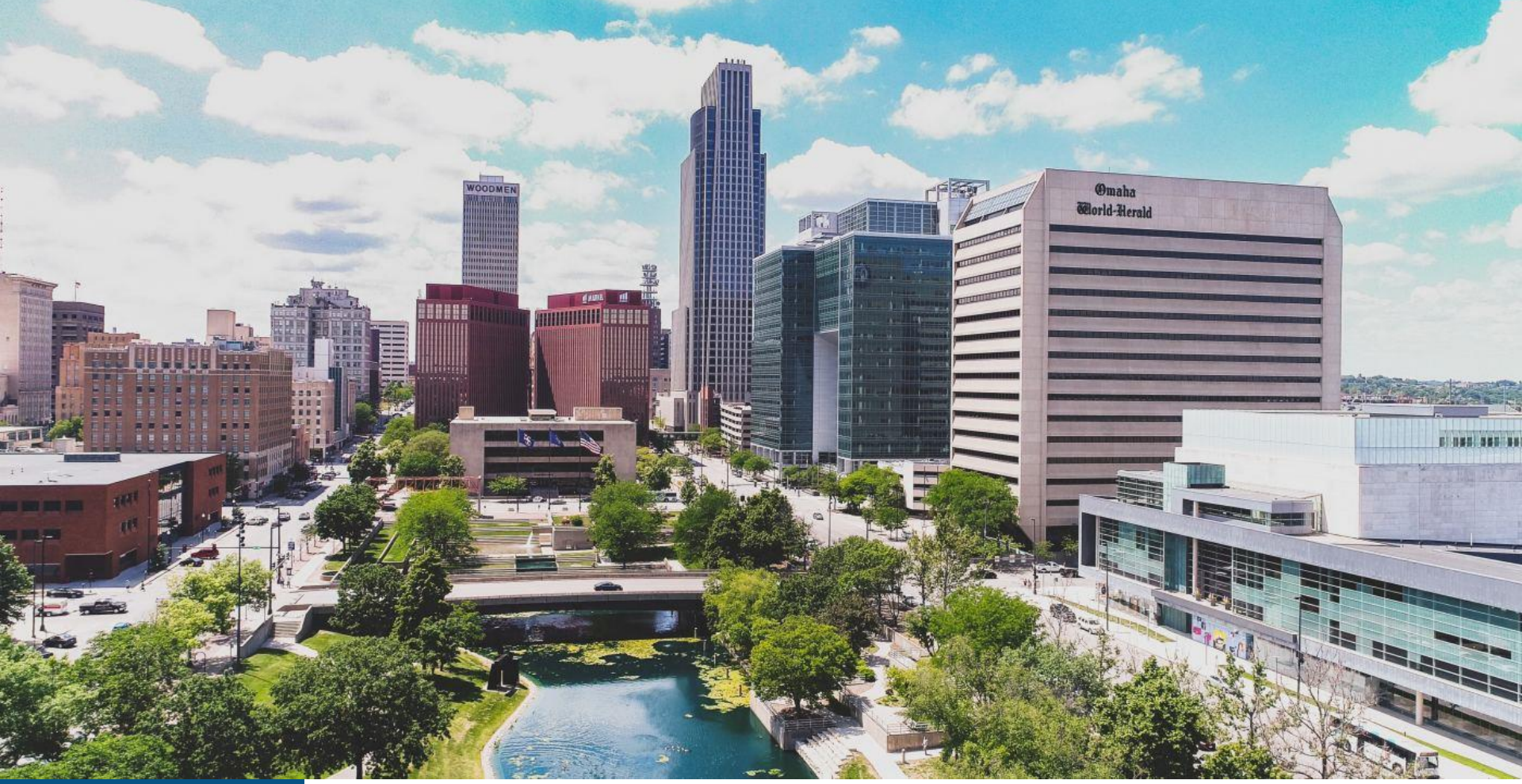

Stretch Codes in the United States

2019 MEEA Energy Codes Conference

November 13-14, 2019

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MIDWEST ENERGY EFFICIENCY ALLIANCE

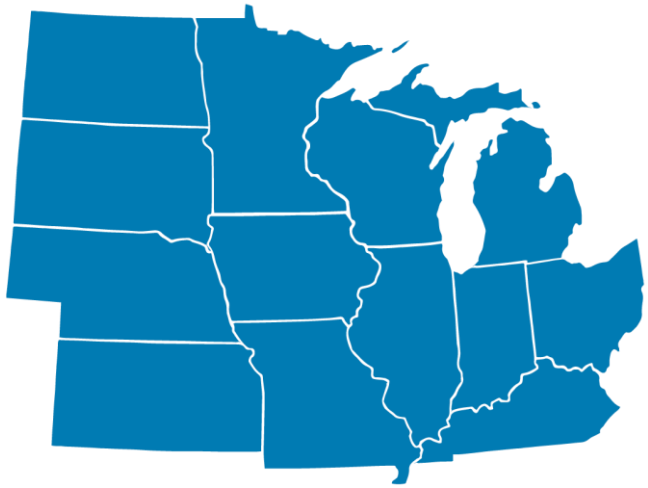
About MEEA

The Trusted Source on Energy Efficiency

We are a nonprofit membership organization with 160+ members, including:

- Utilities
- Research institutions
- State and local governments
- Energy efficiency-related businesses

As the key resource and champion for energy efficiency in the Midwest, MEEA helps a diverse range of stakeholders understand And implement cost-effective energy efficiency strategies that provide economic and environmental benefits.



