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Sent: Tuesday, March 24, 2015 1:30 PM
To: Shirakh, Maziar@Energy
Cc: Bowley, Brice Alan (GE, Appl & Light); Strait, Peter@Energy
Subject: Clarification Questions for Proposed Revisions to California Title 24, Part 6, Subchapter 3 - Docket No. 15-BSTD-01

Mr. Shirakh,

During the March 3 hearing on proposed changes to California Title 24, Part 6, I asked two online questions that could not be answered during the hearing. It was recommended that they be addressed offline. Can you answer the questions below to provide clarification on the proposed requirements for dampers?

1. **120.2(f)2-EXCEPTION 3** references an “override signal”. For clarification can you provide the definition and the function of an override signal for the applications referenced in this section?

120.2(f) Dampers for Air Supply and Exhaust Equipment. Outdoor air supply and exhaust equipment shall be installed with dampers that:

1. Automatically close upon fan shutdown; and,
2. Automatically close during unoccupied periods; and,

EXCEPTION 1 to Section 120.2(f)2: During pre-occupancy as specified by Section 120.1(c)2.

EXCEPTION 2 to Section 120.2(f)2: When enabled by an Occupant Sensor as specified by 120.1(c)5.

EXCEPTION 3 to Section 120.2(f)2: When enabled by an Override signal as specified by **120.2(e)1** and dampers open to provide outdoor air ventilation.

3. Remain closed during setback heating and cooling as specified by 120.2(e)2

EXCEPTION 1 to Section 120.2(f)3: When equipped with an economizer as specified by 140.4(e) and the outdoor air conditions are below the high limit shutoff in TABLE 140.4-B.

EXCEPTION 1 to Section 120.2(f): Where it can be demonstrated to the satisfaction of the enforcing agency that the equipment serves an area that must operate continuously.

EXCEPTION 2 to Section 120.2(f): Gravity and other nonelectrical equipment that has readily accessible manual damper controls.

EXCEPTION 3 to Section 120.2(f): At combustion air intakes and shaft vents.

EXCEPTION 4 to Section 120.2(f): Where prohibited by other provisions of law.

2. **120.2(f)2-EXCEPTION 3** references **120.2(e)1**. **120.2(e)1** also has an exception, **EXCEPTION 4** which applies to hotel/motels. If a product/system used in a hotel guest room meets the requirements

for EXCEPTION 4 below and is exempted from 120.2(e)1, does that mean it also complies with 120.2(f)2 -EXCEPTION 3 and is exempted from 120.2(f)2?

EXCEPTION 4 to Sections 120.2(e)1 and 2: Systems serving hotel/motel guest rooms, if they have a readily accessible manual shut-off switch.

120.2 (e) Shut-off and Reset Controls for Space-conditioning Systems. Each space-conditioning system shall be installed with controls that comply with the following:

1. The control shall be capable of automatically shutting off the system during periods of nonuse and shall have:

A. An automatic time switch control device complying with Section 110.9, with an accessible manual override that allows operation of the system for up to 4 hours; or

B. An occupancy sensor; or

C. A 4-hour timer that can be manually operated.

EXCEPTION to Section 120.2(e)1: Mechanical systems serving retail stores and associated malls, restaurants, grocery stores, churches, and theaters equipped with 7-day programmable timers.

2. The control shall automatically restart and temporarily operate the system as required to maintain:

A. A setback heating thermostat setpoint if the system provides mechanical heating; and

EXCEPTION to Section 120.2(e)2A: Thermostat setback controls are not required in nonresidential buildings in areas where the Winter Median of Extremes outdoor air temperature determined in accordance with Section 140.4(b)4 is greater than 32°F.

B. A setup cooling thermostat setpoint if the system provides mechanical cooling.

EXCEPTION to Section 120.2(e)2B: Thermostat setup controls are not required in nonresidential buildings in areas where the Summer Design Dry Bulb 0.5 percent temperature determined in accordance with Section 140.4(b)4 is less than 100°F.

3. Multipurpose room less than 1000 square feet, classrooms greater than 750 square feet and conference, convention, auditorium and meeting center rooms greater than 750 square feet that do not have processes or operations that generate dusts, fumes, vapors or gasses shall be equipped with occupant sensor(s) to accomplish the following during unoccupied periods:

A. Automatically setup the operating cooling temperature set point by 2°F or more and setback the operating heating temperature set point by 2°F or more; and

B. Automatically reset the minimum required ventilation rate with an occupant sensor ventilation control device according to Section 120.1(c)5.

EXCEPTION 1 to Sections 120.2(e)1, 2, and 3: Where it can be demonstrated to the satisfaction of the enforcing agency that the system serves an area that must operate continuously.

EXCEPTION 2 to Sections 120.2(e)1, 2, and 3: Where it can be demonstrated to the satisfaction of the enforcing agency that shutdown, setback, and setup will not result in a decrease in overall building source energy use.

EXCEPTION 3 to Sections 120.2(e)1, 2, and 3: Systems with full load demands of 2 kW or less, if they have a readily accessible manual shut-off switch.

EXCEPTION 4 to Sections 120.2(e)1 and 2: Systems serving hotel/motel guest rooms, if they have a readily accessible manual shut-off switch.

EXCEPTION 5 to Sections 120.2(e)3: If Demand Control Ventilation is implemented as required by Section 120.1(c)3 and 120.1(c)4).

Any clarification you can provide on the topics above would be helpful.

Best Regards,

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