DOCKETED

Docket Number:	15-MISC-02
Project Title:	2013 Building Energy Efficiency Standards
TN #:	204935
Document Title:	Email to Mr. Splitt with Page from 2016 T24 Standards Part 6 15-Day Language
Description:	N/A
Filer:	Patty Paul
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	6/8/2015 9:37:41 AM
Docketed Date:	6/8/2015

Energy - Docket Optical System

From: Strait, Peter@Energy
Sent: Monday, June 08, 2015 8:57 AM
To: Energy - Docket Optical System
Subject: FW: 2016 Language Changes from Petition (additional item)
Attachments: Pages from 2016 T24 Standards Part 6 15-Day Language.pdf

Hello Dockets,

Please docket the below letter (with its attachment) to Dockets 15-MISC-01 and 15-MISC-02.

Thank you,

Peter

From: Strait, Peter@Energy
Sent: Monday, June 08, 2015 8:29 AM
To: 'info@app-techinc.com'
Subject: RE: 2016 Language Changes from Petition (additional item)

Dear Mr. Splitt,

One of your petition requests related to the language in Section 110.2(a)3, specifying requirements for equipment performing multiple functions.

We've edited Section 110.2(a)3 in the 15-Day Language to remove the examples ("such as both heating and cooling, or both space heating and water heating") and improve the overall grammar of the Section. I've attached a copy of this language, with the change highlighted.

If you have any questions about this change, please let us know.

Thank you,

Peter Strait

Supervisor, Building Standards Office
California Energy Commission
1516 9th Street, MS 37
Sacramento, CA 95814
(916) 654-2817

SECTION 110.2 – MANDATORY REQUIREMENTS FOR SPACE-CONDITIONING EQUIPMENT

Certification by Manufacturers. Any space-conditioning equipment listed in this section may be installed only if the manufacturer has certified to the Commission that the equipment complies with all the applicable requirements of this section.

(a) **Efficiency.** Equipment shall meet the applicable efficiency requirements in TABLE 110.2-A through TABLE 110.2-K subject to the following:

1. If more than one efficiency standard is listed for any equipment in TABLE 110.2-A through TABLE 110.2-K, the equipment shall meet all the applicable standards that are listed; and
2. If more than one test method is listed in TABLE 110.2-A through TABLE 110.2-K, the equipment shall comply with the applicable efficiency standard when tested with each listed test method; and
3. Where equipment ~~can~~ serve<u>s</u> more than one function, ~~such as both heating and cooling, or both space heating and water heating,~~ it shall comply with ~~all~~ the efficiency standards applicable to each function; and
4. Where a requirement is for equipment rated at its "maximum rated capacity" or "minimum rated capacity," the capacity shall be as provided for and allowed by the controls, during steady-state operation.

EXCEPTION 1 to Section 110.2(a): Water-cooled centrifugal water-chilling packages that are not designed for operation at ANSI/AHRI Standard 550/590 test conditions of 44°F leaving chilled water temperature and 85°F entering condenser water temperature with 3 gallons per minute per ton condenser water flow shall have a maximum full load kW/ton and NPLV ratings adjusted using the following equation:

Adjusted maximum full-load kW/ton rating = (fullload kW/ton from TABLE 110.2-D) / Kadj

Adjusted maximum NPLV rating = (IPLV from TABLE 110.2-D) / Kadj

Where:

Kadj = (A) x (B)

$A = 0.00000014592 \times (LIFT)^4 - 0.0000346496 \times (LIFT)^3 + 0.00314196 \times (LIFT)^2 - 0.147199 \times (LIFT) + 3.9302$

LIFT = LvgCond – LvgEvap (°F)

LvgCond = Full-load leaving condenser fluid temperature (°F)

LvgEvap = Full-load leaving evaporator fluid temperature (°F)

$B = (0.0015 \times LvgEvap) + 0.934$

The adjusted full-load and NPLV values are only applicable for centrifugal chillers meeting all of the following full-load design ranges:

- Minimum Leaving Evaporator Fluid Temperature: 36°F
- Maximum Leaving Condenser Fluid Temperature: 115°F
- LIFT ≥ 20°F and ≤ 80°F

Centrifugal chillers designed to operate outside of these ranges are not covered by this exception.

EXCEPTION 2 to Section 110.2(a): Positive displacement (air- and water-cooled) chillers with a leaving evaporator fluid temperature higher than 32°F shall show compliance with TABLE 110.2-D when tested or certified with water at standard rating conditions, per the referenced test procedure.

<u>EXCEPTION 3 to Section 110.2(a):</u> <u>Equipment primarily serving refrigerated warehouses or commercial refrigeration</u>~~exempt or covered process loads~~<u>.</u>

(b) **Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters shall have controls: