because of direct solar radiation by permanently attached exterior devices or building elements, interior shading devices, glazing material, or adherent materials.

**SHADING COEFFICIENT (SC)** is the ratio of the solar heat gain through a fenestration product to the solar heat gain through an unshaded 1/8-inch-thick clear double strength glass under the same set of conditions. For nonresidential, high-rise residential, and hotel/motel buildings, this shall exclude the effects of mullions, frames, sashes, and interior and exterior shading devices.

**SIDELIT DAYLIT ZONE, PRIMARY** is the area in plan view directly adjacent to each vertical glazing, one window head height deep into the area, and window width plus 0.5 times window head height wide on each side of the rough opening of the window, minus any area on a plan beyond a permanent obstruction that is 6 feet or taller as measured from the floor.

**SIDELIT DAYLIT ZONE, SECONDARY** is the area in plan view directly adjacent to each vertical glazing, two window head heights deep into the area, and window width plus 0.5 times window head height wide on each side of

the rough opening of the window, minus any area on a plan beyond a permanent obstruction that is 6 feet or taller as measured from the floor.

**SIGN** definitions include the following:

**Electronic Message Center (EMC)** is a pixilated image producing electronically controlled sign formed by any light source. Bare lamps used to create linear lighting animation sequences through the use of chaser circuits, also known as "chaser lights" are not considered an EMC.

**Illuminated face** is a side of a sign that has the message on it. For an exit sign it is the side that has the word "EXIT" on it.

**Sign, cabinet** is an internally illuminated sign consisting of frame and face, with a continuous translucent message panel, also referred to as a panel sign.

**Sign, channel letter** is an internally illuminated sign with multiple components, each built in the shape of an individual three dimensional letters or symbol that are each independently illuminated, with a separate translucent panel over the light source for each element.

**Sign, double-faced** is a sign with two parallel opposing faces.

**Sign, externally illuminated** is any sign or a billboard that is lit by a light source that is external to the sign directed towards and shining on the face of the sign.

**Sign, internally illuminated** is a sign that is illuminated by a light source that is contained inside the sign where the message area is luminous, including cabinet signs and channel letter signs.

**Sign, traffic** is a sign for traffic direction, warning, and roadway identification.

**Sign, unfiltered** is a sign where the viewer perceives the light source directly as the message, without any colored filter between the viewer and the light source, including neon, cold cathode, and LED signs.

**SINGLE FAMILY RESIDENCE** is a building that is of Occupancy Group R-3.

**SINGLE PACKAGE VERTICAL AIR CONDITIONER (SPVAC):** Is a type of air-cooled small or large commercial package air-conditioning and heating equipment; factory assembled as a single package having its major components arranged vertically, which is an encased combination of cooling and optional heating components; is intended for exterior mounting on, adjacent interior to, or through an outside wall; and is powered by single or three-phase current. It may contain separate indoor grille, outdoor louvers, various ventilation options, indoor free air discharge, ductwork, wall plenum, or sleeve. Heating components may include electrical resistance, steam, hot water, gas, or no heat but may not include reverse cycle refrigeration as a heating means.

**SINGLE PACKAGE VERTICAL HEAT PUMP (SPVHP):** Is an SPVAC that utilizes reverse cycle refrigeration as its primary heat source, with secondary supplemental heating by means of electrical resistance, steam, hot water, or gas.

**SINGLE ZONE SYSTEM** is an air distribution system that supplies air to one thermal zone.

**SITE-BUILT** is fenestration designed to be field-glazed or field assembled units using specific factory cut or otherwise factory formed framing and glazing units that are manufactured with the intention of being assembled at the construction site. These include storefront systems, curtain walls and atrium roof systems.

**SITE SOLAR ENERGY** is thermal, chemical, or electrical energy derived from direct conversion of incident solar radiation at the building site.

**SKYLIGHT** is fenestration installed on a roof less than 60 degrees from the horizontal.

**SKYLIGHT AREA** is the area of the rough opening for the skylight.

**SKYLIGHT TYPE** is one of the following three types of skylights: glass mounted on a curb, glass not mounted on a curb or plastic (assumed to be mounted on a curb).

**SKYLIT DAYLIT ZONE** is the rough area in plan view under each skylight, plus 0.7 times the average ceiling height in each direction from the edge of the rough opening of the skylight, minus any area on a plan beyond a permanent obstruction that is taller than one-half the distance from the floor to the bottom of the skylight. The bottom of the skylight is measured from the bottom of the skylight well for skylights having wells, or the bottom of the skylight if no skylight well exists. For the purpose of determining the skylit daylit zone, the geometric shape of

the skylit daylit zone shall be identical to the plan view geometric shape of the rough opening of the skylight; for example, for a rectangular skylight the skylit daylit zone plan area shall be rectangular, and for a circular skylight the skylit daylit zone plan area shall be circular. For skylight located in an atrium, the skylit daylit zone shall include the floor area directly under the atrium, and the area of the top floor that is directly under the skylight, plus 0.7 times the average ceiling height of the top floor, in each direction from the edge of the rough opening of the skylight, minus any area on a plan beyond a permanent obstruction that is taller than one-half the distance from the top floor to the bottom of the skylight.

