CALIFORNIA ENERGY COMMISSION

1516 Ninth Street Sacramento, California 95814

Main website: www.energy.ca.gov

2013 BUILDING ENERGY EFFICIENCY STANDARDS

CALIFORNIA CODE OF REGULATIONS

Title 24, Part 6, and Associated Administrative Regulations in Part 1

(CALIFORNIA ENERGY CODE)

CALIFORNIA ENERGY COMMISSION

DOCKET NUMBER 12-BSTD-1

NONSUBSTANTIAL ERRATA

NOVEMBER 2013

Explanation

This errata identifies edits to the Building Energy Efficiency Standards correcting typographical errors in spelling, spacing, grammar, numbering, and cross-references, alphabetizing lists, improving clarity, and conforming the text to California Building Standards conventions.

In addition, duly adopted and approved text that had been inadvertently omitted from previously published versions of the Energy Code has been restored.

Edits to the Energy Code

Part 1, Chapter 10

Explanation:

Repaired numbering to accurately reflect referenced sections and removed incorrect reference to mechanical code added in error in previous errata, to conform to definitions in **Part 6 Section 100.1**.

Errata:

COMPLEX MECHANICAL SYSTEMS are defined here for the purposes of complying with the design phase review component of section 10-103(a)1. 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 nonpackaged HVAC equipment), or 3) hydronic or steam heating systems, or 4) hydronic cooling systems. Complex systems are not the following: unitary or packaged equipment listed in

TABLES 110.2-a, 110.2-b, 110.2-c, and 110.2-e ~~of the mechanical code~~, that each serve one zone, or two-pipe, heating only systems serving one or more zones.

PART 6, SECTION 100.0 – SCOPE

Explanation:

Added "process space" to ensure consistency between the stated scope of the Standards with the provisions of the Standards that regulate process spaces.

Errata:

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

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.

PART 6, SECTION 100.0 (e)2C and TABLE 100.0-A

Explanation:

References to process spaces within the scope of the standards were inadvertently deleted in 45-Day language and are being added back in with additional clarification.

Errata:

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. Sections 140.1, 140.3(c), and 141.0 apply to all process spaces within the scope of Section 100.0(a).

Table 100.0-A APPLICATION OF STANDARDS

Occupancies	Application	Mandatory	Prescriptive	Performance	Additions/Alterations
General Provisions		100.0, 100.1, 100.2, 110.0, 110.10			
Nonresidential, High-Rise Residential, And Hotels/Motels	General	140.0	140.2	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, 120.0-120.5, 120.8	140.4		
	Water Heating	110.3, 120.3, 120.8	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		
	Building Electrical Power	130.5	N.A.		
	Pool and Spa Systems	110.4, 150.0(p)	N. A.		N. A.
	Solar Ready Buildings	110.10	N.A.		N.A.
Covered Processes[1]	Envelope, Ventilation, Process Loads	110.2, 120.6, 120.8	140.9	140.1	120.6, 140.9

PART 6, SECTION 100.1 DEFINITIONS AND RULES OF CONSTRUCTION

Explanation:

Definition for UL 1574 was inadvertently removed in 15-day language, and was not shown as a change. Definition for Energy Commission was added to underscore the name change that has occurred since the inception of the Commission.

Errata:

UL 1574 is the Underwriters Laboratories document entitled "Track Lighting Systems," 2000.

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

PART 6, SECTION 100.1 DEFINITIONS AND RULES OF CONSTRUCTION

Explanation:

Changed definitions for clarity and brevity.

Errata:

Edited the following definitions for clarity and consistency.

"**LPG** is liquefied petroleum gas. ~~Propane is one type of LPG.~~ "

PROCESS LOAD ~~the energy consumption of and/or the heat generated by a piece of equipment or device that~~ is ~~part of~~ a load resulting from a process.

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-ft², 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. (See "process load" and "process space.")

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

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~~, and permanently anchored to the floor~~.

OPERABLE FENESTRATION is ~~**OPERABLE** is fenestration that is~~ designed to be opened or closed.

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

Motion Sensor is used outdoors, automatically turns lights OFF after an area is vacated of occupants, and automatically turns the lights ~~ing load~~ ON when the area is occupied.

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

INTEGRATED ENERGY EFFICIENCY RATIO (IEER) is a single-number cooling part load efficiency figure of merit calculated per the method described in ANSI/AHRI Standard 340/360/1230 ~~210/2040~~. This metric replaces the IPLV for ducted and non-ducted units.

INTEGRATED PART LOAD VALUE (IPLV) is a single-number cooling part-load efficiency figure of merit calculated per the method described in ANSI/AHRI STANDARD 550/590 for use with chillers.

PART 6, TABLE 110.2-K,

Explanation:

Restoring footnotes to Table 110.2-K that were in adopted language but inadvertently missing from subsequently-prepared "clean" documents showing new regulatory text.

Errata:

[a] Applicable test procedure and reference year are provided under the definitions.

[b] Ec = combustion efficiency (100% less flue losses) .See reference document for detailed information.

[c] Et= thermal efficiency. See test procedure for detailed information.

[d] Maximum capacity - minimum and maximum ratings as provided for and allowed by the unit's controls.

[e] Included oil-fired (residual).

