Energy Codes in Austin

How Are Energy Codes Developed and Adopted?

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Energy Codes in Austin

- What are Energy Codes?
- Why are they important?
- How did we get here?
- How do they get developed?
- How do they get adopted?
- How do I get involved?

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What are Energy Codes?

Energy Codes create minimum requirements for design and construction.

"Energy codes - specify how buildings must be constructed or perform, and are written in mandatory, enforceable language. States or local governments adopt and enforce energy codes for their jurisdictions." – Pacific Northwest National Laboratory

Examples of energy requirements in Austin 2021 residential energy code:

- Attic insulation = R49
- Windows = U.27
- High efficiency lighting = 65 lumens/watt lamps
- Energy Star bathroom fans and outdoor ventilation supply fans

Why are Energy Codes Important?

Homes built to modern codes

- Save energy, water, materials
- Improve air quality
- Increase resiliency
- Save money

Community benefits include

- Decreasing need for new power infrastructure
  Energy efficiency is an energy source
- Reducing local carbon emissions
- Creating local jobs

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IN PERSPECTIVE

2 in every 5 jobs in the U.S. energy sector are in energy efficiency (41.3%)

1.19 million construction jobs are in energy efficiency. Over 15% of total U.S. construction workers spend at least 50% of their time on EE

2.1x Energy efficiency employs 2.1 times as many workers in the U.S. as the entire fossil fuel industry

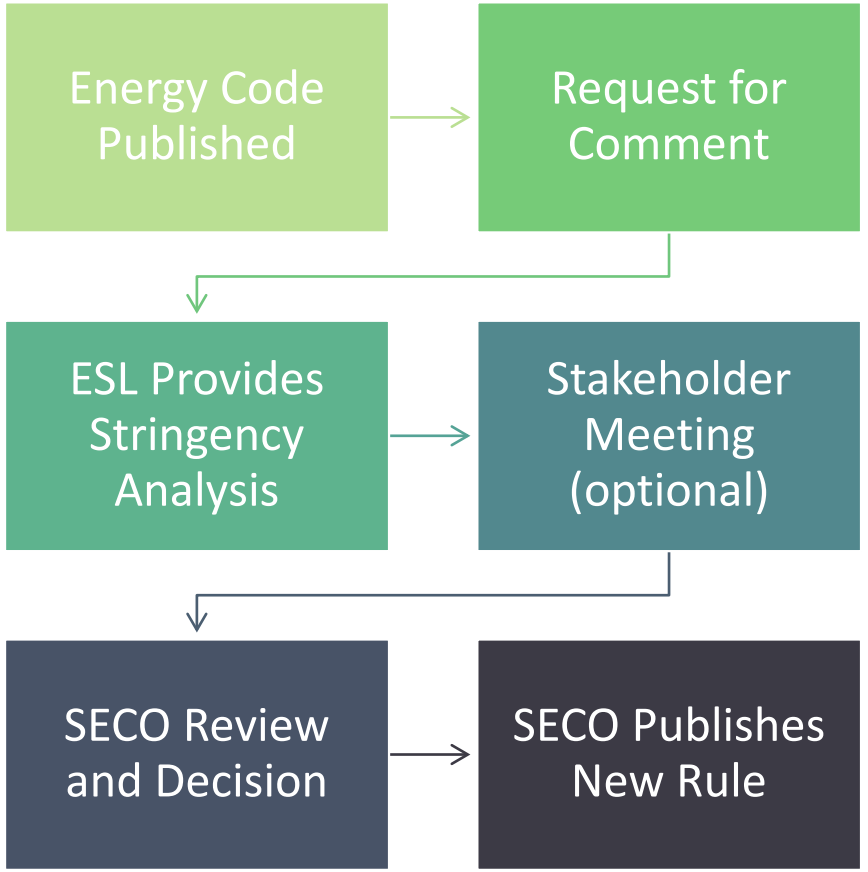
9% of energy efficiency jobs are held by veterans (203,602), greater than the national average of veterans in the workforce (5%)

How Did We Get Here?