**SMACNA** is the Sheet Metal and Air-Conditioning Contractors National Association.

**SMACNA HVAC DUCT CONSTRUCTION STANDARDS** is the Sheet Metal Contractors' National Association document "HVAC Duct Construction Standards Metal and Flexible - 3rd Edition," 2006 (2006ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition)

**SMACNA RESIDENTIAL COMFORT SYSTEM INSTALLATION STANDARDS MANUAL** is the Sheet Metal Contractors' National Association document titled "Residential Comfort System Installation Standards Manual, Seventh Edition." (~~1998~~2016).

**SOCIAL SERVICES BUILDING** is a space where public assistance and social services are provided to individuals or families.

**SOLAR ELECTRIC GENERATION SYSTEM** or **PHOTOVOLTAIC SYSTEM** is the complete set of all components for converting sunlight into electricity through the photovoltaic process, including the array of panels, inverter(s) and the balance of system components required to enable the system to effectively deliver power to reduce a building's consumption of electricity from the utility grid.

**SOLAR REFLECTANCE INDEX (SRI)** is a measure of the roof's ability to reject solar heat which includes both reflectance and emittance.

**SOLAR SAVINGS FRACTION (SSF)** is the fraction of domestic hot water demand provided by a solar water-heating system.

**SOLAR ZONE** is a section of the roof designated and reserved for the future installation of a solar electric or solar thermal system.

**SOUTH-FACING** (See "orientation.")

**SPA** is a vessel that contains heated water in which humans can immerse themselves, is not a pool, and is not a bathtub.

**SPACE-CONDITIONING SYSTEM** is a system that provides heating, or cooling within or associated with conditioned spaces in a building, and may incorporate use of components such as chillers/compressors, fluid distribution systems (e.g., air ducts, water piping, refrigerant piping), pumps, air handlers, cooling and heating coils, air or water cooled condensers, economizers, terminal units, and associated controls.

~~**SPANDREL** is opaque glazing material most often used to conceal building elements between floors of a building so they cannot be seen from the exterior, also known as "opaque in-fill systems."~~

**STANDARD DESIGN BUILDING** is a building that that is automatically simulated by Commission-approved compliance software to establish the Energy Budget that is the maximum energy consumption allowed by a Proposed Design Building to comply ~~complies~~ with the ~~mandatory and prescriptive requirements in the~~ Title 24 Building Energy Efficiency Standards ~~by using the building energy modeling rules described in the Alternative Calculation Method (ACM) Reference Manual~~. The Standard Design building is simulated using the same location and having the same characteristics of the Proposed Design building, but assuming minimal compliance with the mandatory and prescriptive requirements that are applicable to the proposed building, as specified by the Alternative Calculation Methods Approval Manual.

**STORAGE, COLD,** is a storage area within a refrigerated warehouse where space temperatures are maintained at or above 32° F.

**STORAGE, FROZEN** is a storage area within a refrigerated warehouse where the space temperatures are maintained below 32° F.

**TENANT SPACE** is a portion of a building occupied by a tenant.

**THERMAL MASS** is solid or liquid material with a high overall heat capacity~~used~~ to store ~~heat~~energy for ~~later~~ heating ~~use~~ or ~~for reducing~~ cooling requirements.

**THERMAL RESISTANCE (R)** is a measurement of the resistance over time of a material or building component to the passage of heating (hr x ft² x ºF)/Btu.

**THERMOSTAT** is an automatic control device or system used to maintain temperature at a fixed or adjustable setpoint.

**THERMOSTATIC EXPANSION VALVE (TXV)** is a refrigerant metering valve, installed in an air conditioner or heat pump, which controls the flow of liquid refrigerant entering the evaporator in response to the superheat of the gas leaving it.

**TIME DEPENDENT VALUATION (TDV) ENERGY** is the time varying energy caused to be used by the building to provide space conditioning and water heating and for specified buildings lighting. TDV energy accounts for the energy used at the building site and consumed in producing and in delivering energy to a site, including, but not limited to, power generation, transmission and distribution losses.

**TINTED GLASS** is colored glass by incorporation of a mineral admixture resulting in a degree of tinting. Any tinting reduces both visible and radiant transmittance.

**TOTAL HEAT OF REJECTION** (THR) is the heat rejected by refrigeration system compressors at design conditions, consisting of the design cooling capacity plus the heat of compression added by the compressors.

