MA Cities and Towns: Finalizing Your IECC Voter Roster

MAPC's Codes for Climate Webinar Series and Zero to 101 Initiative

August 20, 2019
101 municipalities
1,440 square miles
Nearly 3.2 million residents
1.8 million jobs (2010 Census)
1) Regional Energy Projects
- Green Municipal Aggregation
- Municipal and Community Solar
- LED Streetlight Retrofit Program
- Solar Hot Water
- Green Mobility Program
- ESCO Procurement
- Energy Resiliency

2) Climate and Energy Planning
- Community energy and climate data, baselining, planning, and strategizing
- Connecting municipalities with incentives + plug-and-play programs
- Net Zero planning, guidance & education

3) Energy Technical Assistance
- Peak Demand Management
- Green Communities
- Methane Leaks
- Data Analysis
- Solar Permitting and Zoning
- State and Local Policy
- Grant Writing
- Codes for Climate
Agenda

1. Local Codes Update
2. Registration Results and Next Steps
3. How To: Completing Voter Validation
4. Nationwide Efforts and Expected Code Proposals
5. Q & A
Net Zero as a Framework for Holistic Climate Planning

Multi-Benefit Outcomes

• Energy
• Economic
• Environmental
• Public Health
• Equity
• Livability

Bringing Net Zero to 101 Cities and Towns and Beyond
How the Energy Code Improves a Home

- **Thermal Barrier**: Installing adequate insulation on all sides of the home improves occupant comfort and reduces the heating and cooling load.
- **Air Barrier**: Sealing cracks and penetrations prevents unwanted air movement and improves indoor air quality by reducing contaminants in the living environment.
- ** Efficient Lighting**: Installing LED or CFLs dramatically lowers electricity usage and reduces unwanted heat in the home.
- ** Duct Sealing**: Sealing all components of the HVAC system, and testing to verify, improves indoor air quality, system efficiency, and increases occupant comfort by ensuring air is evenly distributed to all rooms in the home.
- ** HVAC System Sizing**: Properly sizing the HVAC system reduces capital costs, prolongs the life of the system, and improves system efficiency.
- ** Efficient Windows**: It is critical that windows be well insulated and well-sealed to prevent unwanted heat transfer and moisture infiltration.
- ** Mechanical Ventilation**: Installing a dedicated exhaust, supply or balanced ventilation system improves indoor air quality by guaranteeing source-controlled fresh air is being supplied to the home.
### Massachusetts GHG by Sector

- **Buildings**: 31%
- **Transportation**: 41%
- **Electricity**: 21%
- **Other**: 7%


### U.S. GHG by Sector

- **Commercial & Residential**: 11%
- **Industry**: 22%
- **Transportation**: 29%
- **Electricity**: 29%
- **Agriculture**: 9%

Efficiency Improvements of IECC

EnergyEfficientCodes.com
Local Codes Update
How Can We Improve Buildings?

There are four main ways that Massachusetts municipalities can impact building regulations:

**VOTE**
- International Energy Conservation Code (IECC)

**COMMENT**
- Base Code (MA Building Code CMR 780)
- Stretch Energy Code (780 CMR Ch. 15 AA)

**ADOPT**
- Zoning and other local ordinances
- Stretch Energy Code (780 CMR Ch. 15 AA)

**ENFORCE**
- Zoning and other local ordinances
- Base Code (MA Building Code CMR 780)
- Stretch Energy Code (780 CMR Ch. 15 AA)
Mass General Law (MGL), Chapter 143, Section 94

“To adopt and fully integrate the latest International Energy Conservation Code as part of the state building code, together with any more stringent energy-efficiency provisions that the board, in consultation with the Department of Energy Resources, concludes are warranted.”
Two hundred seventy-two (272) municipalities have adopted the Board of Building Regulations and Standards (BBRS) Stretch Code, as of July 18, 2019.
Efforts to Update the Stretch Code

AN ACT TO ESTABLISH A NET ZERO STRETCH ENERGY CODE

By Representative Gouveia of Acton and Senator Comerford, a joint petition (accompanied by bill, House No. 2865 of Tami L. Gouveia, Joanne M. Comerford and others) for legislation to establish a net zero stretch energy code. Telecommunications, Utilities and Energy.

Presenters:  Tami L. Gouveia  Joanne M. Comerford
Status:  Referred to Joint Committee on Telecommunications, Utilities and Energy

https://malegislature.gov/Bills/191/H2865

The Board of Building Regulations and Standards (BBRS) monitors Massachusetts building codes and construction supervisor licensing. The Board also licenses concrete testing labs and technicians, approves manufactured buildings and related inspection procedures, approves native lumber producers, and certifies municipal building inspectors.