State Adoption of the Texas Emissions Reduction Plan (TERP) 2001

- Adopted the 2000 ICC International Energy Conservation Code (IECC) with 2001 Supplement (SB 5, 77th Legislature)
- Texas Building Energy Performance Standards Health and Safety Code 388 (TBEPS)

State of Texas Energy Code Adoption Process



Texas Emissions Reduction Plan (TERP)

- Diesel emissions reduction incentive
- Motor vehicle purchase or lease incentive
- New technology research and development
- Energy efficiency grant
- Texas Building Energy Performance Standards (TBEPS)

Save Money and the Environment

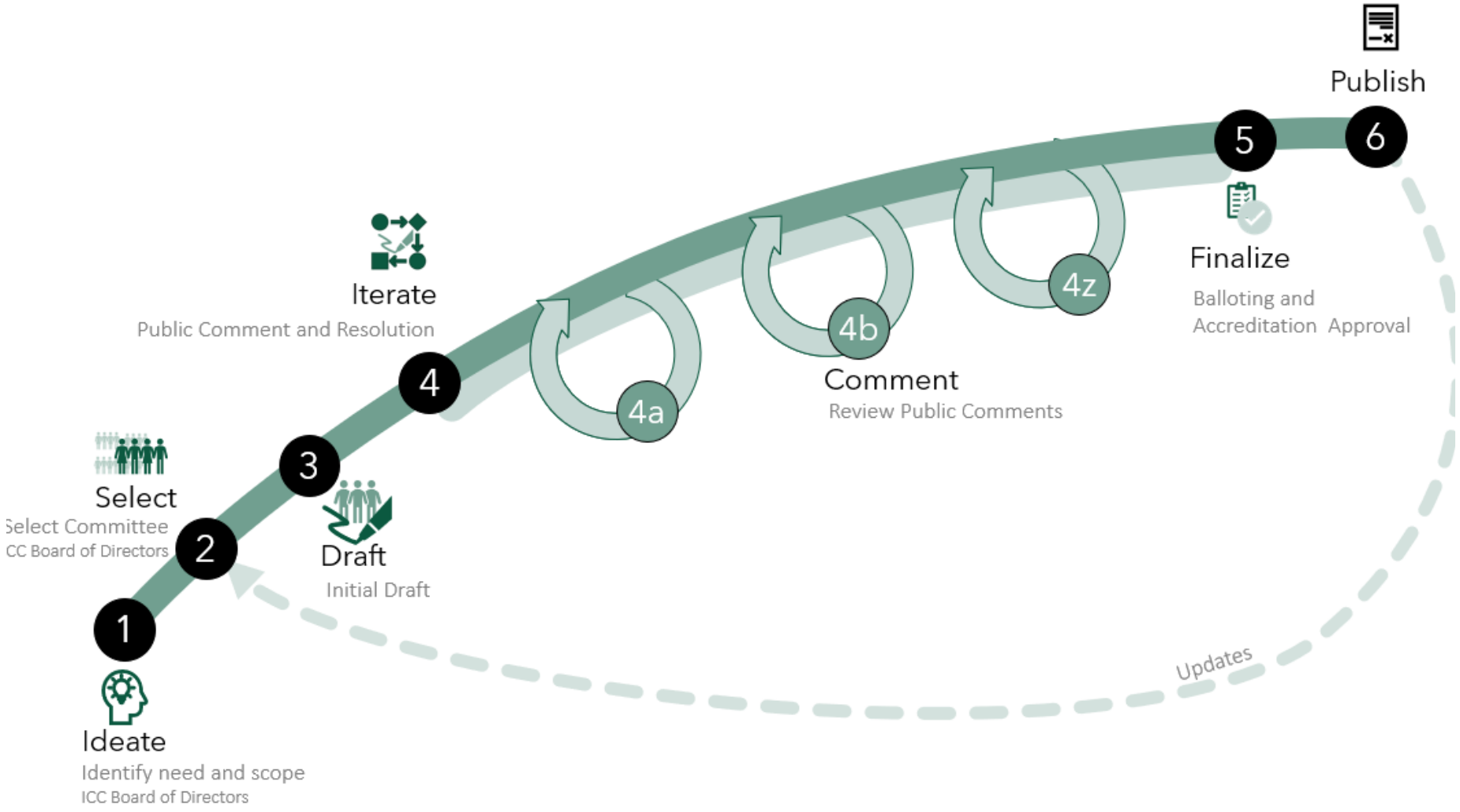
How Do Energy Codes Get Developed?