**TOWNHOUSE** is a single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from the foundation to roof and with open space on at least two sides.

**TRANSCRITICAL $CO_2$ REFRIGERATION SYSTEM** is a type of refrigeration system that uses $CO_2$ as the refrigerant where the ultimate heat rejection to ambient air can take place above the critical point.

> **TRANSCRITICAL MODE** is a system operating condition for a refrigeration system wherein the refrigerant pressure and temperature leaving the compressor is such that the refrigerant is at or above the critical point. Typically used in reference to $CO_2$ refrigeration systems.
>
> **SUBCRITICAL MODE** is a system operating condition for a refrigeration system wherein the refrigerant pressure and temperature leaving the compressor is such that the refrigerant is below the critical point. Typically used in reference to $CO_2$ refrigeration systems.

~~**TRANSFER AIR** is air transferred, whether actively by fans or passively by pressure differentials, from one room to another within a building through openings in the room envelope.~~

**TRIM COMPRESSOR** is a compressor that is designated for part-load operation, handling the short term variable trim load of end uses, in addition to the fully loaded base compressors.

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

**UL** is the Underwriters Laboratories.

**UL 727** is the Underwriters Laboratories document titled "Standard for Oil-Fired Central Furnaces," 2006.

**UL 731** is the Underwriters Laboratories document titled "Standard for Oil-Fired Unit Heaters," ~~2006~~ 2016 with revision 1 through 7.UL 1574 is the Underwriters Laboratories document entitled "Track Lighting Systems," ~~2000~~2016.

**UL 1598** is the Underwriters Laboratories document titled "Luminaires," ~~2008~~2012.

**UNCONDITIONED SPACE** is enclosed space within a building that is not directly conditioned, or indirectly conditioned.

~~**UNIT INTERIOR MASS CAPACITY (UIMC)** is the amount of effective heat capacity per unit of thermal mass, taking into account the type of mass material, thickness, specific heat, density and surface area.~~

**USDOE 10 CFR 430** is the regulation issued by Department of Energy and available in the Code of Federal Regulation - Title 10, Chapter II, Sub-chapter D, Part 430 – Energy Conservation Program for Consumer Products. Relevant testing methodologies are specified in "Appendix N to sub-part B of Part 430 – Uniform test method for measuring the energy consumption of furnaces and boilers."

**USDOE 10 CFR 431** is the regulation issued by Department of Energy and available in the Code of Federal Regulation - Title 10, Chapter II, Sub-chapter D, Part 431 - Energy Conservation Program for Certain Commercial and Industrial equipment. Relevant testing methodologies are specified in "Subpart E to Part 431 – Uniform test method for the measurement of energy efficiency of commercial packaged boilers."

**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 meeting Section 202 of the 2010 California Building Code.

**VARIABLE AIR VOLUME (VAV) SYSTEM** is a space-conditioning system that maintains comfort levels by varying the volume of supply air to the zones served.

**VENDING MACHINE** is a machine for vending and dispensing refrigerated or non-refrigerated food and beverages or general merchandise.

**VERY VALUABLE MERCHANDISE** is rare or precious objects, including, but not limited to, jewelry, coins, small art objects, crystal, ceramics, or silver, the selling of which involves customer inspection of very fine detail from outside of a locked case.

**VIRTUAL END NODE (VEN)** is an interface with a demand responsive control system that accepts signals transmitted through OpenADR, consistent with the specifications in OpenADR 2.0a or 2.0b.

**WALL TYPE** is a type of wall assembly having a specific heat capacity, framing type, and U-factor.

**WATER BALANCE IN EVAPORATIVE COOLING TOWERS** The water balance of a cooling tower is:

M = E + B, where:

M = makeup water (from the mains water supply)

E = losses due to evaporation

B = losses due to blowdown

**WEST-FACING** (See "orientation")

**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.

**WOOD HEATER** is an enclosed wood-burning appliance used for space heating and/or domestic water heating.

**WOOD STOVE** (See "wood heater.")

**ZONE, CRITICAL** is a zone serving a process where reset of the zone temperature setpoint during a demand shed event might disrupt the process, including but not limited to computer rooms, data centers, telecom and private branch exchange (PBX) rooms, and laboratories.

**ZONE, NON-CRITICAL** is a zone that is not a critical zone.

**ZONE, SPACE-CONDITIONING,** is a space or group of spaces within a building with sufficiently similar comfort conditioning requirements so that comfort conditions, as specified in Section 140.4(b)3 or 150.0(h), as applicable, can be maintained throughout the zone by a single controlling device.

