International Energy Conservation Code
Consensus Committee-Commercial

Meeting Agenda (Draft 8/2/23)

August 9, 2023
2 PM Eastern to 5 PM Eastern (3 hours)
Webex Link

Committee Chair: Duane Jonlin
Committee Vice Chair: Emily Hoffman

1. Call to order.

2. Meeting Conduct. Staff
   a. Identification of Representation/Conflict of Interest
   b. ICC Council Policy 7 Committees: Section 5.1.10 Representation of Interests
   c. ICC Code of Ethics: ICC advocates commitment to a standard of professional behavior that exemplifies the highest ideals and principles of ethical conduct which include integrity, honesty, and fairness. As part of this commitment it is expected that participants shall act with courtesy, competence and respect for others.
   d. ICC Antitrust Compliance Guideline

3. Roll Call – Hoffman

4. Approval of Agenda

5. Approval of Minutes from July 12, 2023

6. Administrative issues.-

7. Action Items.

CE2D-17-23(Table C403.3.2(12) footnote edit)	HVACR approve 12-0-1
CE2D-19-23(Boilers footnote l edit)	HVACR as modified 12-0-1
CE2D-22-23(Demand responsive controls)	HVACR approve 7-5
CE2D-23-23(Demand control ventilation exception)	HVACR approve 11-0-1
CE2D-26-23(C404.2. table footnote l edits)	HVACR as modified 9-1-2
CE2D-06-23(Green retail tariff definition)	Modeling disapprove 11-1-3
CE2D-33-23(Sub-metering)	Modeling as modified 10-1-2
CE2D-34-23(Electric meters)	Modeling as modified 11-1-2
CE2D-58-23(Remove limit on use of surplus credits)	Modeling approve 10-3-2
CE2D-1-23(Appendices)	Admin disapprove 10-0
CE2D-2-23(Substantial improvement)	Admin approve 10-0-1
CE2D-10-23(SEHPCAC/BCAC accessible term)	Admin approve 8-1-1
CE2D-29-23(Move plan for disclosure)	Admin as modified 9-0-1
CE2D-69-23(C503.2.1 defined term correction)	Admin approve 10-0-1

8. Subcommittee Reports

9. Other business.

10. Next meeting August 23, 2 pm Eastern

11. Adjourn.

FOR FURTHER INFORMATION BE SURE TO VISIT THE ICC WEBSITE:
IECC Commercial Consensus Committee Webpage
https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/iecc-commercial-consensus-committee/
ICC Energy webpage
https://www.iccsafe.org/products-and-services/codes-standards/energy/

FOR ADDITIONAL INFORMATION, PLEASE CONTACT:

Kristopher Stenger, AIA, Director of Energy Programs
International Code Council
kstenger@iccsafe.org

Join by meeting number

Meeting number (access code): 2599 815 0421

Meeting password: 3eKk3uWWdi3

Tap to join from a mobile device (attendees only)

1-844-740-1264,,25998150421## USA Toll Free

+1-415-655-0003,,25998150421## US Toll

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-17-23 Table C403.3.2(12) footnote edit
CDP ID #	1770
Code	IECC CE
Code Section(s)	C403.3.2(12) Table
Location	SC rev
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC rev
Subcommittee	CE HVACR & WH
Subcommittee Notes	Editorial changes for clarity
Recommendation	Approve as submitted Reason: Footnote should not contain requirements. The purpose of the tables are to identify 'minimum efficiency,' so it does not need to be repeated in the footnote.
Vote	12-0-1 (chair not voting)
Recommendation Date	7/27/2023
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee __X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-19-23 Boilers footnote I edit
CDP ID #	1765
Code	IECC CE
Code Section(s)	C403.3.2(6) Table
Location	SC rev
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC rev
Subcommittee	CE HVACR & WH
Subcommittee Notes	• This footnote addresses equipment efficiency for very large gas-fired steam commercial packaged boilers prior to 3/2/2022. We can just delete this, since it only applies to equipment made prior to 3/2/2022. These changes are editorial, but only applies to older equipment. • Very Large gas boilers aren't just sitting on the shelf, they are custom made.
Recommendation	Approve as modified Reason: this footnote isn't applicable anymore since it is for older equipment.
Vote	12-0-1 (chair not voting)
Recommendation Date	7/27/2023
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee ___X_____
Consensus Committee	
Committee Response	

Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

Revise as follows:

TABLE C403.3.2(6) GAS- AND OIL-FIRED BOILERS—MINIMUM EFFICIENCY REQUIREMENTS [i]
For SI: 1 British thermal unit per hour = 0.2931 W.

