



Department of Planning & Permitting
Office of Climate Change, Sustainability & Resiliency

Updating O'ahu's Energy Code

2018 State Energy Code with Local Amendments

ROH Ch. 16B, Building Energy Conservation Code

Bill 4 (2023)
Committee on Housing, Sustainability and Health
April 5, 2023

MAYOR'S MESSAGE 74
HSH





Meeting the Moment to Support Local Action

\$369 billion in the Inflation Reduction Act

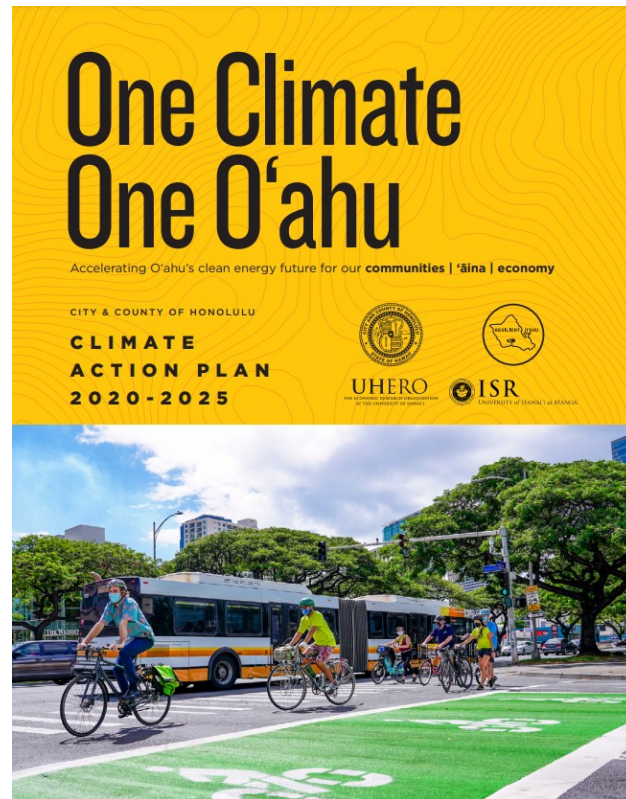
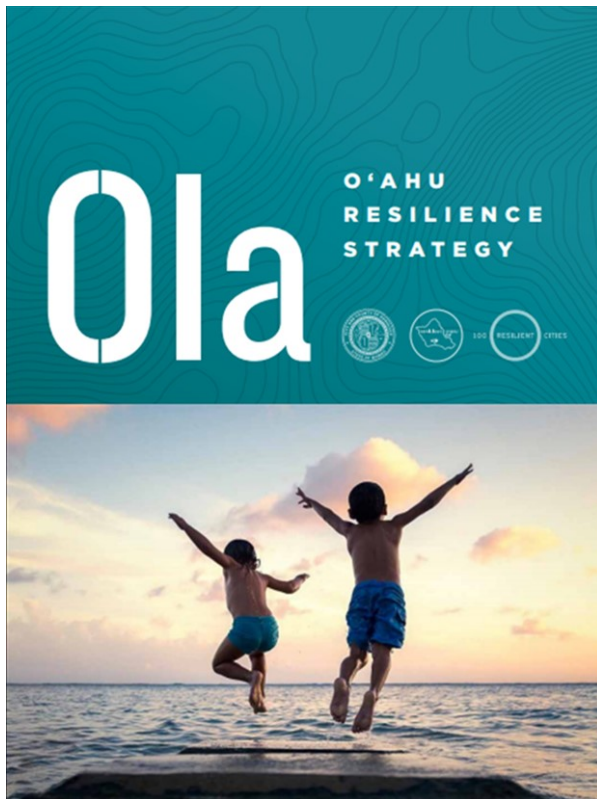
Incentives to address affordability & reduce upfront costs . . .

- **Tax credits** for new efficient homes & renewable energy
- **Grants** for adopting & implementing codes
- **\$68M** energy efficiency **rebate program**

*. . . make it **cheaper than ever** to build highly efficient buildings*



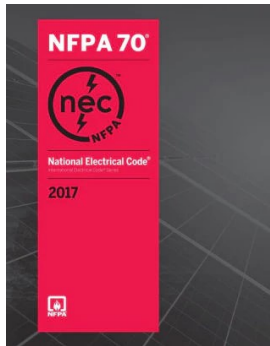
Implementation of Council-Adopted Plans





A Suite of Building Codes for Safety and Resilience

**Electrical
(2017)**



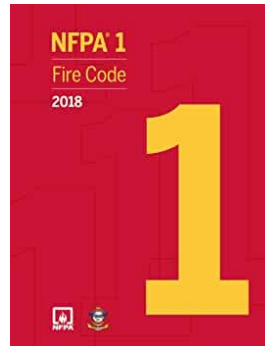
adopted Aug 2019

**Building
(2012)**



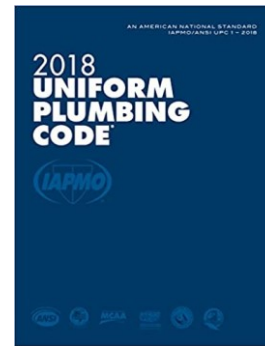
adopted May 2020

**Fire
(2018)**



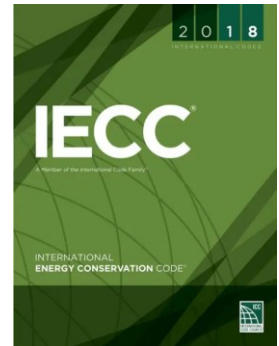
adopted Sep 2021

**Plumbing
(2018)**



adopted Oct 2022

**Energy
(2018)**



proposed (Bill 4)