Contact Us

Address
1000 Washington St, Suite 710, Boston, MA 02118
directions
Tewksbury Office, Tewksbury Hospital - Old Anne Sullivan Building
365 East Street , Tewksbury, MA 01876
directions
Springfield Office
One Armory Square , Building 15, 2nd Floor, Springfield,
<table>
<thead>
<tr>
<th>Event Type</th>
<th>Date</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Hearing</td>
<td>May 7, 2019</td>
<td>MAPC, Cambridge, Somerville, Boston, MCAN, and state representatives provided testimony to the Board on updating and accelerating the stretch code and integrating energy efficiency measures into the 2018 IECC update.</td>
</tr>
<tr>
<td>Monthly Board Meeting</td>
<td>June 11, 2019</td>
<td>Cambridge, Somerville, and Boston presented to the BBRS. The Board agreed to have their Energy Advisory Council review a Net Zero Stretch Code</td>
</tr>
</tbody>
</table>
Examples of Net Zero Codes

District of Columbia

- Clean Energy DC Omnibus Amendment Act
- Title III: Benchmarking and Building Energy Performance Standards for existing buildings based on Energy Star Ratings. 20% EUI reduction.
- 100% RPS by 2032

New York City

- Stretch-To-Zero optional stretch code pathway
- Part of 2020 stretch code update
- NYC Climate Mobilization Act: Sets emissions caps for buildings over 25,000 SQFT. Requires 40% reduction by 2030 and 80% by 2050.


https://www.nyserda.ny.gov/All-Programs/Programs/Energy-Code-Training/NYStretch-Energy-Code-2020
Examples of Net Zero Codes

- **Washington**
  - Roadmap to the 2031 Energy Code
  - Residential and Nonresidential new construction must achieve a 70% reduction in energy over 2006 code (RCW 19.27A.160)
  - Goal to construct increasingly efficient homes and buildings that help achieve the broader goal of building zero fossil-fuel greenhouse gas emission homes and buildings by the year 2031 (RCW 19.27A.020)

- **California**
  - Multi-Tier green building standards code
  - Optional tier for Net Zero buildings
  - Requires whole building HERS modeling
  - 2019 CA building code, all new buildings will use net-zero electricity
  - As of 2020, all new homes under 3 stories must install solar on their rooftops; storage, heat pumps, and thicker building envelopes encouraged

https://newbuildings.org/code_policy/washington-state-energy-code/

https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen
2021 IECC Code Proposal
New Buildings Institute (NBI)
• An optional appendix that would codify net zero pathway
• Based on the Energy Rating Index (ERI) compliance path [Section R406 of the 2018 IECC]
• Would require an initial ERI value based on highly efficient buildings before considering on-site generation
• Remaining annual energy use is satisfied with on-site generation
Registration Summary
2019 IECC Code Cycle

January 1st – March 29th
Registration of Governmental Members with ICC

March 29th – September 23rd
Voters for each Governmental Member ID’d by Primary Representative

November
Voting Guide in advance
2-Wk Online Voting Window
Tentative: Nov 13 - 27
Results of MAPC Registration Efforts

Target: 400 votes

420+ Potential Voters

82 Govt Members
Voter Validation
MCAN Voter Validation Tutorial Video

https://www.youtube.com/watch?v=Xa1jBRwO54U
Voter Validation

To start, go to: http://www.iccsafe.org/ and log in using the email and password you created. If you don’t have this, look for your membership confirmation email from the ICC.

1. Navigate to My ICC in the top right hand corner of the site.

2. Select Voter Validation within the My ICC portal (left hand column). Scroll down and click add representative.

3. Enter a voter’s contact information, and how they meet ICC eligibility (from dropdown menus), and click save. Do this for each voter, up to 4, 8, or 12. Don’t forget to include yourself if you plan to vote!
Welcome to the Code Council’s improved electronic voter validation system. Here you may designate your jurisdiction’s Governmental Member Voting Representatives.

All validated ICC Governmental Member Voting Representatives now remain active for the course of a three-year Code Development Cycle. Any credentials validated and approved on or after January 1, 2018 are active through December 31, 2020 as long as the Governmental Member account is kept fully paid and current*. The Primary Contact may edit the voting roster from time to time throughout the cycle, but if no changes occur to an approved voter’s status, the credentials need not be revalidated until the next code development cycle.

New or revised applications for voting representatives must be submitted 30 days prior to a voting event (committee action hearings, public comment hearings, or Annual Business Meeting) in order to be eligible to vote at that event.

*Consider purchasing a three-year Governmental Membership. Contact Member Services at 888-422-7233 x33804 to extend your current Membership account.