**NOTE:** Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code. Reference: Sections 25402, 25402.1, 25402.4, 25402.5, and 25402.8, Public Resources Code

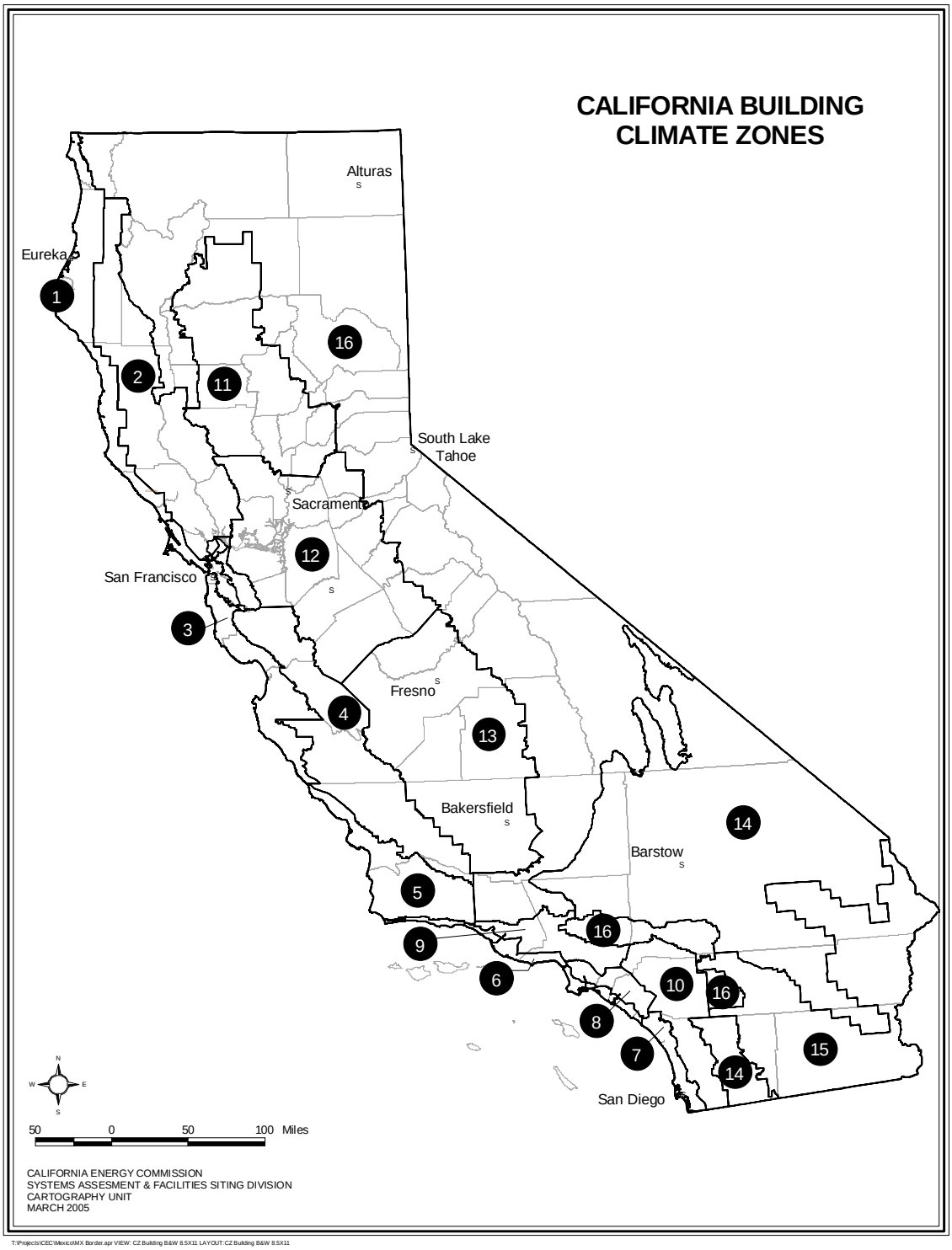


*FIGURE 100.1-A—CALIFORNIA CLIMATE ZONES*

***Climate Zones for Residential and Nonresidential Occupancies***

# SECTION 100.2 – CALCULATION OF TIME DEPENDENT VALUATION (TDV) ENERGY

Time Dependent Valuation (TDV) energy shall be used to compare proposed designs to their energy budget when using the performance compliance approach. TDV energy is calculated by multiplying the site energy use (electricity kWh, natural gas therms, or fuel oil or LPG gallons) for each energy type times the applicable TDV multiplier. TDV multipliers vary for each hour of the year and by energy type (electricity, natural gas or propane), by Climate Zone and by building type (low-rise residential or nonresidential, high-rise residential or hotel/motel). TDV multipliers are summarized in Reference Joint Appendix JA3. TDV multipliers for propane shall be used for all energy obtained from depletable sources other than electricity and natural gas.

**NOTE:** Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code. Reference: Sections 25402, 25402.1, 25402.4, 25402.5, and 25402.8, Public Resources Code