Notes from First Energy Codes Compliance Collaborative meeting

**Minnesota Energy Code Compliance Collaborative**

**October 22, 2014** | **9:30am – 12:30pm CDT**

**Augsburg Park Library, 7100 Nicollet Ave, Richfield, MN**

\*\*\* AGENDA \*\*\*

**1. Introductions | Overview of Project | Meeting Goals** *9:30-9:45* | *MEEA*

* *Define purpose:* Why are we here?
* *Define outcome:* What do we want to accomplish?
* Briefly Describe Nebraska Collaborative

In attendance:

Steve H. Code Official

Tim Manz – AMBO – Blaine – ASHRAE, listen, streamline process

Megan Hoye – CEE, find ways to engage community and create tools

Alan Christenson – St. Cloud, lots of questions

Ross Anderson – Coccoon, Blower Door Testing

Pete Burns, Mpls Blower Door, test procedure

Michelle Gransee, Dept of Commerce, closely w DLI in the future someone else will be there

Mike Wilson – HVAC wholesaler, have sat on code committees

Chad Harvey – MinnAir

Steve – Homes, interested in how people are going to comply with siding when going to grade, enormous amounts of foundation insulation, duct blaster

Pat Huelman – Building America

Ed VonThoma, BKI – BAM

Peter Kulczyk – goal to see if there’s a way we can all interpret and teach the code the same

Ray Pruban – build above code, already surpassing, want to make sure to understand it

Mike Anderson, heating contractor, board for MN Heating and Cooling Assn, provide training

Alison Lindburg, Fresh Energy

Isaac Elnecave, Midwest Energy Efficiency Alliance

***2.* Overview of Energy Code Status | Compliance Work in Minnesota** *9:50-10:10*

Participants discussed how they are currently working with the energy code and any compliance work that is currently happening. DLI and BAM are doing some outreach with the residential energy code to code officials, builders, and contractors, but it is still early.

Don’t put the changes into the existing rule until the adopted date. Revisor’s office. This 1322 has been adopted and cannot change. There is a final review by governor.

BAM is putting out code guides, from the perspective of builders.

Top 20 changes.

Foundation support guide.

***3.* Identifying Key Issues for Code Compliance** *10:15-11:40* | *Group discussion led by Alison Lindburg, Fresh Energy*

*Possible discussion questions:*

1. What tools and resources would be helpful to **you** to improve compliance?

2. Which area(s) should we focus on?

The group each wrote down 1-3 barriers and/or opportunities that they see related to energy code compliance. After some general discussion, each person suggested at least one to be added to a Barriers or Opportunities list. The group also brainstormed ideas about other participants to invite. Additional notecard suggestions were recorded after the meeting adjourned (below).

**General Discussion:**

How do they find the current draft? It’s currently under Radon.

Building Code Adoption Map, every town over 2,500 people; there isn’t someone to look over the plans. Over 14,000 contractors. Residential builders with their license are required to comply with code. The code is now in effect statewide – is there somewhere to get inspected?

85% gets inspected (according to Steve Hernick from DLI) Mostly done with electrical inspection

State of IA trained electrical inspectors in energy code

Pat – Some different levels of compliance/enforcement, some to take a look harder

CEE- works on SB2030. They do plan review, lighting and code compliance in the 90’s; tools to target commercial compliance, smaller projects could be getting tools, like that book, lists.

Design assistance to larger projects. Not a financial burden to cities.

Energy savings could help fund something like this.

Adoption of green code as appendix chapter to code. Commercial but could also include residential.

Not every house is 100% compliant.

We do have a challenge as it’s getting more complex. Only enforce the “gotchas”

A lot of HVAC should be licensed.

HVAC guys send out the load calcs “code official is not going to look at it.”

What are we doing to get others?

Steve Hernick – HVAC sizing is critical to overall issues.

Licensing: we need to have mechanical folks licensed but we needed those people, trades can’t agree on type of licensing and framework.

**Barriers and Opportunities Identified by the Group**

Barriers

Blower door – clarify – Guidance. Who can do it? Who gets to test? Standards?

Balanced Ventilation without HRV (Concern). What are best practices?

What does BU (BV?) mean? Clarify/interpretation (O)

Quality installation of insulation. Use blower door. IR cameras.

What happens when you don’t bass BD?

Multifamily – challenge to meet 3 ACH50

Protocols and education from Blower Door

Rural

Sealed and Continuous Air Barriers. Use of Poly? Warm in winter side. Clarify; guidance. Sequencing, when does BD occur?

Duct Installed unconditioned space. What is testing protocol?

