



CHARLES D. BAKER
GOVERNOR

KARYN E. POLITO
LIEUTENANT GOVERNOR

JAY ASH
SECRETARY OF HOUSING AND
ECONOMIC DEVELOPMENT

Commonwealth of Massachusetts
Division of Professional Licensure
Office of Public Safety and Inspections
1000 Washington Street • Boston • Massachusetts • 02118

JOHN C. CHAPMAN
UNDERSECRETARY OF
CONSUMER AFFAIRS AND
BUSINESS REGULATION

CHARLES BORSTEL
COMMISSIONER, DIVISION OF
PROFESSIONAL LICENSURE

Energy Advisory Committee (EAC) of the Board of Building Regulations and Standards

MEETING NOTES

Wednesday, January 16th 2019, beginning @ 2:00 p.m. and ending @ approximately 4:30 p.m.

National Grid Offices
40 Sylvan Road, Waltham MA

Roll Call

Members

1. Ian Finlayson, Chair	present	absent	remote
2. Michael Andelman, Vice-chair	present	absent	remote
3. Robert Anderson or designee (Adelle Reynolds)	present	absent	remote
4. Fran Boucher	present	absent	remote
5. Michael Browne	present	absent	remote
6. Alan Glynn	present	absent	remote
7. Mark Halverson	present	absent	remote
8. Isabel Kaubisch	present	absent	remote
9. Peter Ostroskey or designee (Jennifer Hoyt)	present	absent	remote
10. Don Vigneau	present	absent	remote
11. David Weitz	present	absent	remote

Quorum:

Guests

Name	Affiliation	email	Phone

BBRS EAC Jan 16, 2019 - Expanded Agenda:

I. Continued review building energy code proposals presented to the BBRS at the November 13th and December 11th, 2018 meetings

Code change proposals available online here: <https://www.mass.gov/service-details/board-of-building-regulation-and-standards-and-building-code-appeals-2018-meetings>

I.I Summary of changes recommended by the EAC to date:

Recap of Sept 4 – EAC endorsed amendments (DOER August proposal):

- a) Electric Vehicle Charging (EV) Ready language for residential buildings, and some commercial new buildings – amended by EAC
- b) Additional options for commercial buildings (C406) to encourage use of heat pumps and tall timber construction
- c) Requirements for commercial building envelopes to be no worse than the IECC2018 backstop level (C402.1.5)
- d) Updates to residential HERS rating path to encourage heat pumps and clarify documentation,
- e) Updates to the optional Passive-house pathway to reflect new PHIUS 2018 standard
- f) No significant changes (other than those above) to the stretch energy code (Appendix AA) staying at HERS 55 for residential, and 10% better than ASHRAE 90.1-2013 for commercial

Recap of Jan 3- EAC endorsed amendments (Mass Save and IALD):

- g) 11-1-2018 –Adds new section R407 to prescriptive residential code path
- h) 11-2-2018 – Amends R402.2 – Insulation requirements to require Grade 1 level
- i) 11-8-2018 – Revises Interior Lighting Power allowance table C405.3.2(1) and C405.3.2(2)
- j) 11-9-2018 – Amends Time-switch controls (C405.2.2.1)
- k) 11-10-2018 - Amends C406.4 Enhanced digital lighting controls.
- l) 11-11-2018 - Amends C503.1 Building Alterations to exclude application of C406

I.II Remaining code change proposals for discussion:

1. 12-4-2018 – Ian Finlayson – Department of Energy Resources (DOER) – Adoption of 2018 IECC with MA amendments proposed by DOER

- Significant change since August version is the proposed removal of the IECC section C407 performance path.

Reasoning: IECC C407 Performance path is not widely used given the ASHRAE 90.1 performance path and additional MA performance path options (Passivehouse, HERS and Energy Star). Updating the C407 performance path would require significant updates to tables, or otherwise provide a loophole for developers. Removing it reduces code official confusion and significantly reduces the size of the commercial energy code. This change would also allow for streamlined numbering of HERS, Energy Star Homes and Passive-house options.

2. 11-5-2018 – Kevin Rose – Mass Save – Amend Daylight responsive lighting controls (C405.2.3)

Changes trigger for daylight responsive controls in new commercial lighting from spaces with 150 watts of general lighting to spaces with 100 watts.

Reasoning: Mass Save analysis done by Andelman and Lelek (represented on the EAC) suggested this as a practical improvement to the MA code.

3. 11-6-2018 – Brendan Giza Sisson – Mass Save – Changes to Exterior Lighting power requirements (C405.4)

Reduces allowable exterior lighting from 100% of calculation in C405.4.2 to 90% or less.

Adds reduction of allowable exterior lighting power in optional section C406.3 to 80%.