Model Energy Code

- The International Energy Conservation Code (IECC) regulates the design and construction of buildings for the effective use and conservation of energy over the useful life of each building
- The International Code Council (ICC) develops model codes on a three-year cycle.
- Starting with the 2024 IECC the IECC is developed using a standards process. This allows continuous work on the code during the three-year cycle.

ICC Standard Development Process

Austin is currently using the 2021 model energy code with Austin amendments for higher performance and application to local climate conditions and goals.



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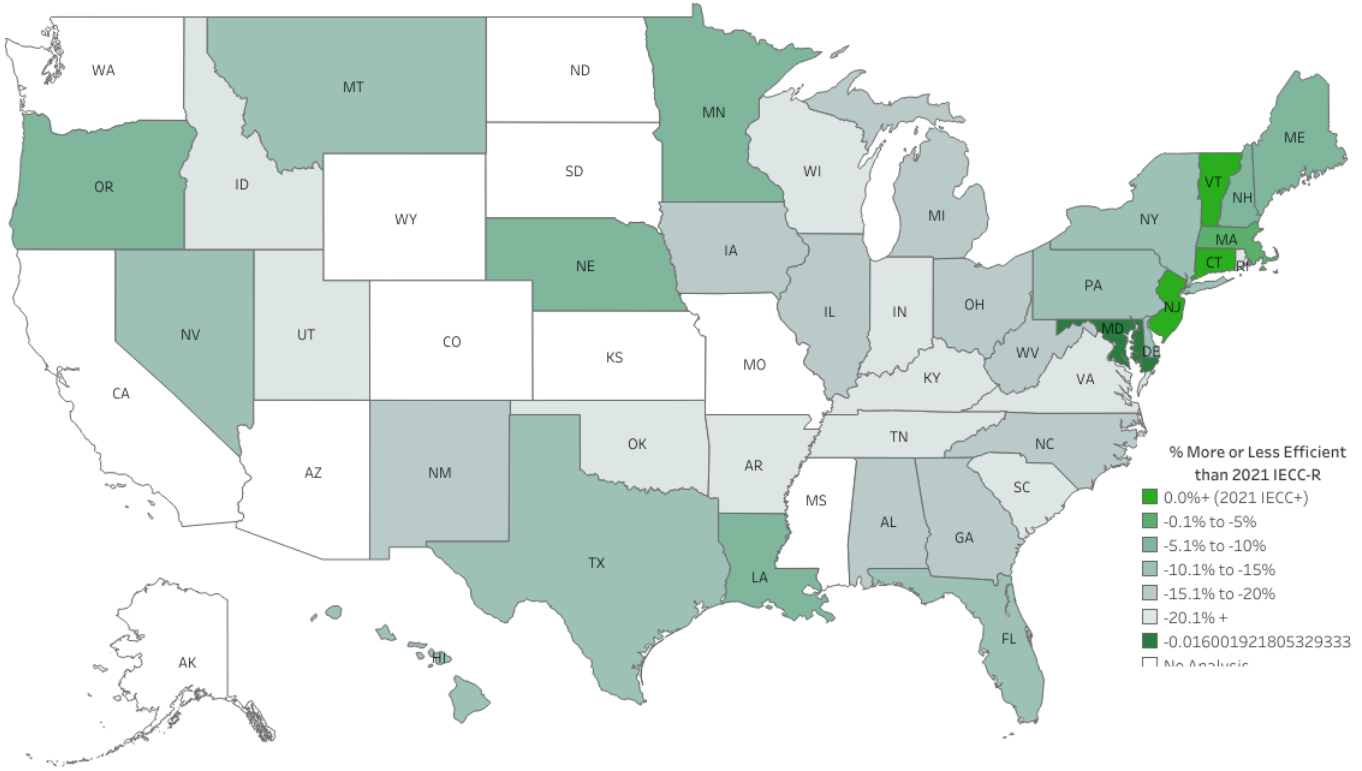
Development Entities

