## CALIFORNIA ENERGY COMMISSION

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## Staff Supplement to CASE Report #2016-NR-ASHRAE2-F

**Date:** 2015-02-13

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**Subject:** Proposals Based on ASHRAE 90.1-2013 2016-NR-ASHRAE2-F

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## DESCRIPTION OF PROPOSED REGULATORY CHANGES

CASE report #2016-NR-ASHRAE2-F, titled Proposals Based on ASHRAE 90.1-2013, proposes to make the following changes to the Standards:

- Add new definitions for: "ASME A17.1/CSA B44", "optimum start controls", "optimum stop controls", and "thermostat".
- Add a new subsection (j) to Section 120.2 that will require certain buildings to install direct digital controls. The subsection also sets requirements for the capabilities of these control systems.
- Add a new subsection (f) to Section 120.6 that will set lighting, ventilation, and standby operation requirements for elevators.
- Add a new subsection (g) to Section 120.6 for escalators and moving walkways in airports, hotels, and transit areas. The subsection addresses which escalators and moving walkways will be required to slow down when not in use, as well as the guidelines with which they must comply.
- Add a new section (n) to Section 140.4 that would require windows and doors that can be
  opened manually be equipped with controls that disable mechanical heating and cooling
  to the zone where the window or door is open. The interlock controls are not required on
  doors with automatic closing devices, in any space without thermostatic controls, or on
  alterations to existing buildings.
- Modify Section 140.6(a)3V to exempt elevator lighting from the prescriptive indoor LPD
  calculations, and specify that lighting in elevators must comply with the new mandatory
  elevator lighting requirements.

 Add new acceptance test requirements for Elevator Ventilation and Cab Lighting Controls, Escalator and Moving Walkway Speed Controls, Direct Digital Controls, Operable Window/Door Switches in NA7.14 and NA7.15 to verify that the control has been installed and commissioned appropriately.

Staff agrees with the proposed changes to Sections 120.6, 120.2, 140.4, 140.6, NA7.14, NA7.15 and has incorporated substantively similar changes into the proposed Express Terms.

## STAFF ANALYSIS AND CONCLUSION

Staff has analyzed the submitted CASE report and reached the following conclusions for the measures included in the Express Terms:

- Based on the evidence presented in the CASE Report, the measures, as proposed, appear to be cost effective and the author appears to have appropriately followed the Energy Commission's Life Cycle Cost methodology.
- Measure costs premiums presented in the CASE Report appear reasonable and appropriate for the measure proposed.
- Measure energy savings presented in the CASE Report appear to have been appropriately modeled and appear credible.
- Measure environmental impacts presented in the CASE Report appear reasonable and appropriate for the measure proposed.