

IECC-C Modeling Subcommittee Meeting – Agenda

Monday December 5, 2022 –2:00-3:00 PM EDT

[Join via WebEx](#)

Attendance:

#	Voting Members, Effective 11/19/22	Present	Guests	Present
1	Eades, Greg - EPA (Chair)	X	Laura Petrillo-Groh, AHRI	X
2	Eley, Charles - Architecture 2030 (VC)	X	Jerry Phelan, Covestro	X
3	Anderson, Courtney - City and Co. Denver	X	Greg Johnson, National Multifamily Housing Council	X
4	Bomer, Bryan - Montgomery Co., MD	X	Martha VanGeem, Alliance for Concrete Codes and Standards	X
5	Burk, Diana - NBI	X	Steve Rosenstock, Edison Electric Institute	X
6	Dalzell, John - Boston Planning and Dev.	X	Ted Williams, Natural Gas Direct	X
7	Edwards, Ben - Mathis Consulting	X	Ben Edwards, NORESKO	X
8	Giunta, Frank – Trane Technologies	X	Matthew Brown, APA	X
9	Goldstein, David - NRDC	X	Michael Tillou, PNNL	X
10	Gowri, Krishnan - Intertek Inc	X	Eric Lacey, Responsible Energy Codes Alliance	X
11	Grew, Greg – Architect/Code Consultant		Alex Smith, NAHB	X
12	Harris, Stephen - University of Texas	X		
13	Hernandez, Alfonso - Gensler	X		
14	Hoffman, Emily - NYC	X		
15	Jakobs, Diane - Rheem			
16	Koban, Mary - AHRI	X		
17	Lessans, Mark - Johnson Controls			
18	McCullough, Anna - Group 14 Eng.	X		
19	Mock, Don - Howard County	X		
20	Panigrahi, Amiya - TTUHSC	X		
21	Port, Darren - NEEP	X		
22	Rosenberg, Mike – PNNL (Consultant)			
23	Waite, Mike - ACEEE	X		

Agenda:

1. Introductions/Attendance
2. Determination of quorum
3. Meeting Note Taker: **Anna McCullough**
4. Schedule
 - a. Modeling SC meets the first and third Mondays of every month
 - b. Next meeting is scheduled for Monday December 19
5. Approval of meeting notes
 - a. N/A

vote

6. Announcements

information

a. None

7. Old Business, Tabled Motions

discussion/vote

a. None

8. New Business

discussion/vote

a. CED1 Proposal Review

i. CEDI-186-22 Deletion of Section C406

1. Ted Williams, NGCLLC representing One Gas, speaking

- a. Revising reason statement to remove “ad hoc” statement – he no longer believes this after reading the technical information
- b. Revising reason statement to remove “qualitative benefits” statement – he believes this is a thorough analysis by PNNL
- c. No information in cited studies that reflect success with this process through ASHRAE
- d. Concerned that this sweeping credit scheme change has skipped steps in the development process
- e. Concerned that the credits across the credits and climate zones are not equivalent
- f. Does not expect that project teams would take this route when the modeling approach is available
- g. Suggests appropriate steps are to go through an ASHRAE adoption process to adopt standards language or to add this section to a stretch code
- h. Does not expect a subcommittee reaction to “the role of DOE” reason statement

2. Charles Eley

- a. In support of the credit system – design flexibility while providing more stringency to the standard. If it was moved to an appendix, we would lose that stringency
- b. Modeling targets have moved to reflect credits in Section C406
- c. In support of keeping Section C406

3. Eric Lacey:

- a. Question for Ted Williams – what is the intent here? Section C406 has been a part of the IECC since 2012 version
- b. Ted response: Intent would be to set a minimum code efficiency to meet the requirements of the consensus
- c. Eric: Benefit of C406 is flexibility in design and flexibility in compliance with new technology improvements

4. Courtney Anderson:

- a. C406 is a great place to locate pieces of code compliance that may be too stringent, especially when looking at code compliance from an equity perspective