Reasoning: Market adoption of LED exterior lighting allows for a reduction in exterior lighting power in a highly cost-effective way – may reduce cost of construction rather than increase it based on CA analysis.

4. 11-7-2018 – Kevin Rose – Mass Save – Adds new section: C405.10 Automatic receptacle control

Requires offices, classrooms, conference rooms, and individual workstations to have occupancy or time-switch controls on at least 50% of 15 and 20amp outlets.

Reasoning: IECC2018 doesn't address plug loads, and ASHRAE 90.1 offers only a few requirements. This change would improve alignment between IECC and ASHRAE 90.1, and reduce electric loads.

I.III Other Proposed code changes in written comments. available online in BBRS January Meeting Agenda:<https://www.mass.gov/files/documents/2019/01/03/BBRS%20January%208%202019%20Meeting%20Agenda%20.pdf>

1. **NECEC, Greenlots, TechNet – EV ready language revisions:** (Pages 10-11 of public comment in BBRS Jan 8 Meeting agenda)
 - a. Increase circuit requirements from 50amps to 60amps
 - b. Remove language specifying NEMA receptacles (aligns with EAC Sept 4 revisions)
 - c. Remove exceptions for 130ft, crossing a public right of way, and short term (less than 1 hour) parking (EAC on Sept 4 removed 130ft)
2. **Conservation Law Foundation – EV ready language revisions:** (Pages 78-81)
 - a. Remove exceptions for 130ft, crossing a public right of way, and short term (less than 1 hour) parking (EAC on Sept 4 removed 130ft)
 - b. Clarify EV ready spaces for residential use buildings
 - c. Remove limit to parking based on municipal ordinance minimum
3. **Scott Ananian – Town of Brookline – EV ready language revisions:** (Pages 4-5)
 - a. Keep circuit requirements at 50amps
 - b. Clarify Residential R-2, R-3 space requirements
4. **Edison Electric Institute – Revise Source Energy conversion factors (C401.2.3)** (Pages 51-62)

Source energy factors are out of date given changes in Electric Grid fuel mix.
5. **Ingersoll Rand, Jacob Knowles – Energy storage in Stretch code** (Pages 37-41, and 64-65)

Proposal: Consider revisions to the Stretch code language for large commercial buildings (ASHRAE 90.1 Appendix G) to prevent any unintended disincentive for energy storage systems.

Add the following language to Chapter 13, Table G3.1 Section 10:

If the proposed design includes a thermal energy storage system then the baseline design shall use the same equipment, schedules, and setpoints, including required equipment performance corrections, as necessary to operate the thermal energy storage system.

OR

(2) Add a new footnote following Chapter 115 Appendix AA103.2:

If the building includes a thermal energy storage system, then the baseline design in ANSI/ASHRAE/IESNA 90.1-2013 APPENDIX G shall be permitted to use the same equipment, schedules, and setpoints, including required equipment performance corrections, as necessary to operate the thermal energy storage system.

OR

Change Stretch code assessment of 90.1 Appendix G 10% savings over baseline from site or source energy to Greenhouse gas reduction over baseline.

Reasoning: Stretch code intent is to reduce GHG emissions by reducing overall energy consumption, however, this indirectly discourages use of energy storage which has peak energy benefits.

6. Ingersol Rand – Dual fuel rooftop units in C406 options (Pages 44-46)

Proposal: Consider revisions to section C406.2 option for High Efficiency HVAC equipment to allow for dual fuel rooftop units.

Other BBRs December Meeting Code change proposals:

These code change proposals have already been reviewed and voted on by the EAC.

1. 12-1-2018 – Catherine Flaherty – Air Conditioning Association of New England (ACCA), Inc. – Consider revising Section R403.3.3

- The EAC previously discussed this code change proposal and did not vote on it. DOER recommends that the Sheet Metal Board consider developing a certification program or other means of demonstrating training and competence in duct testing for its members.

2. 12-2-2018 – Catherine Flaherty – Air Conditioning Association of New England (ACCA), Inc. – Consider revising Section R403.3.3

- The EAC previously discussed this code change proposal and did not vote on it. DOER recommends that the Sheet Metal Board consider developing a certification program or other means of demonstrating training and competence in duct testing for its members.

3. 12-3-2018 – David Weitz – CLEAResult for Mass Save – Consider revising Section R806.5 Unvented Roof Assemblies.

- **Note:** This is an energy related code change proposal, but it amends the IRC2015 or 2018 rather than the IECC2018
- The EAC previously reviewed and voted to support this code change proposal, but it is likely tabled until the 10th edition updates to the IRC.

II. Other business not reasonably anticipated within 2 business days of the meeting.

EAC composition – Updates to EAC membership

- Fran Boucher – resigning from EAC – proposing Kevin Rose as a replacement utility expert.