WHY THE ZERO CODE?

With currently under-designed buildings are of urban growth in place, the city of New York by 2050 will have twice the building stock. Only by eliminating CO2 emissions from new buildings will we begin to reduce building sector emissions overall.
The ZERO Code

1. Design an energy efficient building in minimum compliance with Standard 90.1-2019, the IECC 2021 or better.

- First version released April 2018
- Updated in 2020 to reference ASHRAE Standard 90.1-2019 and the IECC 2021
- See zero-code.org for more information
- Applies to commercial, institutional, hotels/motels, and high-rise residential

Other standards can be substituted when at least as stringent.
The renewable energy requirement can be reduced with the performance approach.
On-site renewable energy will be inadequate for tall and energy intensive buildings.
Various off-site renewable energy procurement options are available.
2020 ZERO Code Options

Beyond-Code Energy Efficiency

However, the prescriptive compliance path is not available

Electrification

On-site combustion is prohibited
ZERO Code Derivatives

- Special California Version
  - First version October 2018
  - 2022 Version Proposed for CalGreen
- Standard 189.1-2020 and IgCC 2021
- IECC 2021 Renewable Energy Appendix
Off-Site Renewable Energy Procurement Methods

- Direct Ownership
- Community Solar
- Green Pricing
- Unbundled RECs
- Virtual Power Purchase Agreements
- Utility Renewable Energy Contracts
- Renewable Energy Investment Fund (REIF)
Minimum Requirements for Off-Site Renewable Energy

- Generators must be solar, wind, or small hydro
- Long-term and durable commitment to purchase
- Renewable energy certificates (RECs) must be retired on behalf of the ZERO Code building.
Architecture 2030 ZERO Code
Architecture 2030 ZERO Code

Documents (visit zero-code.org)

National

California

I-Codes

2020 Off-Site TSD
Coming soon

Charles Eley, Slide 47
Pathways to ZERO Code Adoption

**CITY**

- **YES**
  - OPTION 1: CITY ENERGY CODE
    - Adopt the 2021 IECC, which includes the Zero Code Appendix.
  - OPTION 2: LEAD BY EXAMPLE
    - Adopt the 2021 IECC with the Zero Code Appendix for municipal buildings or buildings receiving municipal funding.
  - OPTION 3: PROVIDE INCENTIVES
    - Provide incentives for projects that meet the Zero Code Appendix.

- **NO**
  - OPTION 1: CITY ZONING
    - Update or adopt new zoning regulations to incentivize or require Zero Code-compatible new commercial buildings.
  - OPTION 2: CITY ORDINANCE
    - Pass a local ordinance requiring or incentivizing Zero Code-compatible new commercial buildings.
  - OPTION 3: EXISTING BUILDINGS
    - Pass a local ordinance to require or incentivize adding on- or off-site renewable energy for existing buildings.

**STATE**

- OPTION 1: STATE CODE
  - Adopt the 2021 IECC with the Zero Code Appendix through state building code adoption or on top of an existing commercial building energy code.
- OPTION 2: LEAD BY EXAMPLE**
  - Adopt the 2021 IECC with the Zero Code Appendix for state buildings or buildings that receive state funding.
- OPTION 3: VOLUNTARY STRETCH CODE**
  - Adopt a voluntary stretch code based on the Zero Code Appendix with incentives to encourage adoption.