

DOCKETED

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Building Energy Efficiency Standards

2019 Pre-Rulemaking for Building Energy Efficiency Standards

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October 05, 2017

Housekeeping Items

- **Restroom locations**
 - Outside the double doors to your left
- **The Snack Bar**
 - Located on the 2nd floor under the white awning
- **Event of an Emergency and the building is evacuated.**
 - Follow our employees to the Roosevelt park, located across the street from this building
 - Proceed calmly and quickly following the employees with whom you are meeting

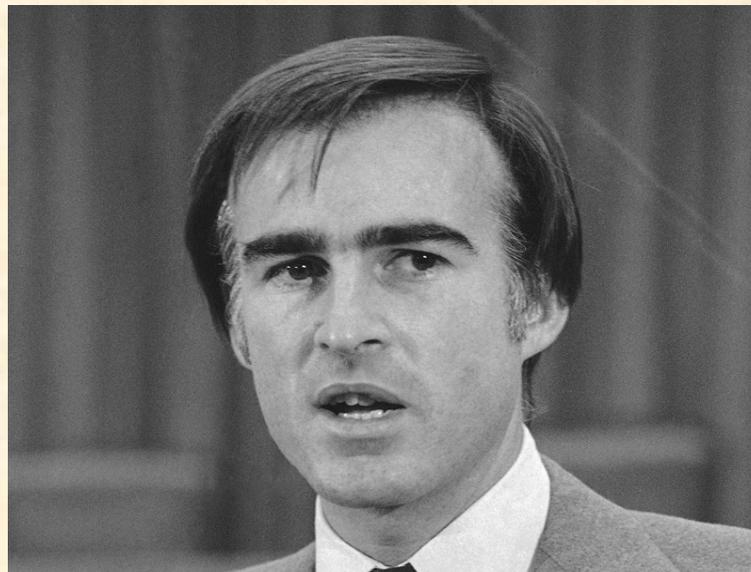
What We Will Cover Today

- How Title 24, Part 6 is developed
- **Peter Strait, P.E.**
 - Part 1, Section 10 – General Provision
- **Jeff Miller, P.E.**
 - § 150 – Low-Rise Residential Buildings – Mandatory Requirements
- **Danny Tam**
 - § 150.1 – Low-Rise Residential Buildings – Prescriptive Requirements
 - § 150.2 – Low-Rise Residential Buildings – Additions and Alteration
- **Peter Strait, Danny Tam**
 - § 140 – Joint Appendix (JA)
- **Jeff Miller, P.E.**
 - Residential Appendix (RA)

Authority & Process

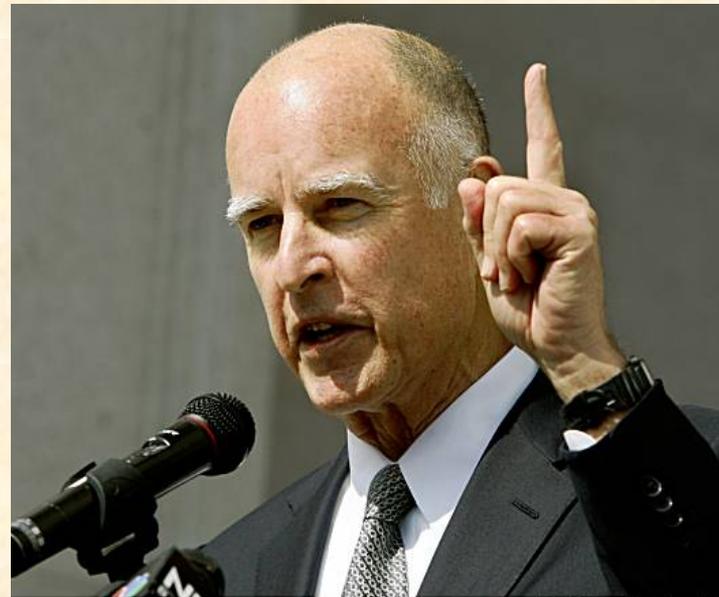
Public Resources Code (PRC 25402): Reduction of wasteful, uneconomic, inefficient, or unnecessary consumption of energy

- (a)(1) Prescribe, by regulation, lighting, insulation, climate control system, and other building design and construction standards that increase the efficiency in the use of energy and water...
- Warren Alquist Act Signed into law in 1974 by Governor Ronald Reagan and launched by Governor Jerry Brown in 1975 which mandates updates Building Efficiency Standards and requires the building departments to enforce them through the permit process.



Policy Drivers For Building Standards

- Governor's "Clean Energy Jobs Plan"
- Governor Brown's ZNE goals – focused on ZNE building code requirement by 2020 for newly constructed residential buildings – get there in three code cycles (2013, 2016, 2019)
- Zero Net Energy:
Residential by 2020 and
Nonresidential by 2030
- CARB Climate Change Scoping Plan
- California Long Term Energy Efficiency Strategic Plan



