

Updating O'ahu's Energy Code

State Energy Code with Local Amendments

ROH Ch. 16B, Building Energy Conservation Code

Bill 4 (2023)

Committee on Housing, Sustainability and Health

March 1, 2023

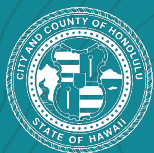
Submitted by the Office of Climate Change, Sustainability, and Resiliency

MAYOR'S MESSAGE 46

HSH

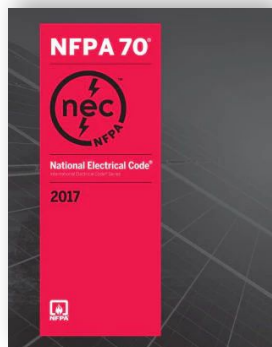
23FEB28 AM 10:32 CITY CLERK





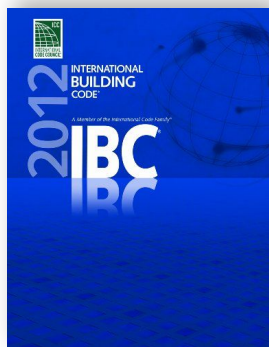
A Suite of Building Codes for Safety and Resilience

**Electrical
(2017)**



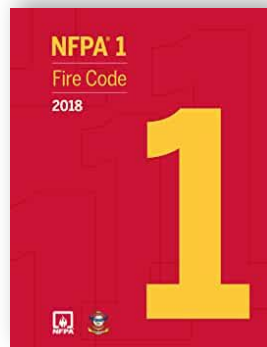
adopted Aug 2019

**Building
(2012)**



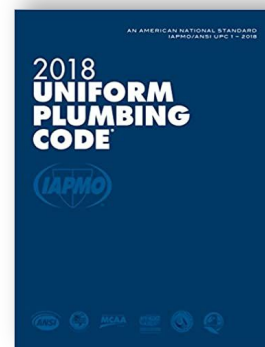
adopted May 2020

**Fire
(2018)**



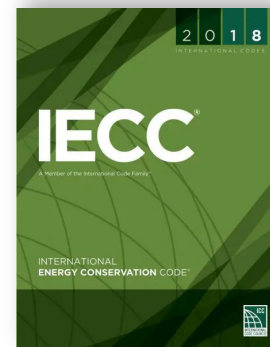
adopted Sep 2021

**Plumbing
(2018)**

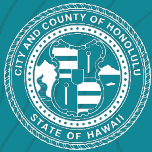


adopted Oct 2022

**Energy
(2018)**

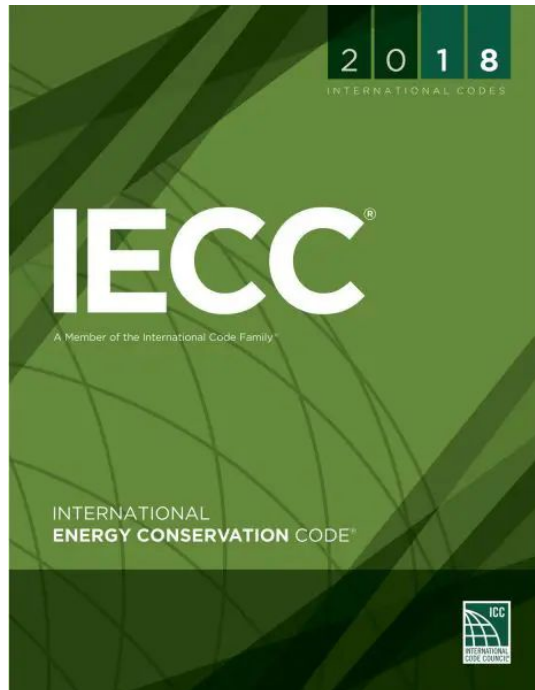


proposed (Bill 4)

