

## IECC-C Modeling Subcommittee Meeting – Agenda

Monday February 13, 2023 –2:00-5:00 PM EDT

[Join via WebEx](#)

**Attendance:**

#	Voting Members, Effective 1/17/23	Present	Guests	Present
1	Eades, Greg - EPA (Chair)	x	Laura Petrillo-Groh, AHRI	x
2	Eley, Charles - Architecture 2030 (VC)	x	Emily Lorenz, IIBEC	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	Vincent Martinez, Architecture 2030	x
7	Deokar, Pratik - Rheem	x	Amy Boyce, EECC	x
8	Edwards, Ben - NORESCO	x	Ty Jennings, CNGC	x
9	Giunta, Frank – Trane Technologies	x	Michael Tillou, PNNL	x
10	Goldstein, David - NRDC	x	Eric Lacey, Responsible Energy Codes Alliance	x
11	Gowri, Krishnan - Intertek Inc	x	Alex Smith, NAHB	x
12	Grew, Greg – Architect/Code Consultant		Aaron Phillips, ARMA	x
13	Harris, Stephen - University of Texas	x	Sean Denniston, NBI	x
14	Hernandez, Alfonso - Gensler	x	Jim Early, EEI	x
15	Hoffman, Emily - NYC		Melissa Mooren, Skye Environmental	x
16	Koban, Mary - AHRI		Kevin Teakell, AAON	x
17	Lessans, Mark - Johnson Controls		Theresa Weston, ABAA	x
18	McCullough, Anna - Group 14 Eng.		Joe Cain, SEIA	x
19	Mock, Don - Howard County	x	Jay Crandell, FSC	x
20	Panigrahi, Amiya - TTUHSC	x	Alamelu Brooks, Energy-Solutions	x
21	Port, Darren - NEEP	x	Jason Vandever, NAIMA	x
22	Rosenberg, Mike – PNNL (Consultant)		Kevin Rose, NEEA	x
23	Waite, Mike - ACEEE	x		

**Agenda:**

1. Introductions/Attendance
2. Determination of quorum
3. Meeting Note Taker:
4. Schedule
  - a. The next Modeling SC meeting is scheduled for Monday February 27
5. Approval of meeting notes
6. Announcements
  - a.

*vote  
information*

7. Old Business, Tabled Motions

*discussion/vote*

- |    |  |                |
|----|--|----------------|
| a. | C503.6 Energy Credits for Alterations Workgroup Proposal | Sean Denniston |
| b. | CED1-204-22 Net Zero (Appendix CC) Modifications         | Greg Johnson   |

8. New Business

*discussion/vote*

- |    |  |                         |
|----|--|-------------------------|
| a. | CED1-184-22 Off-site Renewable Energy Contract Duration    | Charles Eley            |
| b. | CED1-086-22 Net Zero (Appendix CC) Min Envelope Efficiency | Amy Boyce               |
| c. | CED1-205-22 Appendix CC Renewable Energy Requirement       | Reid Hart (Mike Tillou) |
| d. | CED1-180-22 Advanced Energy Credits Appendix Removal       | Laura Petrillo-Groh     |
| e. | CED1-206-22 Glide Path – Enhanced Energy Credits           | Laura Petrillo-Groh     |
| f. | CECD1-8-22 C407 Modeling Software Capabilities and Testing | Michael Tillou          |

9. Adjourn

## 02/13/2024 MEETING NOTES

C503.6 -- Will be taken up in the next or future meeting

CED1-204-22 –

- Charles Eley recommended an editorial change to strike ‘one or more all’ to ‘all’.
- Greg Johnson and Charles Eley recommended the changes with the information to be presented in Table CC103.2
- Steve Rosenstock suggested editorial change for item 3.3 to change ‘constructed’ to ‘placed in service’
- **Vote** was taken to decide the procurement factors information in Table CC103.2 to be kept as a table or in text form. Table – 9; Paragraph – 3; so, it is decided to keep this in the Table form
- Joe Cain expressed that the two rounds of edits to this proposal may have unintended consequences of the edits as to whether it is only editorial, or changes made by one proponent causing more substantial impact on the original intent of the proposal.
- Greg Johnson mentioned that all subcommittee input has been incorporated in the proposed change.
- Joe Cain requested a walk through the changes before voting.
- Charles Eley mentioned that Greg Johnson’s proposal was reviewed with editorial changes except the exception for R-2
- Alex Smith requested review of C103.3.3
- Greg Johnson discussed the exception to CC103.3.3.1. Both the requirements are consistent with the ASHRAE 90.1 renewable energy requirements working group.
- Jay Crandell – The occupancy type R-2 could include apartments, vacation properties and others beyond the affordable housing which was mentioned as the main reason by Greg Johnson. This should be seen as minimum standard.
- Diana Burk expressed concern with the exception and preferred on-site renewable instead of off-site RECS.
- Greg Johnson mentioned that already the requirement for on-site renewable can be excepted with the current code language and requirements for deck and roof areas.
- Joe Cain – does not believe there is a need for the exception for R-2, but keep the same procurement factors for all occupancies
- Related chat discussions:

