2022 Energy Code Goals

• Increase building energy efficiency cost-effectively
• Contribute to California’s greenhouse gas (GHG) reduction goals
• Enable pathways for all-electric buildings
• Reduce residential building impacts on the electricity grid
• Promote demand flexibility and self-utilization of photovoltaic (PV)
• Provide tools for local government reach codes
# 2022 Energy Code Schedule

<table>
<thead>
<tr>
<th>DATE</th>
<th>MILESTONES</th>
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<tbody>
<tr>
<td>August 2019 - October 2020</td>
<td>Stakeholder meetings, workshops, and final staff workshops</td>
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<td>August 2020 - October 2020</td>
<td>CASE reports submitted to the CEC</td>
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<tr>
<td>May 2021</td>
<td>45-day language hearings</td>
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<tr>
<td>August 11, 2021</td>
<td>Adoption of 2022 Energy Code at CEC Business Meeting</td>
</tr>
<tr>
<td>July 2021 - November 2021</td>
<td>Staff updates software, compliance manuals, electronic documents</td>
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<tr>
<td>December 2021</td>
<td>Approval of the 2022 Energy Code by CBSC</td>
</tr>
<tr>
<td>February - June 2022</td>
<td>Software, compliance manuals, electronic documents available to industry</td>
</tr>
<tr>
<td>January 1, 2023</td>
<td>Effective date of 2022 Energy Code</td>
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Effective January 1, 2023

- Building permit applications submitted on or after effective date
- Must use 2022 software and forms
2022 Building Energy Efficiency Standards

The Building Energy Efficiency Standards (Energy Code) apply to newly constructed buildings, additions, and alterations. They are a vital pillar of California’s climate action plan. The 2022 Energy Code will produce benefits to support the state’s public health, climate, and clean energy goals.

Energy Code
Reference Appendices
Draft Compliance Manuals
2022 Energy Code Highlights

- Heat pump baselines
- Solar and battery storage
- Electric-ready requirements
- Ventilation requirements
- Multifamily restructuring
Nonresidential Summary

• Baselines for performance and prescriptive compliance to encourage heat pump technology for schools, offices, banks, libraries, retail, grocery
• Solar PV, battery storage prescriptive requirements for grocery, office, financial, unleased tenant space, retail, school, warehouse, auditoriums, convention center, hotel and motel, library, medical office, restaurant, theater
• Updates for improved indoor air quality
• New efficiency requirements for commercial greenhouses
• Improves efficiency for demand-responsive controls
• Updates to indoor and outdoor lighting, LED baseline
• Updates to cool roof, air barrier and building leakage testing, metal-framed wall assembly U-factors, fenestration per climate zone
Single-family Summary

- Revise baselines to encourage heat pump technology
- Establish electric-ready requirements
- Improve provisions for solar PV, battery storage, with exceptions
- Update kitchen ventilation requirements to improve indoor air quality
- Make general improvements to clarity and consistency
- Relocate multifamily provisions into new dedicated set of chapters
Multifamily Summary

- Consolidate multifamily provisions into dedicated chapters
- Heat pump baseline
- Electric ready requirements for dwelling units
- PV and battery storage depends on number of habitable stories
- Indoor air quality for dwelling units
Blueprint Newsletter

Energy Code Newsletter

• Published quarterly
• Updates
• Clarifications
• Frequently asked questions

IN THIS ISSUE

• Snow Load and PV
  • New Fact Sheets on IRC
  • Virtual Compliance Assistant for IRC Forms
  • Updated Lighting Videos
  • USA
  • Accessory Dwelling Unit (ADU) Seminar
  • Kitchen Range Hood HERS Verification for Allocations

Snow Load and PV

The 2018 Building Energy Efficiency Standards (Energy Code) includes solar photovoltaic (PV) systems requirements for all newly constructed four-story residential buildings per Section 655.10.10.16. The California Building Code (IRC), Title 24, Part 2, and the California Residential Code (CRC), Title 24, Part 2.1 include PV systems, including inverters, supports, and other benefits, to meet the design and installation requirements for high snow loads as American Society of Civil Engineers (ASCE) Standard 7-16. Simultaneously, compliance with the snow requirements of the Energy Code, IRC, and CRC should be met, when feasible, in all newly constructed four-story residential buildings.

The California Energy Commission (CEC) has determined that the solar PV system requirement does not apply to buildings that cannot meet the IRC system structural requirements as the IRC and CRC due to high snow loads. Site-specific wind loads will determine whether a PV system can be installed safely to meet high snow loads. Building permit applicants must address the issues under their control to meet PV system high snow load structural requirements. These include the specific characteristics of the PV module, rail, and ground mount installation. southwest facing, and PV module types.

Steps that can be taken to meet high snow load structural requirements include the following:

• Use these nail spacing or other installation practices to make PV modules resistant to high snow loads.
• Design roof slopes and PV module locations to remove or allow for snow drift and allow the PV array to qualify as unobstructed canopy surfaces.
• Insulate roof designs, roof structures, or PV module mounting to avoid exposure to accidental snow accumulation.
• Design buildings with no snow sliding off the roof to avoid slippery locations on the site.

Local enforcement agencies should ensure that practical approaches are taken to design homes that prevent the installation of PV systems whenever possible.
Energy Code Hotline

Monday through Friday
8:00 a.m. to 12:00 p.m.
1:00 p.m. to 4:30 p.m.

Call
800-772-3300 in CA
916-654-5106 outside CA

Email
Title24@energy.ca.gov
2025 Energy Code Potential Themes

- Heat pump baselines and refrigerants
  - 6 million heat pumps by 2030
- Energy storage and load flexibility
- Additions, alterations, and ADUs
- Covered process loads and embodied carbon
- Electric vehicle (EV) readiness and EV credits
- Energy code accounting: prototypes, weather data, metrics, and utility rates
- Focus on compliance strategies and tools
- Affordable housing program integration
- Interagency coordination
<table>
<thead>
<tr>
<th>Milestone</th>
<th>Tentative Dates</th>
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<tbody>
<tr>
<td>2025 Energy Code Kickoff – Compliance Tools &amp; Templates</td>
<td>March 22, 2022</td>
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<tr>
<td>Deadline to Submit New Measures (title24stakeholders.com)</td>
<td>April 15, 2022</td>
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<td>Measure Identification &amp; Selection</td>
<td>April 2022</td>
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<tr>
<td>Update Energy Code Accounting Metrics</td>
<td>Now through July 2022</td>
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<td>Research Version of Compliance Software</td>
<td>September 2022</td>
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<td>Utility Sponsored Workshops</td>
<td>August 2022 – March 2023</td>
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<td>Draft CASE Measure Reports to CEC</td>
<td>March 2023 – June 2023</td>
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<tr>
<td>CEC Pre-Rulemaking Workshops</td>
<td>April 2023 – July 2023</td>
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<tr>
<td>Final CASE Measure Reports to CEC</td>
<td>July 2023 – August 2023</td>
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<tr>
<td>Draft Express Terms Review</td>
<td>October 2023</td>
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<tr>
<td>Open Formal Rulemaking</td>
<td>January 2024</td>
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Thank you