Governmental Member:
Boston City Council
Maximum Voting Representatives: 12

Previously Validated Voting Representatives:

[+] Add Representative
The ICC Bylaws require that all voters “shall be employees or officials of the Governmental Member or departments of the Governmental Member, provided that each of the designated voting representatives shall be an employee or a public official actively engages either full or part time, in the administration, formulation, implementation or enforcement of laws, ordinances, rules, or regulations relating to the public health, safety and welfare.” Please choose the description that best describes the voter’s duties.

Please Select
- Administers the laws, ordinances, rules or regulations of this Governmental Member.
- Formulates the laws, ordinances, rules or regulations of this Governmental Member.
- Implements the laws, ordinances, rules or regulations of this Governmental Member.
- Enforces the laws, ordinances, rules or regulations of this Governmental Member.
Question 2: This voter is a(n):

Please Select
- Paid Employee of this Governmental Member.
- Third-Party Contractor of this Governmental Member.
- Elected official of this Governmental Member.
- Other – (Please specify)

I hereby affirm that the information I have provided is true and accurate in all respects. I understand that ICC membership and voting status is subject at any time to review by ICC. I also understand that choosing the “Save” button is equivalent to my signature and confers on me the responsibility as to the accuracy of all statements herein.
<table>
<thead>
<tr>
<th>Population</th>
<th>Less than 50,000</th>
<th>50,000 - 150,000</th>
<th>More than 150,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voters per</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Governmental Member</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
“Voting Representatives must be employees or officials of that Governmental Member and are actively engaged full or part-time in the administration, formulation or enforcement of laws, regulations or ordinances relating to public health, safety and welfare.”
Nationwide Efforts and Expected Code Proposals
PUTTING THE 2021 IECC ON A GLIDE PATH TO NET ZERO BUILDINGS IN AMERICA

August 19, 2019
2021 IECC DEVELOPMENT PROCESS
A STRONG START EXCEEDS EXPECTATIONS

• Strong Slate of Proposals Submitted in January
  • EECC Proposals Alone Would Save 35 MMT Carbon/Year by 2030; Nearly 50 MMT with EECC Supporter Proposals
  • Package Proposals get 5%, with a 5% booster for Flex Points – Scalable, proven
  • Net Zero Appendix for Residential is Strong; Commercial Appendix has Potential

• Multiple Governmental Memberships Expand Inter-Jurisdiction Collaboration; Elevate IECC Importance

• Outstanding Code Development Committees
  • Commercial Energy Committee Recommendations Achieve 10% Boost
  • Residential Energy Committee Recommendations Mean Fewer 2/3 Majority Votes; Lots of 5-2, 4-3 Votes
WHEREAS, the International Code Council will complete its year-long development of the 2021 IECC this November with online final action voting by its Governmental Members, who are primarily local officials, and

WHEREAS, since 2008, mayors have endorsed the goals, principles, and efficiency recommendations of the broad-based Energy Efficient Codes Coalition (EECC), whose supporters include government; low-income housing; national efficiency NGOs; regional efficiency organizations; business and labor; consumer and environmental groups; architects; manufacturers; and all forms of utilities, and

WHEREAS, following USCM’s presentation to the ICC Board of Directors in support for future IECCs that help mayors achieve their energy and climate goals, EECC supporters submitted proposals that would: 1) achieve a minimum 10% boost in the residential and commercial building efficiency of the 2021 IECC using flexible options, and 2) incorporate flexible and “scalable” approaches, as well as net-zero appendices, that will allow jurisdictions wishing to exceed 10% efficiency gains to do so.

NOW, THEREFORE, BE IT RESOLVED that The U.S. Conference of Mayors realizes the urgency of meeting Paris Accord and energy policy targets by improving the energy efficiency of America’s existing and newly constructed residential, multi-family, commercial, and governmental buildings.

BE IT FURTHER RESOLVED, The U.S. Conference of Mayors recognizes the unique opportunity for cities and the critical role mayors can play by working with NGOs and broad-based building efficiency organizations in the development of America’s Model Building Energy Code, the IECC.

BE IT FURTHER RESOLVED, that The U.S. Conference of Mayors encourages municipal governments to maximize their jurisdictions’ online voting with the International Code Council to improve the 2021 IECC by at least 10% this November and to put future IECC updates on an efficiency glide path of steady progress to net zero building construction by 2050.
EECC’S VOTING GUIDE

• Our Simple Yardstick to Evaluate IECC Update Proposals:
  • Does the proposal boost efficiency using readily available technologies? If so, vote for the best proposal available.
  • If the proposal rolls back or trades away efficiency, oppose it.