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- What are Stretch Codes?
- Why Stretch Codes?
- Stretch Code Components
- Adoption Methods
- Types of Stretch Codes
- Achieving Compliance
- Summary

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What are Stretch Codes?

A stretch code, also known as a "reach code", is a locally mandated code or alternative compliance path that defines a higher level of energy efficiency or sustainability than the adopted base code. A good way to envision a stretch code is as the future base code.

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Why Stretch Codes?

- Gives municipalities who want the ability to take meaningful action on energy use and climate change an alternative mandatory compliance path that promotes energy efficiency beyond the available code options,
- Provides significant cost savings for residents and businesses,
- Implement cutting-edge technologies and processes, and
- Help gain market acceptance of the adoption of more energy efficient codes in the future.

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Stretch Code Components

- Simple improvement of prescriptive or mandatory requirements found in model energy codes.
- Simple improvement of code efficiency from a performance perspective.
- Improvement of the energy code through the use of energy use indices such as the Energy Use Index (EUI), Zero Energy Performance Index (zEPI) number, and Home Energy Rating System (HERS) Index.

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Stretch Code Components

- Improvement of the energy efficiency through adoption of codes or standards that are above the baseline code and might include non-energy-efficiency measures, like the International Green Construction Code (IgCC) or Leadership in Energy and Environmental Design (LEED).
- Conversion of language in design guides into code-enforceable language.

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Adoption

- Could be mandated legislatively or through normal adoption process
- Developed uniquely (typically for municipalities)
- Developed as part of the larger state energy code, could be added as part of an Informative Appendix.
- Developed in a stakeholder process

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Types of Stretch Code Policies

- Individual Cities/Counties with No Statewide Code
- Addition of a Stretch Code Component to the State Code
- Legislation that Allows the Adoption of a Local Stretch Code
- Voluntary Stretch Codes

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City of Boulder, CO

Individual Cities/Counties with No Statewide Code

The City of Boulder has set a goal of reaching net zero energy (NZE) construction through building and energy codes by 2031

- Baseline: IECC 2012/ASHRAE 90.1-2010
- Residential: sliding scale of ERI/HERS 60 or better
- Additional "green points" of EV-ready and PV-ready are now required by code for res & com.
- > 5,000 sq. ft. houses are required to be Net Zero Energy (NZE)

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Vermont

Addition of a Stretch Code Component to the State Code

- The Vermont Residential Stretch Code -December 1, 2015
- Prescriptive and performance compliance options slightly more stringent than baseline code
- EV-ready for multifamily over 10 units
- ERI: Maximum HERS 54
- Complies with Act 250

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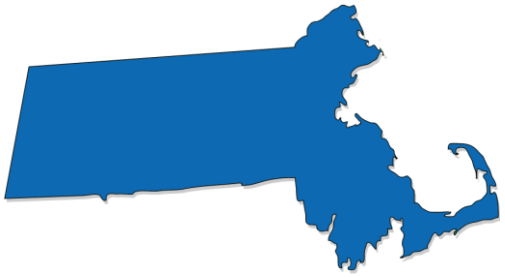
Massachusetts

Addition of a Stretch Code Component to the State Code



- 2009 - First state to adopt an above-code policy using an informative appendix to its state code
- New residential construction must achieve a HERS rating of 55
- The updated stretch code also applies to new commercial buildings over 100,000 square feet.
- As of Dec 2018, 250 jurisdictions have adopted the stretch code – more than half of the state by population.

