

DOCKETED

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CALIFORNIA ENERGY COMMISSION

Title 24 – 2019: Demand Response

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Energy Efficiency Division

2019 Pre-Rulemaking Workshop
Rosenfeld Hearing Room
July 13th, 2017



Acknowledgements

- Commissioners Rosenfeld and Pfannenstiel
- California Utilities Statewide Codes and Standards Enhancement (CASE) Team
- CASE Authors:
 - ✓ Heidi Hauenstein, Bijit Kundu, & Kitty Wang
- California Efficiency Alliance (CEA)



Goals for Today

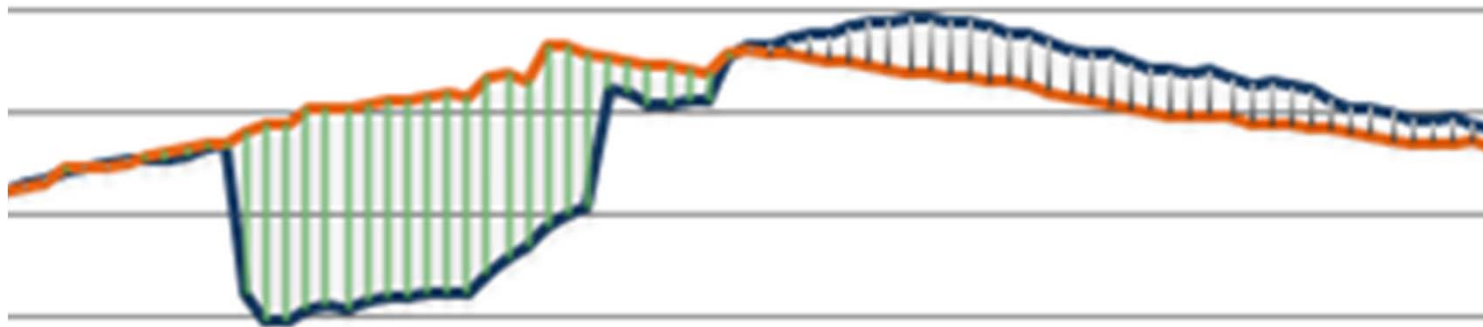
1. Proposed Changes
2. OpenADR Briefing
3. Schedule





What is Demand Response?

- Minimize Transaction Costs
- Enable Cost Effective Actions
- Information, Motivation, & Tools
- Title 24, Part 6
is Owner / Operator Enabling





Summary of Proposed Changes

- Proposed Cleanup
 - Harmonize with ASHRAE 90.1-2016
- Proposed Code Changes
 - Consolidate all DR language
 - New §110 Systems & Components
 - Specify OpenADR Protocol





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Proposed Cleanup: HVAC Equipment (§110.2)

- Thermostatic Controls
 - Harmonize with ASHRAE
 - Delete “setback thermostat”
- ***Clean-up, no requirement change***



Proposed Cleanup: Solar Ready (§110.10)

- Clarify Thermostat Requirements
 - Thermostatic Controls
 - Energy Management Control System
- Delete “home automation system”
 - Not defined
 - Duplicates EMCS
- ***Clean-up, no requirement change***



Proposed Cleanup: Low-rise Residential Additions & Alterations (§141.0)

- Clarify Thermostat Requirements
 - Thermostatic Controls
- ***Clean-up, no requirement change***



Proposed Cleanup: Thermostats (§150.0(i))

- Clarify Thermostat Requirements
 - Thermostatic Controls
 - Delete “setback”
- ***Clean-up, no requirement change***



Proposed Cleanup: Joint Appendix 5 (JA5)

- General Rewrite for Clarity
 - Delete “Occupant Controlled Smart Thermostat ”
- Partially Redundant with OpenADR
- ***Clean-up, no requirement change***



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Proposed Code Change: Definitions (§100.1)

- Automatic Control System
- Energy Management Control System
 - EMCS
- OpenADR 2.0a and 2.0b
- Virtual End Node (VEN)
- Thermostat / Thermostatic Control



Proposed Code Change: Consolidation (§110.X)

- All non-residential DR Requirements
 - New Section: DR Controls
- Clarify & Simplify
- New Section 110



Proposed Code Change: Consolidation (§110.X)

- HVAC Controls (§120.2)
- Lighting & Electrical Power (§130.0)
- Lighting Controls (§130.1)
- Sign Lighting Controls (§130.3)
- Electrical Power Distribution (§130.5)
- Thermostatic Controls (§150.0)
- Low-rise Residential Additions and Alterations (§150.2)



Proposed Code Changes: OpenADR (§110.X)

- OpenADR 2.0a or OpenADR 2.0b





Open Automated Demand Response: OpenADR

- **2002:** Following energy crisis, the Energy Commission funded research
- **2003-2006:** Pilots & Field Trials
- **2009:** OpenADR 1.0
 - Energy Commission Publication
- **2011:** OpenADR 2.0a
- **2014:** OpenADR 2.0b



Summary of Proposed Changes

- Proposed Cleanup
 - Harmonize with ASHRAE 90.1-2016
 - Clarify Intent
- Proposed Code Changes
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Schedule: 2019 Title 24 Standards

2016

Research & Outreach

2017

Pre-Rulemaking

2018

Rulemaking

2020

2019 Standards Effective January 1, 2020



Schedule: 2019 Title 24 Standards

2016

Research & Outreach

2017

Pre-Rulemaking

2018

Rulemaking

2020

2019 Standards Effective January 1, 2020



Schedule: Pre-Rulemaking (2017)





Schedule: Rulemaking (2018)

Jan.

End of 45-day Public Review
Comments from Public

Feb.

Issue Revision for 15-day Public Review

May

Commission Adoption

Dec.

Building Standards Commission Approval



Key Web-Links/Resources

Building Energy Efficiency Program

<http://www.energy.ca.gov/title24/>

Docket for Comments (17-BSTD-01)

<https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=17-BSTD-01>

2019 Title 24 Utility-Sponsored Stakeholder Info

<http://www.title24stakeholders.com/>

OpenADR Alliance

<http://www.openadr.org/>



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