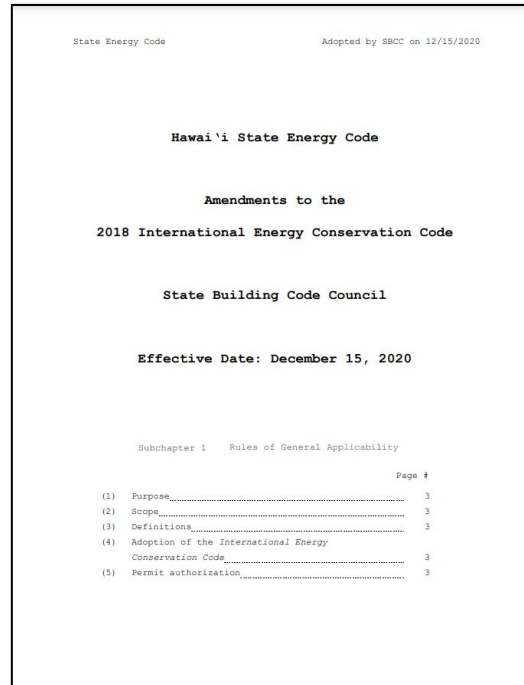


IECC Code Cycle and Amendments for Local Context

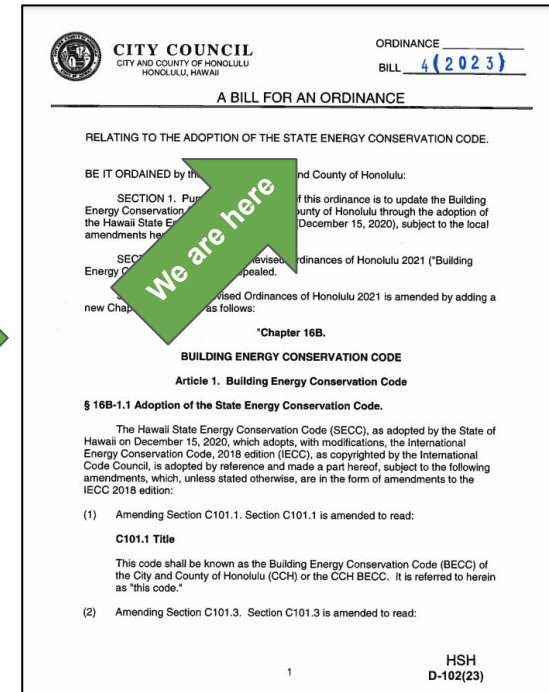
IECC 2018

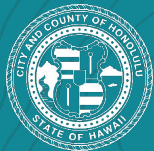


STATE AMENDMENTS

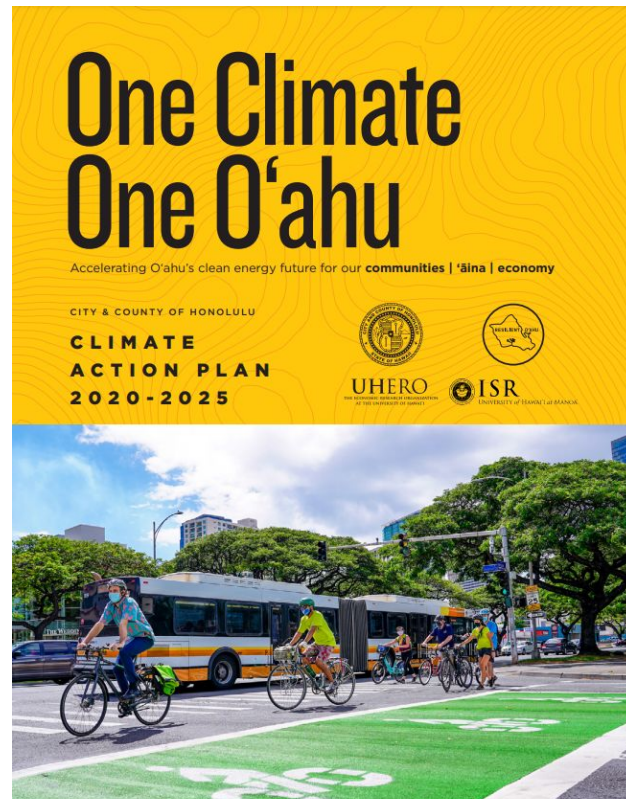
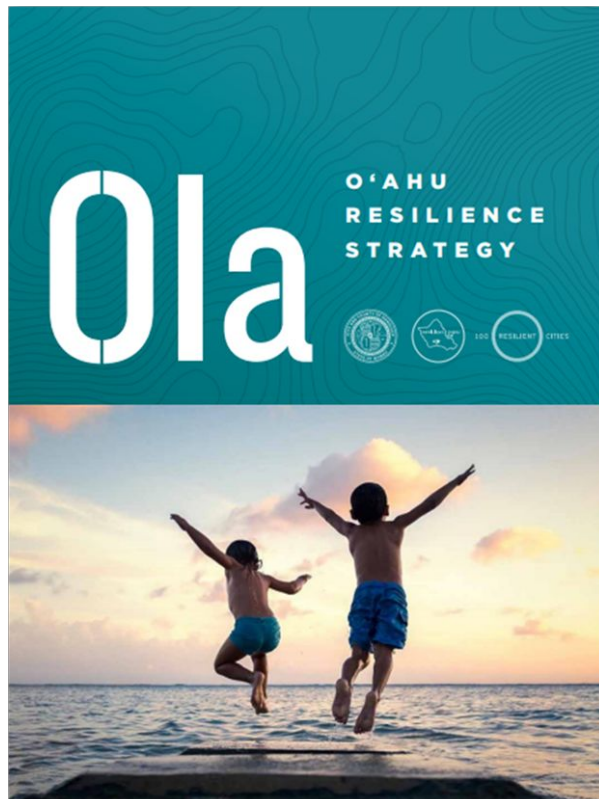


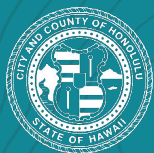
LOCAL AMENDMENTS





Implementation of Council-Adopted Plans





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?