International/ National	State Government	Local Government	Communities	Industry/ Business
ICC	Gov Office and Eos	City	Climate, energy, justice advocates, networks	Construction Industry
ASHRAE	SECO	County	Community action campaigns	Utilities
USDOE and National Labs	ESL			Boards, Commissions, Associations

Residential Energy Code Map

Residential Energy Code: State Energy Index Relative to Current Model Code (2021 IECC)

The DOE state-level analysis generates a site energy index based on the makeup of each state residential and commercial energy code. This map highlights the percent difference between the state energy index and the current residential model energy code (2021 IECC). Dark green indicates the state code is as or more efficient than the national model code, where shades of turquoise and gray indicates a less efficient state code. States in white either do not have a statewide energy code or have a custom code that DOE did not analyze.



US DOE BECP: Status of State Energy Code Adoption - https://www.energycodes.gov/status/residential
State Energy Index Data: https://www.energycodes.gov/sites/default/files/2023-09/StateLevelResidentialCodesEnergyUseIndex_FY2023Q4_20230925_PNNL_Public.xlsx
Updated as of 09/29/23

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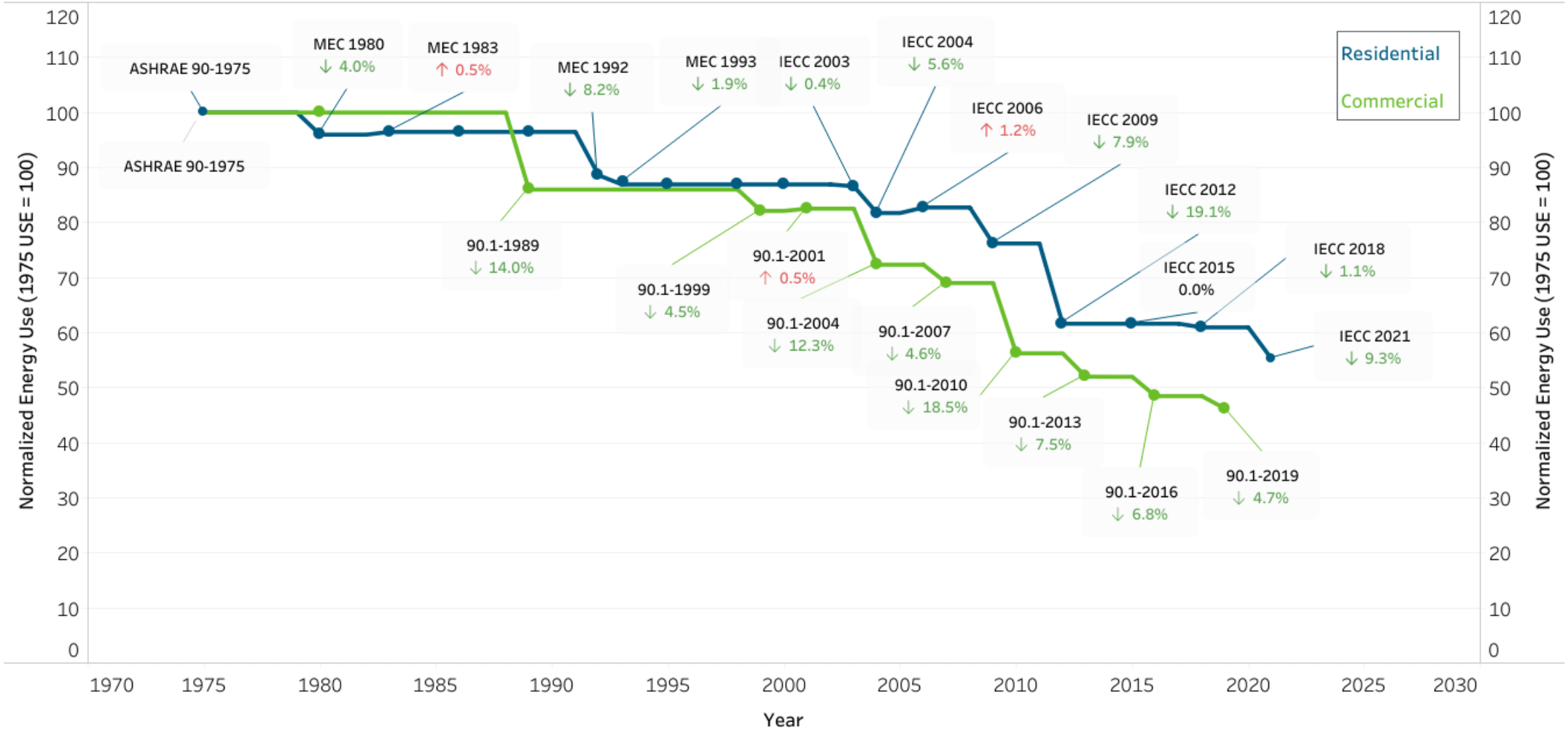
U.S. DEPARTMENT OF ENERGY