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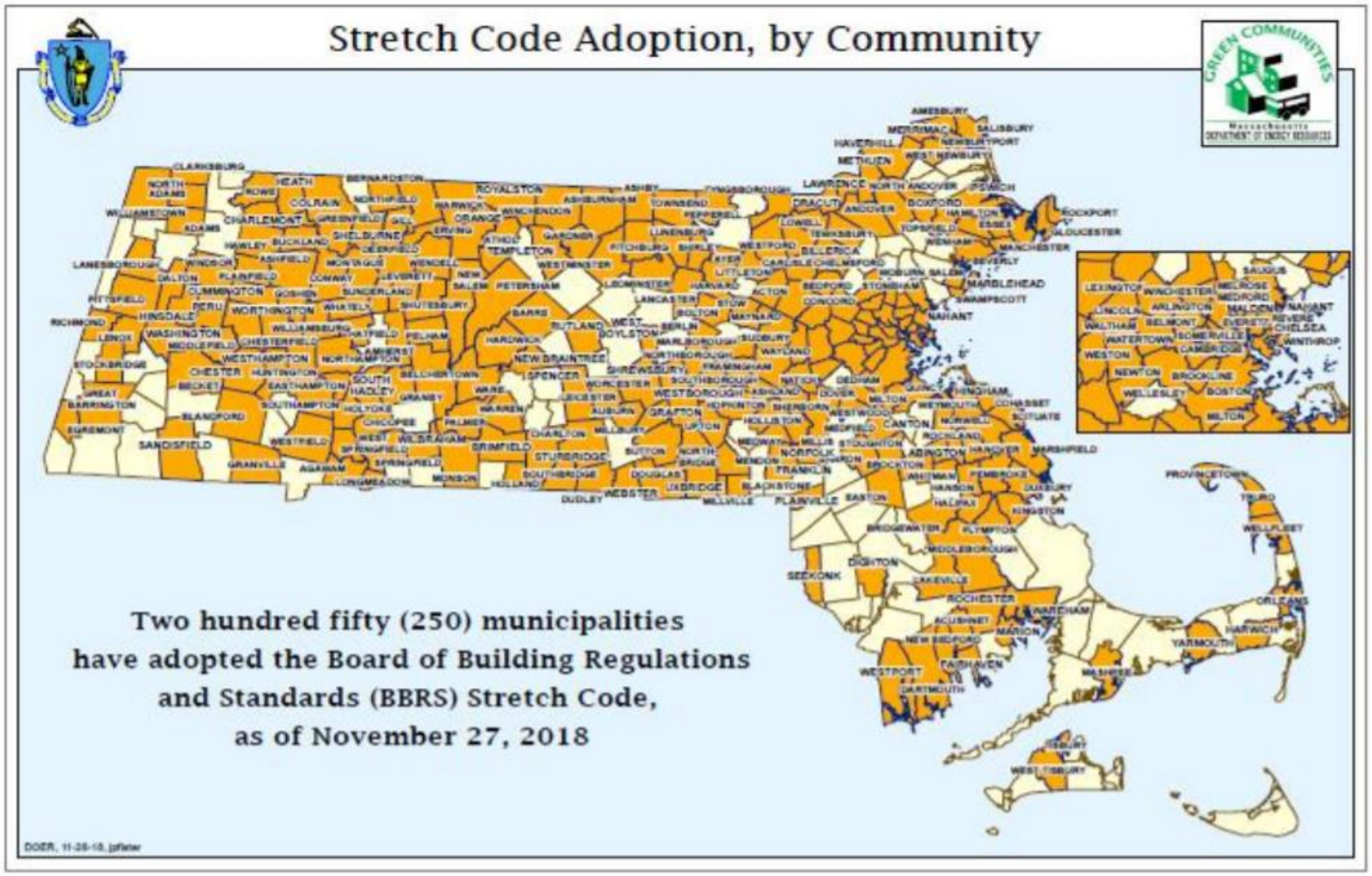
Massachusetts



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Mandatory vs. Voluntary?

Is it really a stretch code?

- Building codes are intended to set mandatory minimum requirements.
- Being mandatory makes them enforceable and thus leads to energy savings.
- Voluntary stretch codes, such as found in the state of Oregon, have been used sparingly and consequently, do not generate energy savings.
- Voluntary stretch codes can have success if paired with monetary incentives.

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Compliance

- Level of compliance directly correlates to:
  - local buy-in,
  - available enforcement
  - general understanding about the requirements and logistics of the stretch code
  - amount of available training and education
  - complexity of the stretch code
- Tools to increase compliance:
  - Partner with local utilities to provide incentives, education and training efforts for stretch codes.
  - Partner with a financial institution, such an affordable multifamily housing finance agency.

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Summary

- Stretch code adoption is gaining momentum
- Stretch codes allow jurisdictions the ability to chart a path of efficiency toward zero energy.
- Stretch codes can vary widely in scope and content, from a simple percentage of energy savings over the baseline code to adaptation of advanced design guides.
- Stretch codes are designed to be "above-code" and should not be diminished due to industry pressure.
- Complexity and ability for enforcement are important items to consider when determining stretch code components.

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Summary

- Stretch codes created and administered in conjunction with utility partners have seen the highest rates of success (California, Massachusetts).
- Voluntary stretch code programs that do not include financial incentives see very low levels of participation (Oregon).
- Schedule systematic updates that allow coordination with the model energy code update cycles and the baseline energy code adoption cycles of the state or local jurisdiction (Massachusetts).

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Questions?

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