

## IECC-C Modeling Subcommittee Meeting – Notes

Monday January 3, 2022 –2:00-4:00 PM EST

[Join via WebEx](#)

**Attendance:**

#	Voting Members, Effective 12/06/21	Present	Guests	Present
1	Eades, Greg - EPA (Chair)	✓	Eric Lacey	
2	Eley, Charles - Architecture 2030 (VC)	✓	Jerry Phelan	
3	Anderson, Courtney - City and Co. Denver	✓	John McHugh	✓
4	Bomer, Bryan - Montgomery Co., MD	✓	Laura Petrillo-Groh	
5	Burk, Diana - NBI	✓	Steve Rosenstock	✓
6	Dalzell, John - Boston Planning and Dev.	✓	Helen Sanders	✓
7	Edwards, Ben - Mathis Consulting	✓	Amy Boyce	✓
8	Giunta, Frank – Trane Technologies	✓	Bryan Holland	✓
9	Goldstein, David - NRDC		Eric Lacey	✓
10	Gowri, Krishnan - Intertek Inc	✓	Gary Heikkien	✓
11	Grew, Milton - City of East Harford		Irene Martin	✓
12	Harbeck, Nicolas - AHRI	✓	Jerry Kettler	✓
13	Harris, Stephen - University of Texas	✓	Joe Cain	✓
14	Hernandez, Alfonso - Gensler	✓	John Stahl	✓
15	Hoffman, Emily - NYC	✓	Justin Gore	✓
16	Jakobs, Diane - Rheem	✓	Maria Karpman	✓
17	Lessans, Mark - Johnson Controls	✓	Shannon Cocoran	✓
18	McCullough, Anna - Group 14 Eng.		Steve Orlowski	✓
19	Mock, Don - Howard County		Steve Selkowitz	✓
20	Panigrahi, Amiya - TTUHSC	✓	Doug Powell	✓
21	Port, Darren - NEEP		Bryan Ahee	✓
22	Rosenberg, Mike – PNNL (Consultant)	✓		
23	Wood, Amber - ACEEE	✓		

**Agenda:**

1. Introductions/Attendance
2. Determination of quorum and review of agenda
3. Meeting Note Taker: **Nick Harbeck**
4. Schedule
  - a. Modeling SC meets the first and third Mondays of every month, 12/6/2021 until 12/5/2022, from 2:00 PM to 4:00 PM.

Members agreed to change the January 17, 2022 meeting to January 18, 2022 from 11:00 AM until 1:00 PM EST. An announcement for the change will be sent to the subcommittee with an agenda.

5. Approval of meeting notes vote
  - a. 12/06/2021

Members approved the meeting notes from December 6, 2021.

6. Announcements

*information*

a.

There were no announcements.

7. Old Business, Tabled Motions

*discussion/vote*

a.

There was no old business.

8. New Business

*discussion/vote*

a. CEPI-24 Part 1 – Amy Boyce

Ms. Boyce presented proposed wording changes to CEPI-24 Part 1 that would clarify the language used in describing building performance by replacing the term ‘total’ with ‘simulated.’ This change was proposed because the term ‘total’ may be misleading to end-users and cause issues with future building performance standards. The 2018 version of the residential code also used the term ‘simulated performance alternative’ before it was updated to align with the commercial code.

Mr. Eley suggested that the term ‘total’ is further described within the section by incorporating all of the major building systems. Using the term ‘simulated’ may also be used to apply to both the reference design and the proposed building design and subsequently refer the relative difference and update the title to “SIMULATED BUILDING PERFORMANCE PROCESS.”

Mr. Panigrahi and Mr. Eley also discussed the merits of referencing specific software, but other sections of the code may be the best spot for referencing software.

Mr. Hernandez shared that the term ‘simulated’ has also been referred to as ‘predicted.’ Adding the distinction between the two terms would enhance the proposal.

Mr. Gowri suggested that updating the definition for building performance is needed to ensure consistency across the code. Mr. Dalzell and members agreed that including both ‘total’ and ‘simulated’ terms would help to ensure consistency. Ms. Burk agreed that the proposal is helpful for highlighting the limits of modeling software in predicting building energy use and suggested the definition could be updated by the subcommittee later.

Mr. Cain cautioned that including energy use may not be clear and the language should include proposed building performance.

