Michigan Energy Code Compliance Collaborative – Residential Subcommittee

***** MINUTES *****

Location: 525 W Allegan Street, Lansing, MI 48933 – John McCauley Room

Date: March 5, 2020

Time: 10:00am – 12:00pm EST

Call-In #: 1 (877) 336-1829 **Access Code:** 2022874#

Facilitator for Meeting: Jake Wilkinson, Michigan Department of Environment, Great Lakes, and Energy (EGLE)

Attendees In Person

Nicole Westfall, Midwest Energy Efficiency Alliance
Jake Wilkinson, EGLE

Attendees On The Phone

Eric Doyle, Catalyst Partners
David Gard, Michigan Energy Efficiency Contractors Association
Jamison Lenz, Catalyst Partners
Jose Goncalves, DTE Energy
Chris McTaggart, Building Efficiency Resources
Tim Mrozowski, Michigan State University
Jeff Zielke, City of Birmingham

Agenda Details

Welcome and Introductions

Summary of Last Meeting and Updates Since Last Meeting

In the last meeting we were presented updates from the two grants that were completed during the last fiscal year. Energy Sciences presented about the 6 trainings that they held at locations geographically distributed across the state (Sterling Heights, Baraga, Alpena, Bay City, Muskegon, and St. Joseph). Better planning and marketing (longer timelines) would have helped get more attendees but overall trainings were successful. Midwest Energy Efficiency Alliance presented about the project work that they completed. Findings included that municipal leadership is generally supportive of energy codes but there is still pushback from outside groups; there is also some misunderstanding about when the energy code applies to existing buildings retrofits, primarily residential sector. The final versions of the factsheets and checklists have been presented and sent to the group for comments. These will be posted to the web soon – Department web updates are delaying the update of the collaborative website.

Discussion and Prioritization of Proposed Topics for the Group

In previous meetings we had discussed doing fact sheets for lighting and when the energy code applies to retrofits.

Other ideas that should be considered include development of fact sheets and/or guidance documents for the systems below.

- Home ventilation
    - Code requires whole house ventilation for homes below 5ACH (which would be all new homes by code).
        - This is often done through bathroom fans or furnace fans,
        - Should promote the use of HRV or ERV,

        - Range hoods over 400 cfm also require makeup air,
    - This proposed document would provide clarity on whole house ventilation.
        - What meets the code and what doesn't,
        - Pro's and cons of different types of systems,
- Explanation of blower door testing requirements combined with duct leakage testing.
    - What is required and how to find qualified testers for these systems,
- Descriptions of approved compliance paths.
    - Prescriptive vs. performance (trade-off) vs. ERI method,
    - And acceptable software for each type of compliance system,
    - MEEA worksheets from past project does briefly describe compliance path options but more detailed sheet would probably be useful.
- Lighting
    - 75% of fixtures require "high efficacy" lamps.
        - What defines "high efficacy" - LED and CFL meet these requirements,
        - Incandescent and halogens do not qualify as "high efficacy" lamps,
        - This is based on number of fixtures not number of bulbs,
    - There was a Navigant field study that showed lighting was one of the areas of lowest compliance.
        - This study was done before the completion of the homes so these bulbs could potentially have been changed between inspection and home completion,
        - MEEA has also seen around the Midwest this is an area of low compliance,
    - DTE has a lighting guide that may be useful to the group should a lighting document be developed.
- Better incorporation of energy codes into other code officials work.
    - Highlighting important issues for these officials to check during their walk through at rough-in,
    - DOE has identified 7 key items of highest impact on building performance so this may be of use,
    - One member suggested this also may be helped by the development of the compliance paths document as lack of understanding of compliance options could be a contributing factor,
- When does the energy code apply to retrofits vs. the maintenance code – lack of understanding which applies seems to be a common issue.

Action Planning for Top Ranked Priorities

- Priority should be given to the more fundamental issues around code compliance such as the compliance paths and when does energy code apply documents. MEEA, Chris McTaggart, and Tim Mrozowski are interested in being involved in the development of these documents.
- Blower door testing / duct leakage testing and the ventilation documents are of about equal importance. Creating homes that are well sealed with poor ventilation have the potential for serious health impacts on the residents. MEEA and Chris McTaggart expressed interest in being involved in development.
- Distribution of these documents will be key to them having a positive effect. Currently previous documents have been uploaded onto the webpage from EGLE but further distribution has not been done at this point. Planning to reach out to code official groups, energy raters, and any other interested groups. MEECA on the call indicated that they would be willing to help distribute these documents to their network.
- It was proposed that the group should look into where permits are being pulled and focus on those areas since that is where development is happening. The US census posts the number of building permits each year organized by zip code so this could be a good resource for this task.