*from Kristopher Stenger to everyone: 11:25 AM*

*CED1-204-22 proposed modification was posted on the website on 2/8*

*from Joe Cain to everyone: 11:35 AM*

*For the Exception to CC103.3.3.1, is there any technical substantiation based on data? Or is it just based on a request that we need to help out R-2?*

*from Joe Cain to everyone: 11:35 AM*

*Perhaps the procurement factors in the exception should apply to all occupancies?*

*from Joe Cain to everyone: 11:36 AM*

*Or if we are just trying "to help," should it be identified as an affordable housing issue, rather than market-rate R-2 or high end, deluxe R-2??*

*from Alex Smith to everyone: 11:38 AM*

*off-site has far less efficiency losses than on-site*

*from John Dalzell, AIA, LEED Fellow to everyone: 11:41 AM*

*There are no snow problems with parking lot canopy PV systems in New England.*

*from John Dalzell, AIA, LEED Fellow to everyone: 11:41 AM*

*On-site PV is cash positive in Boston now!*

*from John Dalzell, AIA, LEED Fellow to everyone: 11:43 AM*

*There are critical additions with on-site PV including resilience, expanded grid capacity, local jobs, and expertise!*

*from Amy Boyce, EECC to everyone: 11:44 AM*

*I have a general concern that we often talk about the impact of measures on housing affordability, but the committees don't have adequate representation from those who truly understand what keeps people out of housing, or from developers whose focus is affordable housing*

*from Alex Smith to everyone: 11:44 AM*

*offsite renewables create jobs, add resilience (greater than onsite). Onsite you have individual inverters, panels, and wiring on every single home. It's an exponentially larger number of problems that can happen*

*from Alex Smith to everyone: 11:45 AM*

*it also requires the cost of design and installation for every single home from John Dalzell, AIA, LEED Fellow to everyone: 11:47 AM*

*And still on site PV is cash positive on day one! This need not be either or, but distant solar PV does not provide any additional community benefits.*

*from Alex Smith to everyone: 11:47 AM*

*offsite is cash positive in more locations than onsite, most of the most profitable solar companies are large scale, community driven*

*from Alex Smith to everyone: 11:48 AM*

*the future of renewable energy generation in this company is large scale, rooftop won't cut it*

*from Alex Smith to everyone: 11:48 AM*

*country\**

*from Alex Smith to everyone: 11:49 AM*

*and the vast majority of new generation in 2022 was large scale solar*

*from Michael Tillou to everyone: 11:49 AM*

*Michael Tillou, PNNL*

**Vote with the table format: Approved -10, Disapprove – 3, Abstain -3; APPROVED**

CED1-184-22 Off-site Renewable Energy Contract Duration Charles Eley

- Charles Eley discussed the summary of changes (i) changing the RECS duration from 10 to 15 years and (ii) requiring not less than 15 years for C405.15.3
- Steve Rosenstock – mentioned that 10 years is more common and reduce barriers.
- Joe Cain – Would support 15 years, and for purposes of market stability 15 years would be best
- David Goldstein – supports the 15 years duration, and the responsibility is with the building owner.
- Steve Rosenstock – this is a contract, and its duration should be consistent with other contracts such as financing and mortgage contract duration
- Alex Smith – shared SEIA language for 10-25 years
- Joe Cain - Power purchase agreements and community solar agreements may not be the same

- Mike Waite – Favor of this change, simplifies the requirements and seems reasonable
- **VOTE as proposed – For: 13; Against- 0; Abstain-1, APPROVED**

CED1-086-22 Net Zero (Appendix CC) Min Envelope Efficiency Amy Boyce

- Amy Boyce – Reviewed the scope this change requiring envelope requirements be met when renewable energy procurement to comply with Equation CC-1.
- Martha Van Geem – Wanted to confirm the use of trade-off methods, Diane Burk mentioned that C402 includes trade-off method tools could be used
- Charles Eley – Speaking against this change as it could be adding unnecessary complications
- Eric Lacey – Speaking in support of the proposal, that envelope requirements be imposed on all projects for net-zero and high-performance goals
- Jay Crandell – Supports this change, and efficiency is important. This is a simple proposal and should be supported.
- David Goldstein – Supports this change requirement
- Joe Cain – Against this change as this is not substantiating the requirements for zero energy buildings
- Greg Johnson – This change penalizes the off-site renewable energy
- Alfonso Hernandez – propose to include reduce lighting and HVAC efficiency as part of the change proposal
- Vincent Martinez – Wanted to clarify that the requirements do not affect overall compliance requirements
- **VOTE – For - 10; Against - 4; Abstain – 2, APPROVED**

CED1-180-22 Advanced Energy Credits Appendix Removal Laura Petrillo-Groh

- Laura P-G – Provided background on the concerns on cost effectiveness calculations
- **VOTE: For - 3; Against - 11; Abstain – 1, DISAPPROVED**

CED1-206-22 Glide Path – Enhanced Energy Credits Laura Petrillo-Groh

- Laura P-G – Same reasoning as previous change
- **VOTE: For 2; Against – 12; Abstain – 1, DISAPPROVED**

CECD1-8-22 C407 Modeling Software Capabilities and Testing Michael Tillou

- Mike Tillou – Included software testing requirements as per Standard 140, alignment with requirements in 90.1.
- **VOTE: For – 15, Against – 0, Abstain – 0; APPROVED**