5. Reid Hart:

- a. Wants to point out that this proposal is a rollback in the required code

- efficiency
- b. Models have been available and carefully researched
- c. ASHRAE is working on adopting a similar credit system
- 6. Steve Rosenstock:
 - a. Concern around some of the tables and the orders of magnitude swings in available credits across climate zones and building occupancies
- 7. David Goldstein:
 - a. The points system may not be the best way to provide this additional efficiency that is necessary, but there is no suggested code language to provide a better route
- 8. Vote: 0 accept, 16 reject, 1 abstain
- ii. CEDI-188-22 C406 Energy Credits
 - 1. Laura Petrillo-Groh:
 - a. Proposed C406 credits require higher than efficiency products in 46% of all building types in all climate zones
 - b. Proposal will adjust credits to harmonize with ASHRAE 90.1-2022
 - c. As Section C406 is currently drafted, the section may not be adoptable by many jurisdictions
 - d. Still evaluating cost questions for draft C406
 - e. Proposal: harmonize with ASHRAE 90.1, no load management credits specifically required, renewable energy and load management credits limited to 40% of the required energy credits
 - f. Must address base energy credits and Addenda CD/CF
 - 2. Mike Waite:
 - a. Against this proposal
 - b. Doesn't see how suggested proposals harmonize with 90.1, just sees reduced required energy efficiency
 - c. Not sure why IECC and 90.1 need to be harmonized
 - d. CEPI-193 was overwhelmingly approved, other subcommittees were invited to working groups and gave input
 - e. 46% of all building types will not be required to have higher efficiency equipment, they will be permitted to increase efficiency in other areas of the building
 - 3. Reid Hart:
 - a. CEDI-190 provides an alternative to this proposal by allowing additional renewables or load management
 - b. This proposal has a 30% reduction in efficiency
 - 4. Diana Burk:
 - a. Against this proposal
 - b. Not sure if this will conflict with federal preemption, may need to consult a legal expert
 - c. A building owner could potentially just buy RECs and not actually be more efficiency
 - 5. David Goldstein:
 - a. Doesn't believe that there's any conflict with preemption

- b. You can go far beyond the requirements in Section C406 with conventional efficiency equipment
 - 6. Mary Koban
 - a. Hoping everyone will support this
 - b. There is not alignment with 90.1
 - c. Issues with federal preemption
 - 7. Laura Petrillo-Groh:
 - a. Case law regarding preemption was vetted by AHRI's legal team. It is a matter of law that there needs to be a pathway to compliance for conventional equipment products
 - b. CEDI-188 seeks to lower credits across the board because PNNL's assessment was that CEPI-193 was 2.5% more stringent than 90.1
 - c. Doesn't need to be adopted as-is, could be modified because only affects 46% of building types across climate zones
 - 8. Greg Johnson:
 - a. It's beneficial to 90.1 and the IECC that they don't diverge too far from each other
 - b. If everyone who wants to use standard efficiency equipment has to comply with 90.1, all of the other good parts in the IECC aren't going to be required
 - 9. Reid Hart:
 - a. The IECC has had this extra energy efficiency requirement since 2012, 90.1 is just now adopting it
 - b. With this adoption, IECC will be a little bit ahead of 90.1, but we won't know until the analysis of the two codes comes out
 - c. Codes are still in a relative ballpark, have similar methodologies
 - d. Codes have been slightly divergent
 - 10. Mary Koban:
 - a. Encourages everyone to vote in favor of this to show alignment between codes and give a clear pathway forward
 - 11. Vote: 2 accept, 15 reject, 1 abstain
- iii. CEDI-189-22 C406 Energy Credits
 - 1. Mike Waite:
 - a. Wants to revert CEPI-193 to previous version before last-minute change after the completion of the working group
 - b. Changes that were made were based on a misreading of the cost analysis guidance voted on by the consensus committee
 - c. Reduction in credits resulted in a reduction in energy savings of about 13%
 - 2. Reid Hart:
 - a. Cost-effective criteria were late in coming to us, couldn't finalize our suggested increase until we got those numbers
 - b. The original lighting power reduction was reduced from 20% reduction to 10% reduction – was more in line with what we felt could be done reasonably

