

## Act 47 Building Energy Code Study Committee

### Meeting #7 Meeting Notes

Department of Public Service, GIGA Conference Room, 112 State Street, Montpelier  
and  
Virtual via Teams  
October 31, 2023  
9:30 am – 12:00 pm

1. Welcome and Roll Call – Chair, Senator Chris Bray

a. **Committee Members:**

Chris Bray  
Ted Brady  
Jim Bradley – Collin Frisbie is in his place. Jim also later joined the meeting  
Chris Burns  
Matt Bushey from AIA VT is in place of Bob Duncan  
Chris Company  
Scott Campbell  
Michael Desrochers  
Karen Horne is representing VT Gas in place of Timothy Perrin  
Kelly Launder  
Matt Musgrave  
Craig Peltier  
Matt Sharpe  
Jason Webster  
Sandy Vitzthum

**Participants:**

Walt Adams  
Liz Bourguet  
Andrew Brewer  
Tom Bursey  
Ben Civiletti  
Ellen Czajkowski  
Richard Faesy  
Michelle Farnham  
Barry Murphy  
Stu Slote

2. Approval of Meetings #6 Minutes

- Page 5 – Sandy – gather “case studies”, not “anecdotes”
- Chris Bray–
  - Agenda item 5 – paying for energy code administration – flagging so we come back to this
  - Agenda item 6 – new RBES would bring \$18-30k to costs – asks if there is a reference/ study for this

- Jason – this figure came from code hearings – figure used to compare 2015 code and the net cost to the 2023 code. Jason can email the cost numbers.
  - Clarifies that comparison of costs is costs of 2015 code built today, 2023 code built today
- 3. Review draft report
  - Chris Bray – If you want to edit the report, please label your report so we know whose version we are reading
  - Chris Bray – recommends splitting recommendations out into tier 1 and 2. Tier 1: work requested by the legislature/ work that needs to be done now. Tier 2: work that our study has revealed as needs to be addressed/done in the future
  - Richard is recording comments in Committee version of the draft report
  - Voting of Committee members on recommendations can happen after via an online poll
    - This is okay under open meeting law
  - Richard – we need to decide on what happens when there isn't consensus
  - We will need another meeting to review another version of the report, another round of feedback, and then a vote on the final version

### Walk through of the report

- Need to list committee members and who they represent under Acknowledgements

### Findings

- Scott recommends an additional finding: there are two offices involved in code administration
  - Mike D– there is only one state office that has energy code expertise
- Kelly – “administer” is a confusing word – need to define the word up front or use a more precise word
  - List all the tasks of what “administer” would mean
  - Be clear about what PSD does and doesn't do. PSD does code interpretation, doesn't do on site inspections or plan review
  - Kelly – will provide a document with track changes
- Sandy/ AIA VT – have suggestions on findings
  - Added a third finding about number of building failures related to building codes
- Chris C – quotes an email from Stephanie Smith, State Hazard Mitigation Officer: “Vermont is not competitive under the Building Resilient Infrastructure and Communities Fund (BRIC) competitive funding because we do not have a statewide residential building code. This limits us to spending only under the state set-aside each year, which means we can do planning and scoping, but can likely not complete for infrastructure projects under BRIC.

We did just get the notice of funding for BRIC 23 after I started this email – and it looks like building codes are now only worth 20 of 200 competitive points instead of 40 – so that will definitely help – but we would still have to get most if not all of the other points and there are a lot of larger coastal states that can oversubscribe the competitive pot on their own.”

- Chris suggests adding a note about absence of statewide building code is getting in the way of funding
- Jason – General Assembly finding #3 – this isn't clear enough to show that there is no single family residential building code

- Sandy/ AIA VT – suggest submitting companion bill that asks for creating a building code
- Matt Bushey – suggest changing “problems” to “findings”
- Matt Sharpe – should clarify that the 54% compliance stat is about thermal efficiency of code, not entire requirements of code. Equipment sizing or ventilation system has different rates of compliance
  - Report should cite the NMR market assessment study
- Deadline for getting written comments: this Friday 11/3/23
  - Next draft sent to the Committee on 11/9/23 (revised since the meeting)

### Assessment of Problems and Underlying Issues Section

- Matt B - AIA VT has revised graph for Figure 1
  - AIA VT – thinks the compliance rate is lower than NMR study. Based on EAN (Energy Action Network) report and RBES certificate filings
  - Kelly does not think we should say that compliance is lower than the NMR report shows
- There are only 27 houses included in the study?
  - Kelly – it is a random survey. Survey participants were asked to participate in on site visits
  - Sandy – we have two diagrams. 25 houses visited, 13 of these were in Chittenden County
  - Barry – study looked at how accurate the reporting was
  - Kelly – survey asked specific questions, including actual model numbers for heating systems for more homes than those visited on site.
  - Richard – important point is that the study was based on 2015 code
- Matt Sharpe – it would be worth having a note about how we talk about compliance. He thinks comparing compliance and EUI [in the graph] is odd
- Sandy – if you keep the status quo, EUI has to go up and compliance is going down. Thinks chart has problems but they agree with intent
- Craig – it might be more intuitive if the EUI axis is declining
- Jason – thinks the chart gets the point across
- Chris C– if you’re fuel switching and adding electric vehicles, does your EUI go up?
- Sandy –DFS has jurisdiction over every building in Vermont except owner-occupied SF homes
- Kelly – clarifies that PSD does code interpretation
- Sandy – suggests including Venn diagram to this section
  - Chris Bray – need to clarify some aspects of the Venn diagram
- Kelly – report needs a reference for rising number of building failures
- Sandy – focus on facts of building failures. Suggests appendix with verified case studies. Factors leading to building failures are lack of training and lack of oversight. If there were an authority, this would be an opportunity to improve tracking of these issues
- Mike D– we have plenty of building failures in new construction, and we don’t have a tracking system in place to provide good data. How do we improve the data collection?
  - Sandy – with better records, we would confirm building failure statements
  - Barry – this is not a failure of energy code, it’s a failure of people following energy code
- Matt M- we don’t have good enough data to make a big investment in this effort. We need more definitive numbers. We need to consider the data we are presenting (e.g., OPR complaints)