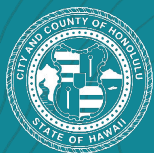
Move toward
performance-based
code compliance



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

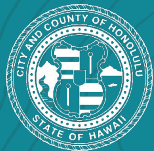
Rocky Mould
Hawai'i Solar Energy Association

Howard Wiig
Hawai'i State Energy Office

Keith Kido
TileCo

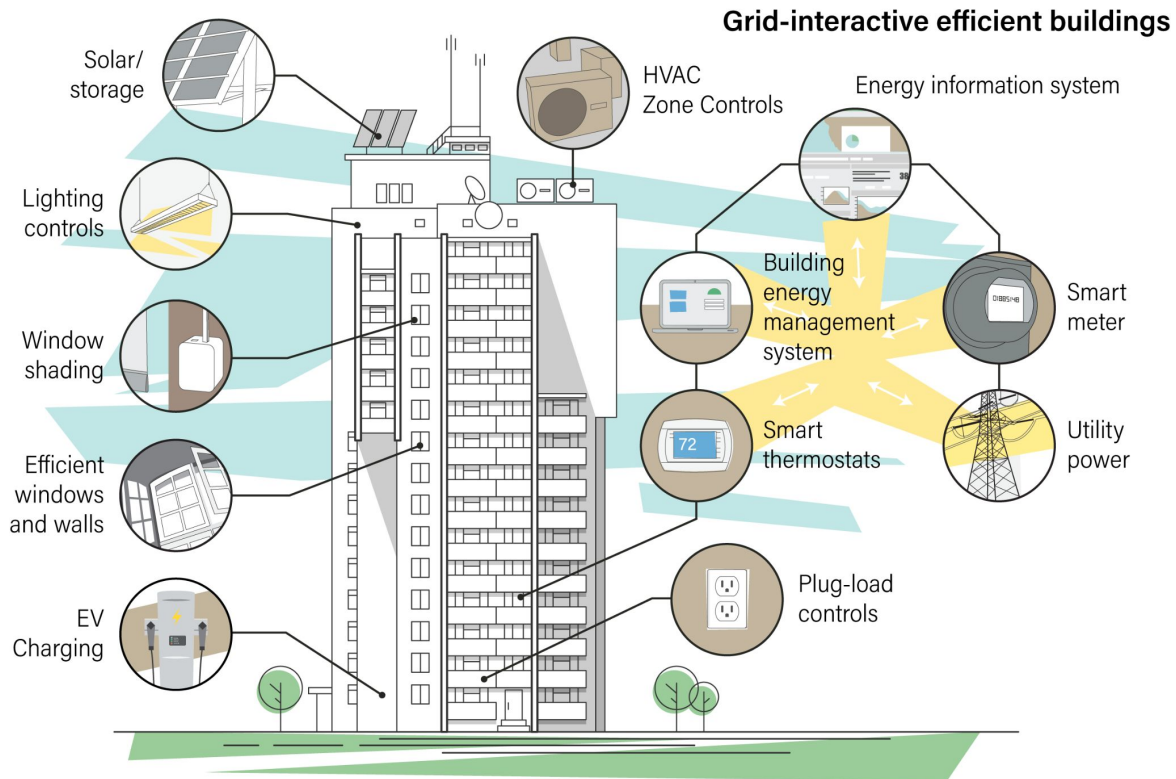
Hoang Tran
Hawai'i Energy

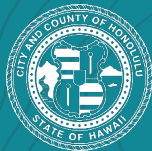
Alex Yee
CCSR



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

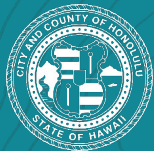




Increasing Performance of Large Residential Homes

SFH $\geq$ 4,000 sf	DR controls for Elec Water Heaters
	Grid responsive appliances required
	Ext walls R13 or min .30 reflectance
	Roofs any two: R30/attic ventilation/SRI
SFH $\geq$ 4000 sf, with $\geq$ 2000 sf of A/C space	Use of an energy model and 10% better than reference design or ERI<52
	Multi-stage variable capacity HVAC
	Thermostats capable of demand response



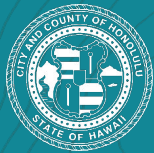


Measures for Short- and Long-Term Cost Savings

Up-front cost savings measures:

- Maintain City's existing EV- and PV-ready provisions for cost-effective preparation of new buildings for an equitable clean energy future
- Remove requirements for floor insulation
- Remove requirements for daylighting controls
- Remove mandate for hot water recirculation pumps





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*



Mahalo!