a.	**Chapter 6 contains a complete specification of the referenced standards, which include test procedures, including the reference year version of the test procedure.**
b.	**These requirements apply to boilers with rated input of 8,000,000 Btu/h or less that are not packaged boilers and to all packaged boilers. Minimum efficiency requirements for boilers cover all capacities of packaged boilers.**
c.	**E_c = Combustion efficiency (100 percent less flue losses).**
d.	**E_t = Thermal efficiency.**
e.	**Maximum capacity—minimum and maximum ratings as provided for and allowed by the unit's controls.**
f.	**Includes oil-fired (residual).**
g.	**Boilers shall not be equipped with a constant burning pilot light.**
h.	**A boiler not equipped with a tankless domestic water-heating coil shall be equipped with an automatic means for adjusting the temperature of the water such that an incremental change in inferred heat load produces a corresponding incremental change in the temperature of the water supplied.**
i.	**~~Prior to March 2, 2022, for natural draft very large gas-fired steam commercial packaged boilers, a minimum thermal efficiency level of 77 percent~~ ~~or greater~~ ~~is permitted and meets Federal commercial packaged boiler energy conservation standards~~**

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-22-23 Demand responsive controls
CDP ID #	1603
Code	IECC CE
Code Section(s)	C403.3.6
Location	SC rev
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC rev
Subcommittee	CE HVACR & WH
Subcommittee Notes	• Discussion from proponent that the requirement for building owners to provide DR controls is simply a transfer of wealth from building owners to utilities. Currently DR controls are incentivized by utilities when they want their customers to have them. Not opposed to controls, opposed to requiring owners to put them in, regardless of if utility programs will ever use them. There are ways to get these controls into the buildings now, and that is through utility incentive programs. • Similar topic was discussed in past meetings in previous round, it was voted down in the SC and also failed full committee. • Discussion of previous SC work, wondering if anything has changed here in round 3 that might change the SC and E4C to reverse previous decisions. • Comments from proponent that the Committee may have considered this previously, but doesn't mean it doesn't merit further consideration. • Similar mandatory requirement for DR capable water heaters for multifamily isn't in the residential code, but it is in there as an optional point credit. • Requirement for mandatory DR controls was rejected by the residential committee • Discussion from supporter of DR-capability for R-2 buildings that the key term is "capable of", feels multifamily are extremely important for what this is trying to do for demand response, if multifamily buildings are removed then we miss out on a big opportunity. • Commenter/Proponent doesn't disagree that DR in R2 occupancies is important for managing the grid, but it isn't the building owners responsibility for doing that. Onus should be on the electric utility to make this happen.

Recommendation	Approve As Submitted Reason (summarized): Demand-response capabilities provide benefit to electric utilities but should be installed as part of electric utility incentive programs rather than have building owners required to install them in the energy code and potentially never use them.
Vote	7-5-0 (chair not voting)
Recommendation Date	7/27/2023
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee ___X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-23-23 Demand control ventilation exception 6 edit
CDP ID #	1776
Code	IECC CE
Code Section(s)	C403.7.1
Location	SC rev
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC rev
Subcommittee	CE HVACR & WH
Subcommittee Notes	Editorial changes for clarity
Recommendation	Approve as submitted Reason: editorial
Vote	11-0-1 (chair not voting)
Recommendation Date	7/27/2023
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee ___X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-26-23 C404.2 table footnote I edits
CDP ID #	1796
Code	IECC CE
Code Section(s)	C404.2 table
Location	SC rev
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC rev
Subcommittee	CE HVACR & WH
Subcommittee Notes	Editorial changes for clarity
Recommendation	Approve as modified Reason: editorial
Vote	9-1-2 (chair not voting)
Recommendation Date	7/27/2023
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee _X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

Revise as follows:

TABLE C404.2 MINIMUM PERFORMANCE OF WATER-HEATING EQUIPMENT

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m^2, °C = [(°F) – 32]/1.8, 1 British thermal unit per hour = 0.2931 W, 1 gallon = 3.785 L, 1 British thermal unit per hour per gallon = 0.078 W/L.

a.	**Thermal efficiency (Et) is a minimum requirement, while standby loss is a maximum requirement. In the standby loss equation, V is the rated volume in gallons and Q is the nameplate input rate in Btu/h. Vm is the measured volume in the tank in gallons. Standby loss for electric water heaters is in terms of %/h and denoted by the term "S," and standby loss for gas and oil water heaters is in terms of Btu/h and denoted by the term "SL" Draw pattern (DP) refers to the water draw profile in the Uniform Energy Factor (UEF) test. UEF and Energy Factor (EF) are minimum requirements. In the UEF standard equations, Vr refers to the rated volume in gallons.**
b.	**Chapter 6 contains a complete specification, including the year version, of the referenced test procedure.**
c.	**A tabletop water heater is a storage water heater that is enclosed in a rectangular cabinet with a flat top surface not more than three feet (0.91 m) in height and has a ratio of input capacity (Btu/h) to tank volume (gal) < 4000.**
d.	**Water heaters or gas pool heaters in this category are regulated as consumer products by the USDOE as defined in 10 CFR 430.**
e.	**Storage water heaters have a ratio of input capacity (Btu/h) to tank volume (gal)<4000.**
f.	**Efficiency requirements for electric storage water heaters ≤ 12 kW apply to both electric resistance and heat pump water heaters. There are no minimum efficiency requirements for electric heat pump water heaters greater than 12kW or for gas heat pump water heaters.**
g.	**A grid-enabled water heater is an electric resistance water heater that meets all of the following:**