Meeting Summary and Action Items Review

Michigan Energy Code Compliance Collaborative – Commercial Subcommittee

***** MINUTES *****

Location: 525 W Allegan Street, Lansing, MI 48933 – John McCauley Room

Date: March 5, 2020

Time: 1:00pm – 3:00pm EST

Call-In #: 1 (877) 336-1829 **Access Code:** 2022874#

Facilitator for Meeting: Jake Wilkinson, Michigan Department of Environment, Great Lakes, and Energy (EGLE)

Attendees In Person

Sonya Pouncy, Energy Sciences
Caile Richards, Small Business Association of Michigan
Nicole Westfall, Midwest Energy Efficiency Alliance
Jake Wilkinson, EGLE

Attendees On The Phone

Tim Mrozowski, Michigan State University
Jeff Zielke, City of Birmingham

Agenda Details

Welcome and Introductions

Summary of Last Meeting and Updates Since Last Meeting

In the last meeting we were presented updates from the two grants that were completed during the last fiscal year. Energy Sciences presented about the 6 trainings that they held at locations geographically distributed across the state (Sterling Heights, Baraga, Alpena, Bay City, Muskegon, and St. Joseph). Better planning and marketing (longer timelines) would have helped get more attendees but overall trainings were successful. Midwest Energy Efficiency Alliance presented about the project work that they completed. Findings included that municipal leadership is generally supportive of energy codes but there is still pushback from outside groups; there is also some misunderstanding about when the energy code applies to existing buildings retrofits, primarily residential sector. The final versions of the factsheets and checklists have been presented and sent to the group for comments. These will be posted to the web soon – Department web updates are delaying the update of the collaborative website.

Discussion and Prioritization of Proposed Topics for the Group

- There has been some discussion about fact sheets/checklists broken down by system (lighting, HVAC, etc.) or even more granularity depending on desired level of detail. Another option would be to break out different building types.
- Lighting controls would be a useful guidance document that could be developed.
- A 1-pager for skylight requirements would be useful and there are a lot of questions received about this requirement.
- Guidance around mechanical systems is a large need but would be difficult to do in a short format.
    - This would need to be broken down into smaller sections in order to be relatively short but also detailed enough to be useful.
    - Suggested breakdowns would be ventilation systems, HVAC controls, economizers, piping insulation, commissioning requirements, and air barriers. Some, such as commissioning, are different based on the size of the system so that would need to be broken down as well.
    - 1-pagers could be done for economizers, demand control ventilation.

    - Most of the mechanical system requirements are handled by the equipment manufacturers (i.e. products that do not meet the code are not sold in the state).
- One instructor noted that most of their questions comes from engineers, architects, and code officials.
- Break out for computer rooms may be useful – there is guidance from ASHRAE (90.4) for data centers.
- Guidance on commissioning is lacking in the code as far as who can do the commissioning work.

Aside from the fact sheets and guidance documents there were some other ideas that were discussed for future work that the group could undertake to improve compliance with the commercial code in Michigan.

- Higher standards or stringency for licensing of professional engineers and architects.
- More training opportunities ahead of the effective date of a new code when it is adopted – the Bureau of Construction Codes has not yet opened the Commercial Energy code for review and/or comments at this point.
- Change trainings to offer different methods of learning including hands on trainings, virtual trainings, as well as the classroom based trainings.
- Development of a central help center for questions.
- Plan review focused trainings would be useful for many stakeholders.
- The BCC does not offer FAQ's or interpretations documents as they have done in the past – this is due to jurisdictional liability if I remember previous discussions about this correctly. While many local officials would like the BCC to offer this guidance again, it is unlikely that this will happen, especially without legislation changes.
    - The Minnesota Codes Collaborative developed a FAQ document that has been very useful and well received despite being developed by a group that has no code setting or enforcing responsibilities (like many in the Michigan collaborative).
    - Development of a similar document in Michigan would likely be welcome.
    - A redline/ new changes document would also be useful when a new code is adopted.

Action Planning for Top Ranked Priorities

Prioritization of the work to be accomplished this year.

- It was first proposed that top items would be lighting controls, commissioning, skylights, and air barriers.
    - Continuous air barriers become issues during the inspection – due to its complex nature it is tough to inspect.
- U-factor testing of site installed windows is a difficult and very expensive test (~$10,000 per window) so it is rarely done.
- Plan review guidance documents would likely be very long. One member has already developed plan review guidance for chapter 5.
- Whatever is developed should be consistent in template. A format should be developed for the collaborative and then could be used by inserting the relevant information into the template.

The top priorities (that would be feasible and useful) were agreed to be lighting controls, commissioning, skylight requirements, and air barriers. MEEA, Energy Sciences, and Tim Mrozowski all volunteered to be part of the development of these documents. The Small Business Association of Michigan (SBAM) volunteered to help review documents after initial development.

Distribution will be an important part of making sure that these documents have the largest possible effect and reach a large number of people. Contractors (and their groups), code official organizations, trade associations, and member networks are good ways to distribute these documents.

Meeting Summary and Action Items Review