

California Energy Commission 2022
Building Energy Efficiency Standards
(Energy Code) for newly constructed and
renovated buildings –
Update and Background

*Presentation and summary by Richard Havenick, Chair - Coastal San Pedro Neighborhood
Council Environment & Sustainability Committee, October 11, 2021*

CEC 2022 Building Energy Efficiency Standards - Update

- The The California Energy Commission (CEC) adopted in August the 2022 Building Energy Efficiency Standards (Energy Code) for newly constructed and renovated buildings that will produce benefits to support the state's public health, climate and clean energy goals.
- As the state's primary energy policy and planning agency, the CEC adopts standards every three years to cost-effectively increase the energy efficiency and lower the carbon footprint of buildings.

Presentation and comments by Richard Havenick, Chair - Coastal San Pedro Neighborhood Council Environment & Sustainability Committee, October 11, 2021

CEC 2022 Building Energy Efficiency Standards - Update

- Homes and businesses use nearly 70 percent of California's electricity and are responsible for a quarter of the state's greenhouse gas (GHG) emissions.
- The 2022 update will be submitted to the California Building Standards Commission (CBSC), which is scheduled to consider it in December 2021. If approved by the CBSC, it would go into effect on January 1, 2023, giving builders, contractors and other interested parties a year to gear up for the changes.

Presentation and comments by Richard Havenick, Chair - Coastal San Pedro Neighborhood Council Environment & Sustainability Committee, October 11, 2021

CEC 2022 Building Energy Efficiency Standards - Update

- The 2022 Energy Code focuses on four key areas in newly constructed homes and businesses:
 - **Encouraging electric heat pump technology** for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units.
 - **Establishing electric-ready requirements** for single-family homes to position owners to use cleaner electric heating, cooking and electric vehicle (EV) charging options whenever they choose to adopt those technologies.
 - **Expanding solar photovoltaic (PV) system and battery storage standards** to make clean energy available onsite and complement the state's progress toward a 100 percent clean electricity grid.
 - **Strengthening ventilation standards** to improve indoor air quality.

Presentation and comments by Richard Havenick, Chair - Coastal San Pedro Neighborhood Council Environment & Sustainability Committee, October 11, 2021

CEC 2022 Building Energy Efficiency Standards - Background

- The use of natural gas in buildings creates about 10% of California's greenhouse gas emissions, according to the California Air Resources Board.
- More than 40 cities and counties in California have tightened rules on natural gas use in new homes (as of January 2021).

Presentation and comments by Richard Havenick, Chair - Coastal San Pedro Neighborhood Council Environment & Sustainability Committee, October 11, 2021

CEC 2022 Building Energy Efficiency Standards - Background

- Nearly 45 percent of the natural gas burned in California was used for electricity generation, and much of the remainder consumed in the **residential (21 percent)**, industrial (25 percent), and commercial (9 percent) sectors.
- California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply.
- Natural gas has become an increasingly important source of energy and provides the largest portion of the total in-state capacity and electricity generation.

Presentation and comments by Richard Havenick, Chair - Coastal San Pedro Neighborhood Council Environment & Sustainability Committee, October 11, 2021

CECEC 2022 Building Energy Efficiency Standards - Background

California's 2020 Total System Electric Generation:

- Natural Gas 37%
- Hydro 14%
- Solar 13%
- Wind 11%
- Nuclear 9%
- Geo-thermal 5%
- Biomass 3%
- Coal 3%
- Other 5%.

Presentation and comments by Richard Havenick, Chair - Coastal San Pedro Neighborhood Council Environment & Sustainability Committee, October 11, 2021

CEC 2022 Building Energy Efficiency Standards - Background

California's Goal for Renewable Power Generation:

- California's renewable portfolio standard enacted in 2002 required
 - 33% of electricity retail sales in California come from renewable resources by 2020;
 - 60% by 2030; and,
 - 100% by 2045 (Senate Bill 100 adopted in 2018 requires that renewable and zero-carbon energy resources supply 100 percent of electric retail sales to customers by 2045).

Presentation and comments by Richard Havenick, Chair - Coastal San Pedro Neighborhood Council Environment & Sustainability Committee, October 11, 2021

CEC 2022 Building Energy Efficiency Standards –References

<https://www.energy.ca.gov/news/2021-08/energy-commission-adopts-updated-building-standards-improve-efficiency-reduce-0>

<https://www.scientificamerican.com/article/california-is-closing-the-door-to-gas-in-new-homes/>

<https://californiaglobe.com/articles/california-energy-commission-proposes-new-building-standards-favoring-electric-appliances-over-natural-gas/>

<https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california>

<https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation>

<https://www.energy.ca.gov/news/2021-03/california-releases-report-charting-path-100-percent-clean-electricity>

<https://www.eia.gov/state/analysis.php?sid=CA>

Presentation and comments by Richard Havenick, Chair - Coastal San Pedro Neighborhood Council Environment & Sustainability Committee, October 11, 2021