- Kelly – doesn't agree with the inference that the complaints are tied to energy code – e.g., solar related issues
- Jim Bradley – there is a disconnect with knowing how to build appropriate building assemblies in our climate. It's about knowing how assemblies go together, not just about increasing the numbers, it's the durability of the structure and are the occupants remaining safe? Isn't a database where this is being reported?
  - Barry – monitoring is key, but it seems like this is about builders knowing how to build assemblies
  - Jim – understanding the code, example of a building - lack of understanding of how to build in the climate even though the building met energy code
- Matt Sharpe (via chat) - This discussion is a call for a Building Code. As energy efficiency increases the pressure on doing things correctly (to building code) is increased.
- Matt M- importance of builder registry, of being able to display certifications
- Jason – problem with energy code getting more stringent, makes building installation failures worse – word of mouth is how many builders learn
- Chris Campany – energy code may cause problems as applied to existing homes
- Collin – 2015 energy code mirrored best building practices in conventional construction techniques. As we've gone beyond that, techniques are different. Continual upgrade of code – pushing people to do things that don't work in a lot of situations without good training
- Barry – as energy code gets more stringent, minor details become more important, that's where you create failures. Making sure people know what they're doing building science – wise
  - Barry – building code and energy code are supposed to work in concert
- Chris C – can't have a building code without permits and inspections, this is where you catch a lot of problems up front and where you can collect data. Plus, an education component.
- Scott – there needs to be a distinction between new construction and existing buildings in the energy codes
- Craig –most important change to energy code is moving to continuous insulation- education is important
- Sandy – other states have a standard of care and an authority . Or some form of licensing for contractors. Vermont is the only state for residences with no path compared to other states. We only have civil litigation
  - Propose that call center is expanded – under DFS
  - Certifying all contractors
- Kelly – regarding OPR builder registry, could OPR do inspections?
- Matt M – concerned about OPR contractor registry, concerned that they aren't following through with tasks, concerned that people don't know about the registry. To add another system on top of this, we might want to fix this first. Direct OPR to register builders
  - Can follow up with more information about this
- Sandy – support voluntary certification. VT DFS would provide generic certification would go on the registry

## Legislative Directive

### Charge 1

- Kelly – PSD does oversee the energy codes. They have language to clarify
- Mike D- will provide a written response. He sees that we have two lanes: energy codes and building codes. Issues, costs, implementation challenges, etc. will need to be addressed. Need to

address fundamental building science through education, training and incentives. IRC should be considered in a summer study in 2024. There are many issues (sprinklers, etc.) that need to be addressed in examining IRC. DFS is under 2015 now and missing opportunities with grants by being behind the code cycles

- Chris Bray – could be helpful to think of it in tier 1 and 2, will be helpful to take one step to understand the necessary next steps
- Chris C – suggest a sidebar about the bigger implications of not having building code, including missing out on grant funding/ risk of forgoing federal resources
- Matt M – wouldn't want to set up DFS if they don't have staffing and financing resources. Concerned making it more expensive
  - DFS would need financing for training
- Jason- charge 1 – there is no agency with jurisdiction over owner-occupied single-family homes

## Charge 2

- Sandy – AIA has additions to recommendation A, including establish an advisory committee to DFS
- Richard- could develop a matrix with recommendations and assign tiers 1 and 2
- Matt M and Kelly – they are both not supportive of recommendation A
- Chris C- is it possible to see where the incremental vs broader approach would get us?
- Matt M – incremental approach has a lot likelier to pass the legislature
  - Given the housing crisis, if we increase the cost of housing, it won't pass
- Jason – builders have done the incremental approach, and have been kicking the can down the road. We can't keep kicking it. It needs a rewrite or it needs to stop. It is dangerous to not come up with a solution. The legislature could go into enabling legislation and remove the requirement of adopting the latest edition of IECC
- Sandy – they are trying to address deep structural mis-alignment, acknowledging it will take a while to get there
- Craig – what is the incremental approach? What does PSD recommend?
  - Kelly – start with compliance and fixing contractor registry, looking at EEU programs and incentives, and outreach/education/training without enforcement. Then we want to see, how far does that get us?
  - Kelly – there is a process with EEUs that needs to play out before presupposing outcomes.
- Jason – so pause the continuing adoption of the standards, and let it play out and don't keep ratcheting up the standards
  - Kelly – PSD is supportive of changing the language from “shall” to “may” for future energy code adoption
- Richard – concerned about how we're going to fit this (PSD disagreeing with recommendation A) into the report
  - Kelly – PSD is not suggesting whole new set of recommendations, just not supportive of recommendation A

## Next steps

- Deadline for getting written comments from Committee members (send to Richard, Liz, Kelly) this Friday, 11/3

- Next draft of report sent to the Committee by Monday, 11/13 (revised since the meeting to be 11/9/23)
- Next meeting – Thursday, 11/16 – will focus on recommendations