Discussion of thermal/air/vapor – BOUNDARY DEFINITION

Living Space Above Garage – duct tests or no?

Ability to meet duct blaster test?

Metal ducts? Moving to flex ducts

Design practices – assistance

Need clarification on how to meet foundation basement insulation requirements

Multi-family issues (which code?, how to test?)

Understanding buildings science to help with compliance

Interpreting codes

Budgeting for new code requirements

Need paradigm shift in order to do higher-performing, not-lowest-bid buildings

Lack of resources for HERS testing/inspectors

Builders performing own blower door test w/o training could be a problem. Self-certify vs. 3rd party

Cost of doing testing might be difficult for lowest-bid builders

Agreement on volume calculation #, etc.

Opportunities

Education and protocols for when/how to perform blower door test (best practices); could be an educational opportunity pre-drywall

Set consistent standard for how both ducts and envelope tests are performed

Smoking ducts to find leaks

Ad hoc on-site field education; moving education in this direction

Best practices for everything

HVAC licensing

USDOE has protocols for weatherization (MN is doing that)

Building officials are asking for a certified rater (BPI, RESNET) for blower door tests – add clarification?

Mortgage companies requiring a certified blower door test for occupancy

Duct/Envelope tester (1 day class/test) and verification

DIR field test (no class) by BPI

List of certified testers

Random testing or code officials perform testing?

Duct blaster database/tests at rough-in (no air handler) CA-WA

Hierarchy of trades – responsibility of HVAC (growing); homebuilders/code officials

Consider possibility – draw details. Meeting intent of code

Accepted procedure

Best practices (linked to certain STDS)

Zoning codes – conflict with building code. What happens? Appeals

“Housing as system”

TO INVITE

Architects/designers

BCAP

Manufacturers (insulation/HVAC)

Utilities

University system – MNSCU

Multi-family developers

Commercial developers

ASHRAE

Notecard suggestions

HVAC Contractors not up to the task as a whole

Interpretation of code – hot to obtain cross-training between code officials, builders, designers, etc.

Training/Education – Residential code compliance found in 2009 was found to be at 75%; Commercial at 90%. More education for builders but also residents would be great. Aligning with home inspectors training and real estate.

The Blower door addresses the envelope sealing. Actual insulation or R value; can that be detected?

Opportunity – alignment. An e-book format is similar to the SWS (Standard work specifics) for USDOE low-income weatherization assistance program.

Residential construction. Requirements that define a conditioned space. Define Barrier – if stud cavity spray foam and seal to face poly – is interior drywall an air barrier? With same-in-joist cavity, is subfloor an air barrier? Accepted procedures approved by state.

City Zoning code encroaching into code relevant energy code.

Residential construction. Siding product to grade over required exterior foundation insulation.

Why is the U-value table (defacto performance standard) more stringent than the prescriptive requirements?

What does “balanced ventilation” really mean? Balanced continuous ventilation? Balanced intermittent ventilation? Balanced Total ventilation? What about when HRV/ERVs are in defrost mode?

What safeguards are in place to mitigate negative pressure in tighter homes caused by exhaust devises? Ventilation (where unbalanced is allowed); kitchen exhaust; dryer; central vacuum/radon/etc.

Uniform enforcement ie. Balanced ventilation; tuck under ducts (in conditioned space).

Balanced ventilation requirements without heat recovery will allow systems that have issues. How do we steer builders toward systems that function well and meet the code?

Barrier – access to finding the codes.

Barrier – municipal staff education and experience.

Barrier – understanding the code language!

Our biggest obstacle is knowing exactly how to interpret the code so we can design and bid our jobs ahead of time.

Consistent enforcement of energy code by metro-area inspectors

Low-cost training for HVAC contractors

Understanding the basics of building science to better enforce energy codes

Is there a performance option for code compliance? What would that be? HERS option?

HVAC market place knowledge (time/money)

REI performance testing. Blower door & duct testing. The local official decides. Who can test? What training required? What test standards apply?

**4. Next Steps** *11:45-12:00* | *Group discussion led by Isaac Elnecave*

Recap of Ideas/Topics Discussed in Section 3

Topics for Next Meeting (from Section 3)

Did we meet the goal of today’s meeting (Formation of a Collaborative)?

It was agreed that the Formation of the Collaborative was important to address these issues and ensure compliance with the energy codes in Minnesota. Isaac and Alison will consolidate the ideas and topics discussed today, and will set up another meeting to work on addressing those issues.

**5. Lunch and Informal Discussion** *12:00-12:30*