Paul Chinn / The Chronicle

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How Standards Are Updated

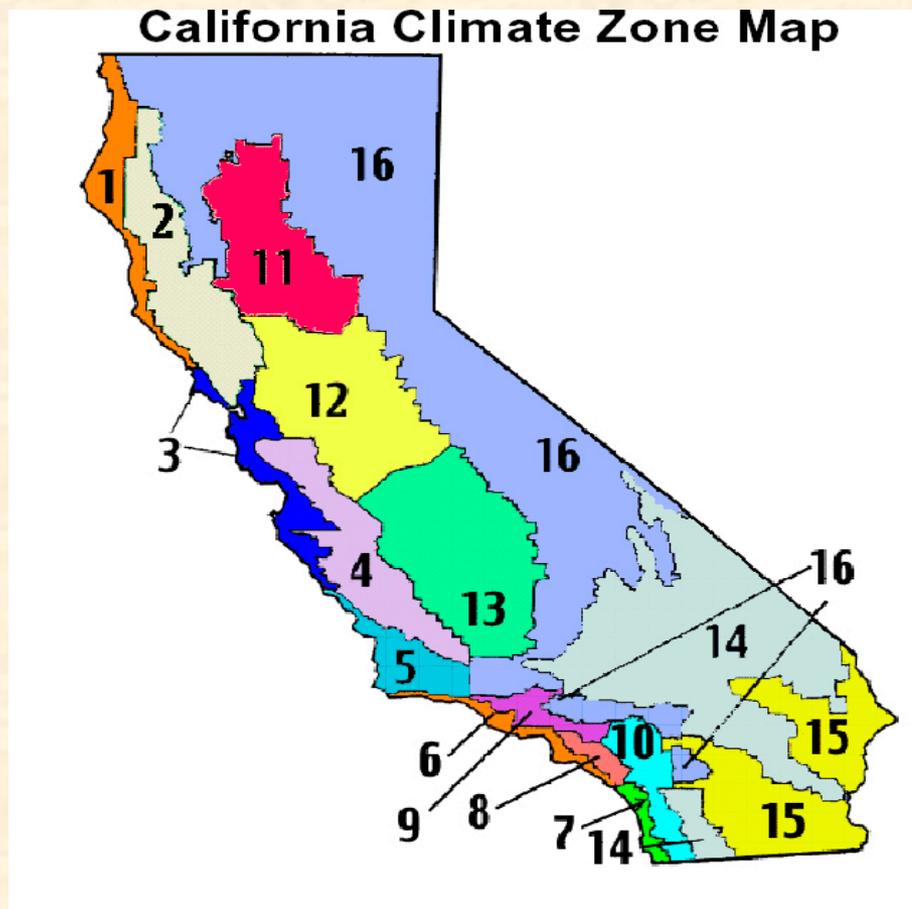
- Energy Commission staff, with help from the utility partners and the consultants, write the Triennial Standards update.
- The updates are presented at both utility-sponsored stakeholder meetings and the public in staff workshops and committee hearings.



California Standards for California Climates

■ Focus on CA Climate Diversity

- Standards set expectations for climate-specific designs
- CA weather data captures statewide coincident peak demand climate conditions



Coastal - 1, 3, 5, 6, 7, 8

Inland - 2, 4, 9, 10

Central Valley - 11, 12, 13

Desert - 14, 15

Mountains - 16

Life Cycle Costing

Standards measures must be cost effective

1. Using Life Cycle Costing Methodology (LCC)
 - i. Discounted cash flows for costs and benefits
 - ii. Accounts for maintenance costs/benefits
 - iii. Appropriate discount rates and life of measures -
30 years for residential measures
15 years for nonresidential measures

2. Time Dependent Valuation (TDV)
 - i. Value of gas and electricity changes depending on the season and the time of day
 - ii. 8,760 TDV multipliers for each hour of the year
 - iii. Favors measures that save energy during high demand periods



2019 Standards Process

We are very early in the process, the pre-rulemaking is set to begin soon

2019 STANDARDS UPDATE SCHEDULE	
DATE	MILESTONES
February 2016-July 2016	Measures Identified
August 2016 to June 2017	Stakeholder meeting/workshop & final staff workshop
August/September 2017	CASE Reports submitted to the CEC
January , 2018	45-day Language Hearings
March, 2018	Adoption of 2019 Standards at Business Meeting
June 1, 2018 to November 2018	Staff work on Software, Compliance Manuals, Electronic Documents Available to Industry
November 1, 2018	Approval of the Manuals
January 1, 2019	Software, Compliance Manuals, Electronic Documents Available to Industry
January 1, 2020	Effective Date



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KEY WEB-LINK

2019 Title 24 Utility-Sponsored Stakeholder

<http://title24stakeholders.com/>

Building Energy Efficiency Program

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

Comments to be submitted to

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

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ACM Approval Manual (Larry Froess, P.E.)

- **Clarifying language regarding major and minor software changes**
- **Clarified ability for nonresidential software to use alternate simulation engines; new Section 1.1.5**

1.1.5 Alternative Nonresidential Energy Simulation Engines

Software vendors may propose to use alternative energy simulation engines for nonresidential modeling, provided the energy simulation engine passes ASHRAE 140 (2017) and produces results that are accurate to the simulation results of the Compliance Manager within a negligible margin of error, meaning that it has no effect on the determination of building compliance or noncompliance or on final metrics such as percent compliance margin.

The compliance rules contained in the Compliance Manager shall still be implemented in the vendor software: the vendor shall not establish differing compliance rules from those that have been approved by the Energy Commission for use in the Compliance Manager. The Energy Commission shall verify that the simulation is accurate compared to the Compliance Manager and that the implemented compliance rules are identical.



Questions?

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