PART 6, SECTION 110.3(a)1

Explanation:

Corrected a reference.

Errata:

Temperature controls for service water heating systems. Service water-heating systems shall be equipped with automatic temperature controls capable of adjustment from the lowest to the highest acceptable temperature settings for the intended use as listed in Table ~~2~~3, Chapter ~~9-49~~ 50 of the ASHRAE Handbook, HVAC Applications Volume.

PART 6, SECTION 120.6(b)2B

Explanation:

Corrected reference numbers

Errata:

EXCEPTION to Section 120.6(b)2A and 2B: Existing compressor systems that are reused for an addition or alteration.

PART 6, SECTION 130.4(a)

Explanation:

Edited for clarity.

Errata:

Changed "indoor and outdoor lighting" to "all indoor and outdoor lighting"

PART 6, Section 140.4(e)4

Explanation:

Fixed a typographical error.

Errata:

4. If an economizer is required by Section 140.4(e)1, and an air economizer is used to meet the requirement, then the air economizer, and all return air dampers on any individual cooling fan system that has a total mechanical cooling capacity over ~~45,000~~ 54,000 Btu/hr shall have the following features:

PART 6, SECTION 140.6(a)2G

Explanation:

This language was in 45-Day Language but was inadvertently deleted in 15 Day language. It was reinserted for clarity.

Errata:

PAFs shall not be available for lighting controls required by Part 6.

PART 6, SECTION 140.6 (c)2.G vi

Explanation:

This language was in 45-Day Language but was inadvertently deleted in 15 Day language when the grammatical error was identified. It was reinserted as corrected.

Errata:

vi. The additional lighting power allowed is the smaller of lighting power listed in the applicable footnote in TABLE 140.6-C, or the actual design wattage may be added to the allowed lighting power; and

Part 6, Section 141.0(a)2A

Explanation:

Deleted reference to conditioned space for consistency with the entirety of the Building Energy Efficiency Standards. As written, this sentence conflicts with the mandatory requirements of these Standards, which apply to both conditioned and unconditioned spaces. The intent of this sentence is to communicate that

when the performance compliance approach is used, all mandatory requirements must also be complied with.

Errata:

A. The envelope and indoor lighting ~~in the conditioned space~~ of the addition, and any newly installed space conditioning system or water-heating system serving the addition, shall meet the applicable requirements of Sections 110.0 through 130.5; and

PART 6, SECTION 141.0(b)2Biii

Explanation:

Edited for clarity:

Errata:

Changed "roof deck, or to the roof recover boards"

iii. For nonresidential buildings, high-rise residential buildings and hotels/ ~~and~~ motels, when roofs are exposed to the roof deck, or to the roof recover boards and meets Section 141.0(b)2Bia and iia the exposed area shall be insulated to the levels specified in TABLE 141.0-C.

PART 6, TABLE 150.1-A, Footnote (2) :

Explanation:

Edited for clarity.

Errata:

Added "R-4 continuous insulation sheathing"

PART 6, EXCEPTION 3 to Section 150.1(c)3A

Explanation:

Edited for clarity and consistency:

Errata:

EXCEPTION 3 to Section 150.1(c)3A For fenestration containing chromogenic type glazing:

i. the lower-rated labeled U-factor and SHGC shall be used with automatic controls to modulate the

amount of solar gain and light transmitted into the space in multiple steps in response to daylight levels or solar intensity ~~to demonstrate compliance with this section~~;

JOINT APPENDICES

GLOBAL CORRECTIONS Spelling, spacing, typographical, clerical, grammatical, numbering, references, and formatting errors have been corrected.

Edited definitions for consistency with Standards.

Renumbered Table JA3-2 through Table JA3-4

JA4.1.7 Note

A HERS rater shall verify the installation of SPF insulation using the procedures specified in ~~RA3.5.5~~ RA3.5.6 whenever R-values other than the default R-value per inch listed in Table 4.1.7 are used for compliance (see *"R-value"* in sections ~~RA3.5.5.0.1(a)~~ RA3.5.6.1.1 and ~~RA3.5.5.0.1(b)~~ RA3.5.6.1.2.

JA4.2 Table 4.2.2 Note 3

3. This assembly requires insulation with an R-value per inch 5.6 or larger (k-factor 1.8 or less). This is board type insulation, mostly Isocyanurate. Medium density spray polyurethane foam may also be used to meet this requirement if the quality installation procedures and documentation in ~~Joint Appendix 7~~ RA3.5.6 are followed.

RESIDENTIAL APPENDICES

RA 3.5

Corrected several references to California Building Code Part 2 Volume 1 Section 720

(typical example:)

Materials shall comply with, and be installed in conformance with, all applicable building codes for building. California Building Code Part 2 Volume 1~~(including, but not limited to, California Electrical Code~~ Section 720 ~~719)~~ and installed to meet all applicable fire codes.

RA 4.2.1.1 ***For Prescriptive Compliance: The attic shall be ventilated to:***

(e) The use of a radiant barrier shall be listed in the Special Features and Modeling Assumptions listings of the Certificate of Compliance~~-~~and c~~C~~onform to the radiant barrier manufacturer's instructions. Additional information is provided in the Residential ACM Manual.