The subcommittee voted to revise the proposal to use the term ‘total simulated building performance’ (1-0-14 accept-reject-revise). Ms. Boyce agreed to revise the proposal and bring it back to the subcommittee for review.

b. CEPI- 203 – Helen Sanders

Ms. Sanders and Ms. Martin presented on closing the gap between “as-designed” and “as-built” building performance to ensure that the energy code can measure outcomes, provide transparency, and enhance data used in modeling. The proposal would add new language for requiring energy use intensity (EUI) public declarations for buildings above 50,000 sq. ft. Individual states and jurisdictions could elect to not include this requirement if data collection infrastructure is not available.

Mr. Hernandez shared that many clients are uncomfortable with publicly sharing building data so anonymous reporting may be needed. Existing building benchmarking may better serve the collection of longitudinal data.

Mr. Eley suggested that the energy reporting is helpful but may be better served by applying to all buildings, not just those following the performance path. Measuring load curves may also be difficult for buildings if infrastructure is not capable of collecting this data. Members shared that a small number of large buildings use the prescriptive pathway.

Mr. Bomer shared that post occupancy and use authority does not exist for some jurisdictions and legislation would need to be introduced before a proposal like this could be mandated and be difficult to enforce. Mr. Johnson shared that the proposal could require equipment and data collection capabilities in buildings but reporting that data is outside the scope of the IECC. Other members also agreed with need to collect data, but other policy avenues might be the better source for implementing it due to compliance challenges. Section C405.12 could be a better location for this type of proposal by requiring a data collection and reporting plan.

Mr. Dalzell recommended that the subcommittee focus on enabling buildings to collect data and better understand modeling relative to performance.

Mr. Rosenstock requested further clarity and detail on the reporting requirements.

The subcommittee voted to revise the proposal to address implementation concerns (0-7-10 accept-reject-revise). Ms. Sanders agreed to revise the proposal and bring it back to the subcommittee for review.

c. CEPI-206 – James Ranfone

Ms. Corcoran presented recommended changes to the exception to remove site energy as a metric of comparison so better measure energy comparison. Additional language to the exception section was not underlined as a new addition to the code.

Mr. Eley was concerned with specifying the source energy multiplier for electricity and fuels which can change dramatically.

Ms. Burk raised concerns with removing site energy as a tool to reduce carbon consumption and more easily incentivize electrification. Mr. Rosenberg and Mr. Dalzell agreed that the exception be kept in as a helpful tool. Members shared that the proposed change could have massive implications on building

energy use and that site energy is important.

The subcommittee voted to reject the proposal (0-17-0 accept-reject-revise).

d. CEPI-207- James Ranfone

Ms. Corcoran also presented on removing site energy exceptions and including source energy metrics consistent with federal data sources.

Mr. Eley reiterated the need to reject or revise the proposal to include more granularity by allowing for the measurement of carbon. Mr. Lessans, Ms. Hoffman, Mr. Rosenberg, and Mr. Rosenstock also agreed that source energy is useful for calculating energy impact. A table should include an emissions factor from sources such as e-grid or other carbon metrics.

Ms. Anderson shared the importance of keeping site energy and concerns with the prescriptive multipliers for electricity. Ms. Burk emphasized that grid emissions are likely to decrease and the language might not ensure energy efficiency if source energy becomes a more important metric.

Ms. Jakobs supported the use of the metrics in the proposal to simplify the way AHJs implement the code requirements.

Mr. Edwards highlighted issues with code compliance that could allow trade-off opportunities as the commercial code is a conservation code first. Members agreed that this should not be an unintended consequence of the proposal.

Mr. McHugh noted that carbon is not allowed as a tradeoff in buildings and would be federally preempted. Other jurisdictions, such as California, have recognized this, so using something like e-grid can reduce the likelihood of violating federal preemption.

The subcommittee voted to revise the proposal to address source energy metric concerns and unintended trade-off issues with renewable energy requirements earlier in the section (0-7-8 accept-reject-revise). Ms. Corcoran agreed to revise the proposal and bring it back to the subcommittee for review.

e. Integration of C406 Efficiency Requirements into C407 Performance – Charles Eley

This item was deferred until a later meeting. Mr. Eley will post slides to Microsoft Teams for member review.

9. Adjourn

The meeting was adjourned at 3:48 PM. The next meeting will have a unique webex link sent to subcommittee members.