- c. Put an upper limit on what any building type climate case would have (reduced from 100 pts to 90 pts)
 - d. Went with most conservative approach to cost effectiveness – we want this to be adoptable in all states and for people to see that most conservative cost effectiveness pathway was considered
 3. Diana Burk:
 - a. Cost effectiveness subcommittee was evenly split on what discount rate was appropriate
 - b. 90.1's method was closer to the 5.33% nominal discount rate
 - c. Does not think the discount rate will impact whether the code is adopted
 4. Greg Johnson:
 - a. Will this affect the federal preemption issue?
 5. Mike Waite:
 - a. We aren't sure – up to designers how they will comply
 6. Diana Burk:
 - a. Only a 13% change between CEPI-193 update and original CEPI-193, clear that you can comply with C406 without HVAC credits
 7. David Goldstein:
 - a. Supports this proposal
 - b. Respect for the process means you have to look at the range
 - c. Given the effects of climate change, a conservative approach would require more efficiency, not less
 8. Mike Waite:
 - a. Original proposal was within cost effectiveness requirements of the committee
 9. Martha Vangeem
 - a. Supports what is in current draft
 - b. We need more experience on what is actually doable before we raise point requirements
 - c. If you approve this you will draw a bunch of public comments
 10. Mary Koban
 - a. Against this proposal
 - b. Doesn't seem rational that we have large swings in the data across climate zones
 11. Vote: 13 accept, 6 reject, 1 abstain
- iv. CEDI-190-22 C406 Energy Credits
 1. Reid Hart:
 - a. Allows to carry over excess renewables to reduce requirement
 - b. Looks at meeting the efficiency credits without increased HVAC and SWH efficiency requirements
 2. Laura Petrillo-Groh:
 - a. AHRI has observed some issues with preemption issues
 - b. Can you speak to how 90.1 deals with renewables and load management?
 3. Reid Hart:

- a. Credits are all lumped together in 90.1
- b. IECC: pulling credits from renewable category when they are exceeded in the renewables section and applying them to the efficiency category
4. Diana Burk:
 - a. Concerns: efficiency is more effective at reducing peak load than load management
 - b. You just get credit for the load management credits by signing up for a load management program
 - c. Wants a backstop that you can't get credit if you're selling your energy back to the grid
5. Mike Waite:
 - a. Agrees with Diana
 - b. Doesn't see a justification for trading off efficiency for load management
 - c. If we go down this road, we need to think more about these percentage caps
 - d. If it is going to be considered, needs more work
6. Mary Koban:
 - a. Needs more detail on what the concern is
7. Diana Burk:
 - a. You get credits for lighting load management by signing up for demand response programs
 - b. DOE has made optimistic assumptions of demand response programs that may not be accurate
 - c. If you actually improve the efficiency of your lighting, you will actually see the energy reduction that we are trying to get
8. Mike Waite:
 - a. Seconds the need to not be trading off efficiency for load management
9. Eric Lacey:
 - a. Doesn't want to set a precedent that would allow huge shifts between load management and efficiency credits
 - b. Opposed to allowing tradeoffs that could potentially allow buildings to comply with the code with less efficiency
10. Reid Hart:
 - a. If the committee gives us clear direction to either come up with a table, we are willing to do that
 - b. For most buildings this allows you to theoretically to reduce the required efficiency improvements by 30%, most buildings would rather select the higher efficiency equipment ilo standard efficiency equipment with load management
11. Laura Petrillo-Groh:
 - a. This is not the most cost-effective pathway
 - b. Would PNNL be suggesting this pathway if there was not an issue with federal preemption
12. Reid Hart:
 - a. Tried to create a pathway that was parallel with 90.1

13. Charles Eley:
 - a. In general, supports proposal
14. Mike Waite:
 - a. We're in a much sounder position to reject the proposal – it has some value, but needs a lot of work
15. Mary Koban:
 - a. Suggests a working group to work on proposal
16. Vote: 0 accept, 8 reject, 9 modify, 1 abstain

9. Adjourn