• Based on EECC Guiding Principles:
  • Support a glide path of steady improvements; no pride of authorship
  • Simplicity, ease of enforcement, cost-effectiveness, longevity, comfort & energy/environmental benefits are paramount considerations
  • No backsliding or rollbacks; Trade ups, not trade offs of efficiency; No loopholes
  • No product specific proposals
  • Reasonable # of compliance paths, but each as efficient as prescriptive path
EECC’S VOTING GUIDE CATEGORIES

• The Biggest Energy Savers (all need 2/3 majorities):
  • Efficiency Package Options +5
  • Flex Points +5 and +10%; Scalable
  • Stronger ERI Scores

• Individual Improvements (most residential need 2/3, most commercial only need simple majority)

• Hard to Quantify Improvements
  • Testing requirements; EV Ready; Zero Energy Appendices

• Rollback and Trade-Off – nearly all need simple majority to beat, 2/3 to pass.
**A Simple, USCM Endorsed Yardstick for EECC Voting Recommendations**

**SUPPORT** Proposals that Boost Efficiency Using Readily Available Technology.

**OPPOSE** Proposals that Roll Back or Trade Off Efficiency Gains.

### Energy Efficient Codes Coalition – Public Comment Hearing RE Recommendations

<table>
<thead>
<tr>
<th>Prop. #</th>
<th>Standing Motion</th>
<th>EECC Recommended Action</th>
<th>Original Proposal Summary</th>
<th>EECC Evaluation &amp; Summary of Public Comments with Modifications</th>
<th>EECC Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>R8</td>
<td>D</td>
<td>Oppose D</td>
<td>Replaces specific interior design temperatures with a reference to ACCA manual J, allowing additional flexibility in design.</td>
<td>PC – Removes requirement to have solar ready zone and to reserve space in electrical service panel, but maintains requirements to document solar-ready portions of the roof, keep these zones free of obstructions, and document conduit pathways and roof loads.</td>
<td>Agree</td>
</tr>
<tr>
<td>R9</td>
<td>D</td>
<td>Oppose D</td>
<td>Requires all new 1- and 2-family and multifamily dwellings with roofs oriented between 30°-270° to have solar ready zone of ≥300 sq ft or ≥150 sq ft for homes under 2000 square feet. Exceptions for buildings with onsite renewables or roof areas shaded &gt;70% of the time. Construction documents must indicate the zone and pathways for conduit, pre-wiring, or plumbing chase and the electrical service panel must reserve space for a breaker. Exceptions for buildings with on-site renewables or roof areas shaded &gt;70% of the time.</td>
<td>PC1 – Moves solar ready provisions into a new appendix; adds an exception for buildings with &gt;600 sq ft of solar ready zone that is unshaded for more than 70% of daylight hours. PC2 – Move solar ready provisions into a new appendix; adds a scoping exception for buildings with &lt;600 sq ft of solar ready zone.</td>
<td>Agree, NR</td>
</tr>
</tbody>
</table>
2021 IECC DEVELOPMENT PROCESS
WHAT’S AHEAD

- **GMVR Roster Validation Deadline**
  - September 23

- **Public Comment Hearings – Las Vegas**
  - October 23-30

- **Tentative ICC Online Voting Window**
  - November 13-27

- **Maximize Governmental Member Voting Clout**

- **Pro-Efficiency Witnesses Set Online Ballot**

- **GOTV Drive – Pro-Efficiency EECC Voting Guide**
Visit EECC Online at energyefficientcodes.org for Everything You Need to Know...

✓ Codes-Carbon Calculator – Energy/Carbon Savings from Top 2021 IECC Efficiency Proposals
✓ News and blog posts from EECC, NBI, and other energy efficiency allies
✓ IECC development process fact sheets
✓ Newsletters and sign-up form
✓ Deadlines and registration links
✓ Official EECC voting guide

William Fay
bfay@ase.org
Questions?
Building Codes for Climate

Take Action Today to Help Set Higher Efficiency Minimums!

BACKGROUND

Massachusetts municipalities can help support their residents' health and safety through the adoption and enforcement of state building codes. These codes also set forth essential energy policies, setting minimum efficiency requirements for a variety of building practices and technologies used in our cities and towns. With the Green Communities act of 2008, Massachusetts created the option for municipalities to adopt a stretch energy code.

QUESTIONS? NEED HELP?

For more information or for help walking through the process, contact Nicole Sanches at nsanches@mapc.org or 617-933-0760.
Nicole Sanches
Clean Energy Coordinator
nsanches@mapc.org
(617) 933-0761

Cammy Peterson
Director of Clean Energy
cpeterson@mapc.org
(617) 933-0791