Estimated Improvement in Residential & Commercial Energy Codes
(1975 - 2021)

Pacific Northwest NATIONAL LABORATORY



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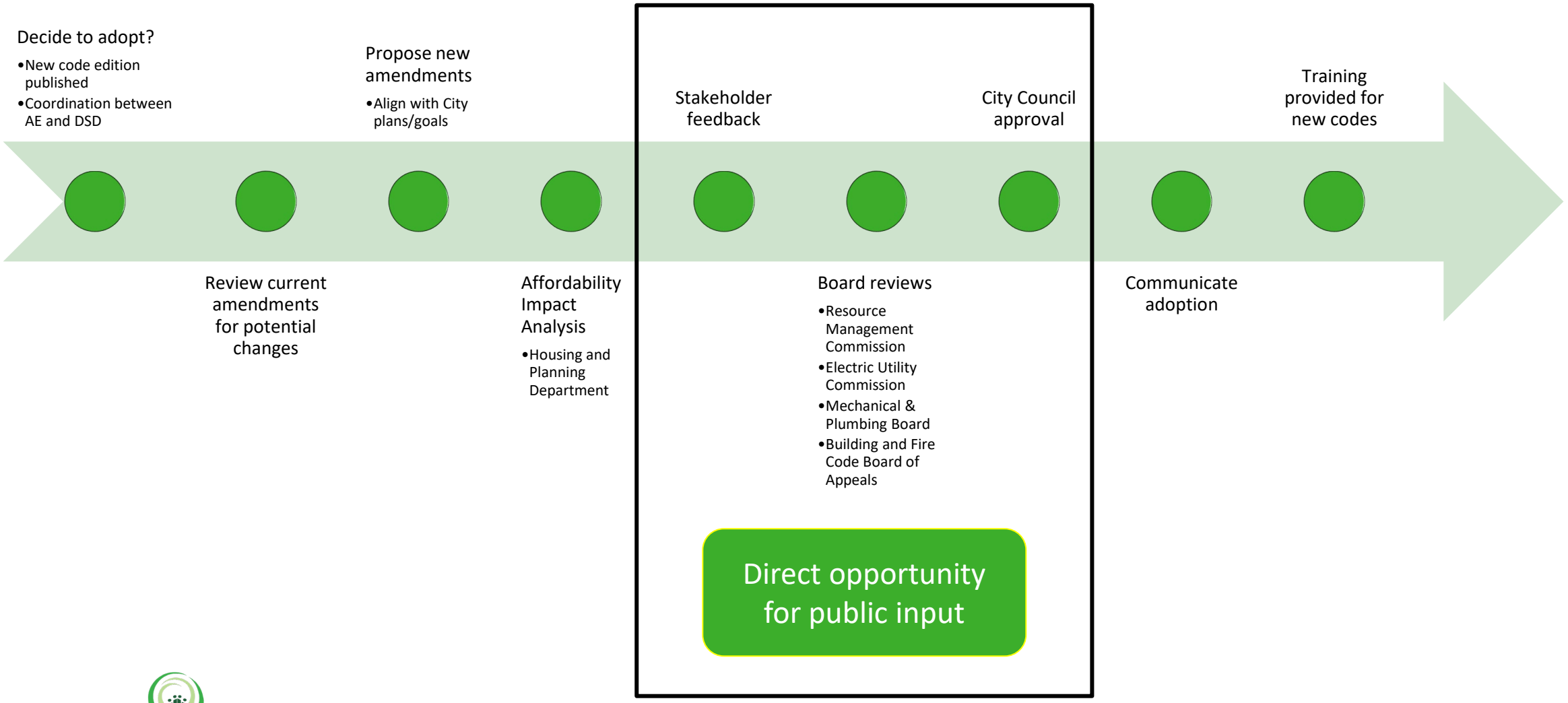
How Do Energy Codes Get Adopted?