Energy Codes Can Offer a 'Win-Win' on Costs

How do we address *both* up-front **construction costs** *and* immediate and long-term **utility costs** for businesses and residents?



Move toward
performance-based
code compliance



Support industry
expertise and local
market leaders



Remove provisions
that don't fit
O'ahu's needs



An Open & Inclusive Code Development Process

Apr-Jun '22

Stakeholder outreach for input on potential local amendments to the Energy Code

June '22

Public workshops on potential amendments

Jul-Dec '22

Cont'd industry engagement & internal review

Feb '23

Council consideration & adoption of the Energy Code (Bill 4)



Panels

Participants

Stretching our Savings
Affordable Readiness
Making it Fit for O'ahu

Melanie Islam
City Climate Change Commission

Kim Cheslak
New Buildings Institute

Alana Kobayashi Pakkala
Kobayashi Group

Eileen Lacaden
Hawai'i Energy

Greg Thielen
BIAH Codes Committee

Daryl Takamiya
Castle & Cooke

Lani Shinsato
Hawaiian Electric

Melissa Miyashiro
Blue Planet Foundation

Rocky Mould
Hawai'i Solar Energy Association

Howard Wiig
Hawai'i State Energy Office

Keith Kido
TileCo

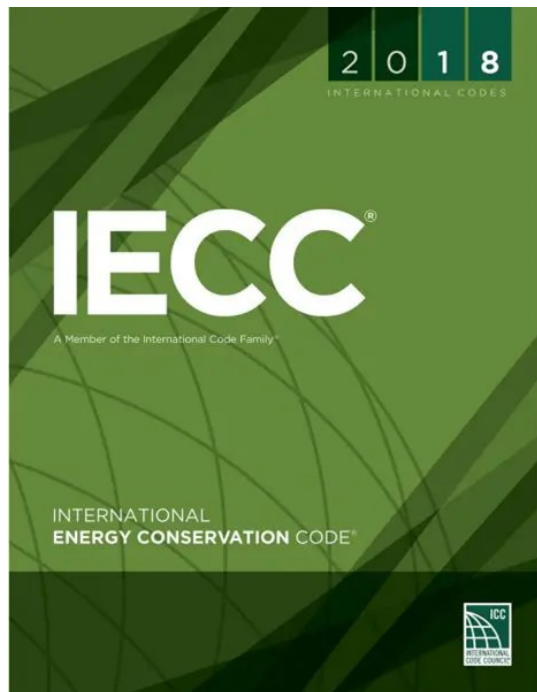
Hoang Tran
Hawai'i Energy

Alex Yee
CCSR

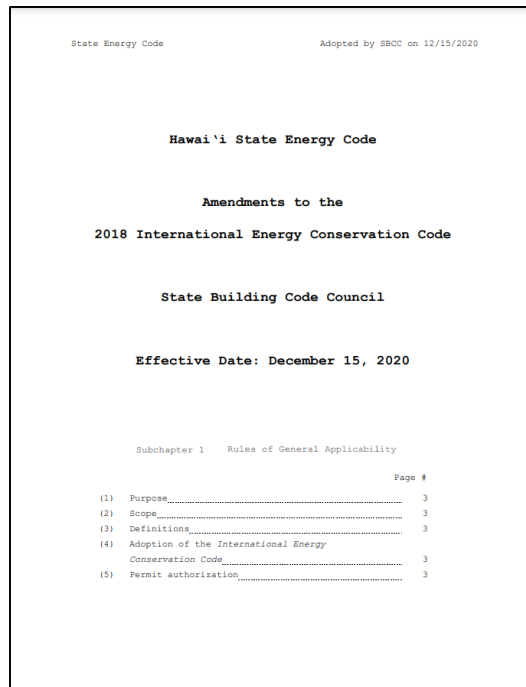


IECC Code Cycle and Amendments for Local Context

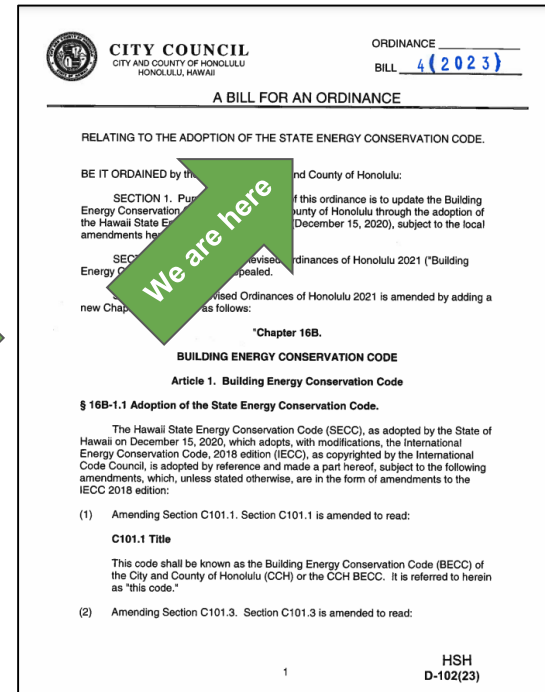
IECC 2018



STATE AMENDMENTS



LOCAL AMENDMENTS





Voluntary Commercial Stretch Code



