
Metropolitan Area Planning Council (MAPC)

January 24, 2019
Poll:
What is your comfort level with the International Energy Conservation Code?
101 municipalities

1,440 square miles

Nearly 3.2 million residents

1.8 million jobs

(2010 Census)
### CLEAN ENERGY EXPERTISE

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
Net Zero as a Framework for Holistic Climate Planning

Multi-Benefit Outcomes
• Energy
• Economic
• Environmental
• Public Health
• Equity
• Livability

`ZERO to 101`

Bringing Net Zero to 101 Cities and Towns and Beyond
Codes for Climate

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%


IECC Partners

MCAN
Mass Climate Action Network

Energy Efficient Codes Coalition

MAPC
Metropolitan Area Planning Council

SIERRA CLUB

NEEP
Agenda

1. Building Code Basics
2. The Big Picture: The IECC as Changemaker
3. Getting Involved: The IECC and You
4. Next Steps
5. Q & A
Building Code Basics
Q: What is code?

A: “Building codes are sets of regulations that address structural integrity, fire resistance, safe exits, lighting, ventilation, and construction materials. They specify the minimum requirements to safeguard the health, safety, and general welfare of building occupant.”

– FEMA

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 fifty (250) municipalities have adopted the Board of Building Regulations and Standards (BBRS) Stretch Code, as of November 27, 2018.
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)
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 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.
- **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 Lighting**: Installing LEDs or CFLs dramatically lowers electricity usage and reduces unwanted heat in the home.
Big Picture:
The IECC as Changemaker
Putting America’s Model Energy Code on a Glide Path to Net Zero Buildings

NATIONAL Building Energy Policy is Determined by LOCAL Government
<table>
<thead>
<tr>
<th><strong>Energy Efficient Codes Coalition</strong></th>
</tr>
</thead>
</table>

### Government
- National Association of State Energy Officials
- ICLEI

### Energy Efficiency Groups
- The Alliance to Save Energy
- American Council for an Energy Efficient Economy (ACEEE)
- United Nations Foundation

### Affordable Housing Advocates
- Enterprise Community Partners
- Global Green USA
- LISC – Local Initiatives Support Corp.
- National Housing Institute
- National Low Income Housing Coalition

### Environmental Groups
- Natural Resources Defense Council (NRDC)
- Center for Environment, Commerce & Energy
- Climate Crisis Coalition
- Environment America
- National Wildlife Federation
- Sierra Club
- 2020 Vision

### Labor
- Blue Green Alliance

### Energy Consumers
- Public Citizen
- Consumers Federation of America

### Academia/Think Tanks
- American College and University Presidents
- Climate Commitment
- Institute for Market Transformation
- New Buildings Institute

### Regional Energy Alliances
- Midwest Energy Efficiency Alliance (MEEA)
- Northeast Energy Efficiency Partnerships (NEEP)
- Northwest Energy Codes Group
- NW Energy Coalition
- Southwest Energy Efficiency Project (SWEEP)
- Southeast Energy Efficiency Alliance (SEEA)
- South-central Partnership for Energy Efficiency as a Resource

### Business/Insurance
- Structural Insulated Panel Association (SIPA)
- Polyisocyanurate Insulation Manufacturers Assn (PIMA)
- North American Insulation Manufacturers Assn (NAIMA)
- Northwest Environmental Business Council
- American Chemistry Council
- Business Council for Sustainable Energy
- Current Energy
- Extruded Polystyrene Foam Association (XPSA)
- Fireman’s Fund
- Green Chamber of Commerce
- Vinyl Siding Institute (VSI)
- Bayer

### Utilities
- American Public Power Association
- Edison Electric Institute
- National Rural Electric Cooperative Association
Efficiency Improvements of IECC: Historic and Projected

- EECC Formed
- 2006 IECC
- 2009 IECC
- 2012 IECC
- 2015 IECC
- 2018 IECC
- 2021 IECC?

- 15% savings
- 18%
- <1%
- <1%

- Glide path to Net Zero
- Carbon Savings Potential

Business as usual
Mayors Support Glide Path to Zero Energy Buildings

Unanimously Adopt Resolutions in 2008, 2010, 2013, 2016 and 2018 that:

- Encourage Municipal Support for All Eligible Code Officials to Vote Online
- Endorse Endorsed EECC Voting Guide
- Oppose Rollbacks and Trade-Offs that Weaken the Stringency of Gains
522 additional pro-efficiency votes would have passed all 10 proposals.
Glide Path Could Produce More Carbon Reductions from Codes in 2040 than IECC B-A-U

Year

2014 2016 2018 2020 2022 2024 2026 2028 2030 2032 2034 2036 2038 2040

Business-as-Usual: 1% EE Gains/Cycle
Glide Path: 5% EE Gains/Cycle
Work Plan Status Update
15 Priority Venues
With Massachusetts Help, We Can Put the 2021 IECC on a Glide Path to Net Zero