h.	Instantaneous water heaters and hot water supply boilers have an input capacity (Btu/h) divided by storage volume (gal) ≥ 4000 Btu/h-gal.
i.	Electric instantaneous water heaters with input capacity >12 kW and ≤58.6 kW that have either (1) a storage volume >2 gal(7.6L); or (2) is designed to provide outlet hot water at temperatures greater than 180°F(82ºC); or (3) uses three-phase power has no efficiency standard.
j.	Gas storage water heaters with input capacity >75,000 Btu/h (21.98 kW) and ≤105,000 Btu/h (30.77 kW) must comply with the requirements for the >105,000 Btu/h (30.77 kW) if the water heater either (1) has a storage volume >120 gal (454L); (2) is designed to provide outlet hot water at temperatures greater than 180°F (82ºC); or (3) uses three-phase power.
k.	Refer to Section C404.2.1 for additional requirements for gas storage and instantaneous water heaters and gas hot-water supply boilers.l. Oil storage water heaters with input capacity>105,000 Btu/h (30.77 kW) and ≤140,000 Btu/h (41.03 kW) must comply with the requirements for the >140,000 Btu/h (41.03 kW) if the water heater either (1) has a storage volume > 120 gal(454L); (2) is designed to provide outlet hot water at temperatures greater than 180ºF (82ºC); or (3) uses three-phase power.
l.	Water heaters and hot water supply boilers ~~having~~ with more than 140 gallons (530L) of storage capacity need not meet the standby loss requirement ~~if~~ where: (1) The tank surface area is thermally insulated to R-12.5 or more; (2) ~~a~~ there is no standing pilot light ~~is not used~~; and (3) for gas or oil-fired storage water ~~heaers~~ heaters, ~~they have~~ the heater is equipped with a fire damper or fan-assisted combustion

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-06-23 Green retail tariff definition
CDP ID #	1752
Code	IECC CE
Code Section(s)	C202
Location	SC rev
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC rev
Subcommittee	CE Model, Metrics
Subcommittee Notes	This proposal would replace the definition of "renewable energy resources" (a defined term) with "renewable energy" an undefined term. The SC overwhelmingly rejected this change.
Recommendation	Disapprove
Vote	Approve – 1, Disapprove – 11, Abstain – 3
Recommendation Date	7/24/23
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee_____X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-33-23 Sub-metering
CDP ID #	1759
Code	IECC CE
Code Section(s)	C405.13.2
Location	SC rev
Proponent	Renee Lani rlani@apga.org
Proposal Status	SC rev
Subcommittee	CE Model, Metrics
Subcommittee Notes	C405.13.2 End-use electric metering categories. TABLE C405.13.2 ELECTRICAL ENERGY USE CATEGORIES C405.13.3 Electrical Meters. C405.13.6 Non-electrical energy ~~metering~~. Consumption of non-electrical fuel or energy sources including district heating or cooling shall be automatically metered ~~in accordance with Section C405.13.2 and C405.13.3.~~ or by an *approved* method developed for usage calculation annually or more frequently from energy bills. Natural gas usage shall be monitored through on site interval metering or from utility interval data, as available. This proposal expresses the concern that many natural gas utilities do not have advanced submetering capability in place.
Recommendation	Approve as modified.
Vote	Approve as modified – 10, Disapprove – 1, Abstain – 2
Recommendation Date	7/24/23
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee_____X_____
Consensus Committee	

Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-34-23 Electric meters
CDP ID #	1777
Code	IECC CE
Code Section(s)	C405.13.3
Location	SC rev
Proponent	Kevin Duell kevin.duell@nwnatural.com
Proposal Status	SC rev
Subcommittee	CE Model, Metrics
Subcommittee Notes	C405.13.3 Electrical Meters. C405.13.6 Non-electrical energy. Consumption of non-electrical fuel or energy sources including district heating or cooling shall be metered in accordance with Section C405.13.2 and C405.13.3, or by an *approved* method developed for usage calculation annually or more frequently from energy bills. This proposal attempts to resolve the discrepancy between electricity and natural gas meters with respect to their accuracy.
Recommendation	Approve as modified
Vote	Approve as modified – 11, Disapprove – 1, Abstain – 2
Recommendation Date	7/24/23
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee_____X_____
Consensus Committee	
Committee Response	

Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-58-23 Remove limit on use of surplus credits for renewable
CDP ID #	1672
Code	IECC CE
Code Section(s)	C406.1.2
Location	SC rev
Proponent	Jay Crandell jcrandell@aresconsulting.biz
Proposal Status	SC rev
Subcommittee	CE Model, Metrics
Subcommittee Notes	**Exception:** Where a building achieves more energy efficiency credits in Section C406.2 than are required in Section C406.1.1, the renewable and load management credits required in Table C406.1.2 shall be permitted to be reduced by the amount of surplus energy efficiency credits~~, not to exceed a 30 percent reduction~~. This proposal removes the 30% limitation on renewable and load management credits. Removing the 30% limitation provides flexibility in achieving credit compliance, and a clear rationale was not presented for the 30% reduction.
Recommendation	Approve
Vote	Approve – 10, Disapprove – 3, Abstain – 2
Recommendation Date	7/24/23
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee_____X_____
Consensus Committee	
Committee Response	

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-01-23 Appendices
CDP ID #	1763
Code	IECC CE
Code Section(s)	C101.2.1
Location	SC rev
Proponent	Eric Tate eric.tate@atmosenergy.com
Proposal Status	SC rev
Subcommittee	CE Admin
Subcommittee Notes	
Recommendation	Reason Statement: It is important to notify the user of the code in Chapter 1 that the appendices are mandatory only when adopted by the AHJ.
Vote	Reject: 10-0-1
Recommendation Date	8/1/23
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee_____X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-02-23 Substancial improvement definition
CDP ID #	1745
Code	IECC CE
Code Section(s)	C202
Location	SC rev
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC rev
Subcommittee	CE Admin
Subcommittee Notes	
Recommendation	Reason Statement: The proponent is correct that the existing sentence structure implies the code official may have ordered the violations.
Vote	Approve: 10-0-1
Recommendation Date	8/1/23
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee_____X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-10-23 SEHPCAC/BCAC accessible term replacement
CDP ID #	1687
Code	IECC CE
Code Section(s)	C402.6.2.3
Location	SC rev
Proponent	SEHPCAC sehpcac@iccsafe.org
Proposal Status	SC rev
Subcommittee	CE Admin
Subcommittee Notes	
Recommendation	Reason Statement: The word “accessible” should remain reserved for uses associated with accessibility requirements for disabled persons as suggested by the proponent.
Vote	Approve: 8-1-1
Recommendation Date	8/1/23
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee_____X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-29-23 C405.13.8 Plan for disclosure
CDP ID #	1650
Code	IECC CE
Code Section(s)	C405.13.8
Location	SC rev
Proponent	Bryan Holland Bryan.Holland@nema.org
Proposal Status	SC rev
Subcommittee	CE Admin
Subcommittee Notes	
Recommendation	**C405.13 Energy monitoring.** New buildings with a gross conditioned floor area of Page 172 of 305 not less than 10,000 square feet (929 m2) shall be equipped to measure, monitor, record and report energy consumption data in compliance with Sections C405.13.1 through C405.13.5. ~~A plan for quantifying annual energy type and end-use disclosure in compliance with Sections C405.13.1 through C405.13.8 shall be submitted with the construction documents .~~ Delete section in its entirety: ~~C405.13.8 Plan for disclosure~~ **C105.6.2 Compliance documentation.** 1. The envelope insulation compliance path. 2. All compliance calculations including those required by Sections C402.1.4, C403.8.1, C405.3 and C405.5. 3. A plan for annual energy use data gathering and disclosure as specified in Section C405.13. Reason Statement: A plan for quantifying annual energy type and end-use disclosure requirement is best located in Chapter 1 versus C405.13.
Vote	Approved as Modified: 9-0-1
Recommendation Date	8/1/23
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee_____X_____
Consensus Committee	

Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

International Energy Conservation Code
Code Change Proposal Tracking Sheet

Proposal #	CE2D-69-23 C503.2.1 defined term correction
CDP ID #	1878
Code	IECC CE
Code Section(s)	C503.2.1
Location	SC rev
Proponent	Glen Clapper gclapper@nrca.net
Proposal Status	SC rev
Subcommittee	CE Admin
Subcommittee Notes	Recommend content for the commentary to distinguish engineering principles from registration requirements
Recommendation	Reason Statement: revising the terminology used provides consistency with residential code.
Vote	Approve: 10-0-1
Recommendation Date	8/1/23
Next Step	To Subcommittee To Advisory Group_____ To Consensus Committee_____X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	