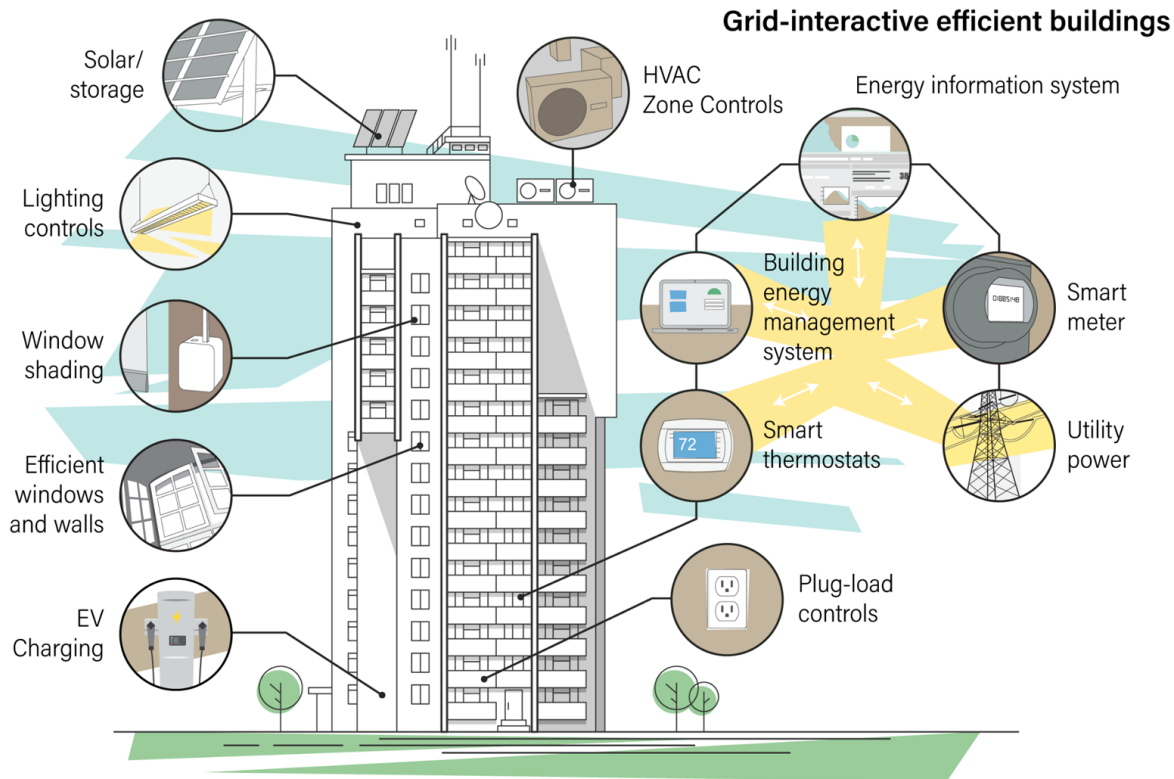
100% voluntary to enable market leadership



Defines performance for building efficiency and demand response



Supports cost effective renewable energy adoption over time





Market Movement in Large Residential Homes

For single-family homes **over 4,000 sf**:

- Increased insulation / solar reflectance for exterior walls
- Increased insulation / solar reflectance for roofs
- Greater lighting efficiency
- “Smart” pool and spa pumps and heaters, electric water heaters, and AC units where used (*Proposed CD1*)

For single-family homes **over 4,000 sf with 2,000 sf AC**:

- All of the above plus:
 - Energy modeling
 - Multi-stage/variable speed HVAC (more efficient)
 - Demand response-capable thermostats





Measures for Short- and Long-Term Cost Savings

Up-front cost savings measures:

- Maintain EV- and PV-ready provisions for cost-effective preparation of new buildings for an equitable clean energy future
- Remove requirements for floor insulation
- Enable simple exemption from requirements for daylighting controls
- Remove mandate for hot water recirculation pumps





Amendments to Clarify & Strengthen

- 100% voluntary Commercial Stretch Code
- Adjustments to meet today's market:
 - Use of "light reflectance value" for mass walls
 - Specified "smart" appliances in large home efficiency requirements
 - Appropriate solar reflectance value for sloped roofs



Mahalo!



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