Austin Code Adoption Process



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Austin Code Regulation and Advisory Roles

Regulation

- Informs public
- Guides building codes adoption process
- Helps with model code development
- Provides plan review
- Provides code interpretation
- Provides code inspection/enforcement
- Works with Boards & Commissions
- Presents proposed codes to City Council for adoption

Advisory

- Guides energy code adoption process
- Manages energy code proposals
- Helps with model code development
- Provides subject matter expertise for code interpretation
- Analyzes energy code performance
- Helps with training and education to stakeholders
- Works with Boards & Commissions

Stakeholder Opportunities

Stakeholder feedback

- Online platforms
- In-person meetings

Boards and Commissions

- Resource Management Commission
- Electric Utility Commission
- Mechanical & Plumbing Board
- Building and Fire Code Board of Appeals

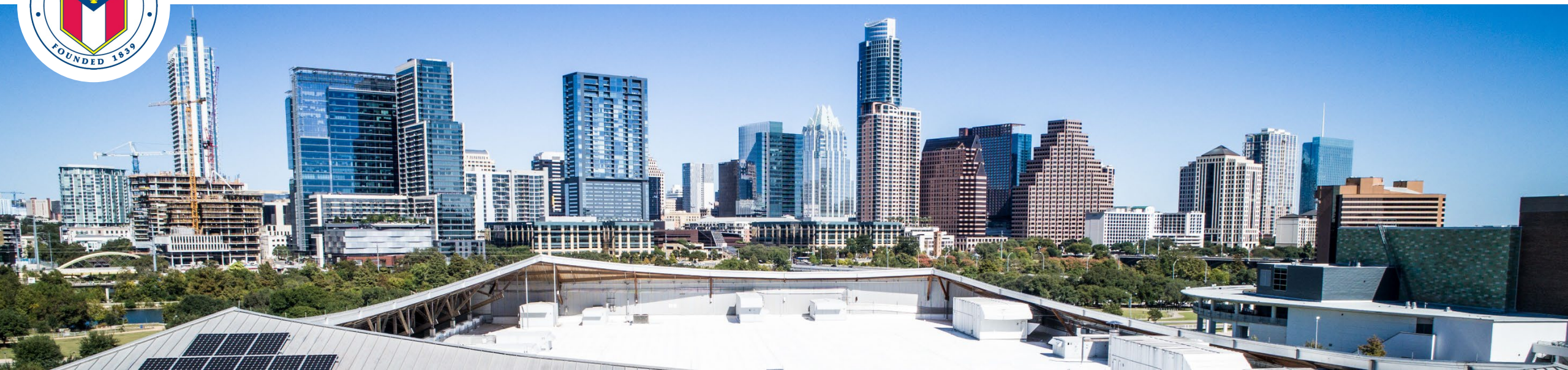
City Council approval

- Energy code is included for adoption with other building codes

Codes | Ordinances | Standards | Initiatives

City Initiatives, Climate Protection Plan and Austin Energy Goals

- Zoning Overlays
- PUD Agreements
- SMART Housing
- Imagine Austin
- Zero Waste Plan
- Watershed Protection
- Water Conservation
- Vision Zero
- 800 MW Conservation Goal with 100 MW of DR
- 950 MW Solar Goal with 110 MW of Local Solar
- 55% Renewables Goal
- 10 MW Storage Goal
- 20% Emissions Reduction



Guidebooks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SINGLE FAMILY RATING
2023 GUIDEBOOK


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MULTIFAMILY RATING
2023 GUIDEBOOK

How To Get Involved

- Be a voice for model code development - become a committee member or interested party
- Provide feedback during local code adoption
- Get ICC certified
- Be an energy mentor or ambassador

Thank You

Questions?

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