BILL FAY
bfay@ase.org
(202) 744-4572 (mobile)
Getting Involved: The IECC and You
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 Released
Two Week Voting Window
Tentative: Nov 13 - 27
<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 Member</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 50,000</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50,000 - 150,000</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 150,000</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Multiple Governmental Members Per Municipality

- Planning Department
- Sustainability Department
- Inspectional Services
Primary Voters

• Must register by March 29, 2019
• Determine the eligibility of the other voters in the Governmental Member (municipal department)
• Sign up the other voters within the Governmental Member over the summer (by September 23, 2019)
“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.”
### Membership Fees

<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>Fee per Governmental Member (department)</td>
<td>$135</td>
<td>$240</td>
<td>$370</td>
</tr>
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How to Register

To register for the first time, go to [http://www.iccsafe.org/membership/join-icc](http://www.iccsafe.org/membership/join-icc) and select the municipal option to apply. Choose your community's population and the code cycle, add the membership to the shopping cart, and check out.

To reinstate your ICC membership, go to [www.iccsafe.org/membership/membership-renewal](http://www.iccsafe.org/membership/membership-renewal).

To confirm your registration, go to: [www.iccsafe.org/membership/membership-directory](http://www.iccsafe.org/membership/membership-directory).
<table>
<thead>
<tr>
<th>Quantity</th>
<th>Format</th>
<th>Price</th>
<th>Member Price</th>
<th>Member Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Governmental Member (population &lt;50,000)</td>
<td>$--.--</td>
<td>$--.--</td>
<td>$--.--</td>
</tr>
<tr>
<td>0</td>
<td>Governmental Member (population 50,001-150,000)</td>
<td>$240.00</td>
<td>$240.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>0</td>
<td>Governmental Member (population &gt;150,000)</td>
<td>$--.--</td>
<td>$--.--</td>
<td>$--.--</td>
</tr>
</tbody>
</table>

**Shopping Cart**

1 product(s) have been added to shopping cart: Governmental Member (population 50,001-150,000).

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Unit Price</th>
<th>Qty</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governmental Member (population 50,001-150,000)</td>
<td>$240.00</td>
<td>1</td>
<td>$240.00</td>
</tr>
</tbody>
</table>

**Complimentary Book (please select one)**

Choose a selection...

**DISCOUNT CODES**

Enter your discount code(s)

**Apply Coupon**

**TAX EXEMPTION FORM**

**Continue Shopping**

**Update Shopping Cart**

**SUBTOTAL** $240.00

**GRAND TOTAL** $240.00

**Procede to Checkout**

**Checkout with Multiple Addresses**
Renew/Reinstate Membership

Renew Your Membership

Members whose memberships are current can renew their ICC Membership online.

Reinstate Your Membership

Members whose memberships have been canceled can reinstate their memberships. Please download the application for your specific category. Mail or fax your application as stated on the application.

Questions? Call toll free 888-ICC-SAFE (888-422-7233), ext. 33804

If you have had an active membership within 5 years, you may purchase a new membership online, but you will not be eligible for a complimentary code book, even if one is chosen.
<table>
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<tr>
<th>Date</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 1st</td>
<td><strong>Identify a community champion</strong> (maybe you!) to coordinate this effort. Ask around in your municipality to see who is registered with the ICC and who may have registered/voted last time in 2016</td>
</tr>
<tr>
<td>February 15th</td>
<td><strong>Identify which departments</strong> or other “governmental members” might be eligible and interested in advancing energy efficiency</td>
</tr>
<tr>
<td>March 1st</td>
<td><strong>Identify the funds</strong> for each department to register and determine the point person** who will register as the “primary representative” for each department</td>
</tr>
<tr>
<td>March 15th</td>
<td><strong>Register each identified department and “primary representative”</strong>. You have until March 29th, but aim for the 15th so that if you run into any challenges, we can help you figure it out!</td>
</tr>
</tbody>
</table>
Next Steps:

Visit our website to stay up to date on our IECC code efforts

https://www.mapc.org/resource-library/building-codes-climate

Schedule a ½ hour check in with us on the IECC

If you would like to get involved, but not sure where to start, we are providing free technical assistance to municipalities to help determine eligibility and to register for the IECC.

Nicole Sanches
Clean Energy Coordinator
nsanches@mapc.org
(617) 933-0761
Questions?
Contact

Nicole Sanches  
Clean Energy Coordinator  
nsanches@mapc.org  
(617) 933-0761

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

• Voter Validation Process FAQ’s: https://www.iccsafe.org/voter-validation-process-faqs/


Governmental Memberships

Submit ICC Governmental Member Voter Designation

Deadline to join as a new Governmental Member or to reinstate an expired Governmental Member to be eligible to participate in this year’s code development cycle and Annual Business meeting is March 16, 2018.

Governmental ICC Members have the ability to designate 4 to 12 voting representatives (total is based on jurisdiction population). These 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.

Governmental Members have voting rights. Read the ICC By-Laws, Articles II and III to learn more.

Be sure you know the upcoming Governmental Member voting deadlines.

Learn More