



## International Energy Conservation Code Consensus Committee-Commercial

### Meeting Agenda (Draft 3/1/23)

March 8, 2023

2:00 PM Eastern to 5:00 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 February 22, 2023
6. Administrative issues.
7. Action Items.
  - a. Public Comment Draft 1 Proposals

CED1-40-22(EV ready space req modifications)	Electrical disapprove 12-0-1
CED1-38-22(EV charging infrastructure in appendix)	Electrical disapprove 12-0-1
CED1-39-22(EV Ready requirements)	Electrical approve 9-5-1
CED1-16-22(EV power transfer)	Electrical disapprove 12-0-1
CED1-41-22(EV charging)	Electrical disapprove 11-0-2
CED1-43-22(EV charging requirements)	Electrical disapprove 9-0-6
CED1-42-22(EV scope)	Electrical disapprove 10-4-1
CED1-45-22(EV scope)	Electrical approve 12-1-0
CED1-44-22(EV scope)	Electrical disapprove 9-4-2
CED1-46-22(EV scope)	Electrical disapprove 9-0-5
CED1-47-22(EV interoperability)	Electrical disapprove 12-0-0
CED1-48-22(EV circuit capacity management)	Electrical disapprove 12-0-0

CEPC1-4-22(EV comment)  
 CEPC1-5-22(EV power transfer infrastructure)  
 CEPC1-6-22(EV code support)  
 CEPC1-15-22(EV energy monitoring support)  
 CEPC1-16-22(EV support)  
 CECD1-11-22(Low slope roof) Envelope as modified 12-0-2  
 CED1-145-22(C503.2.1 remove redundant sentence)Envelope as modified 13-0-1  
 CED1-146-22(Roof alterations) Envelope as modified 13-0-1  
 CED1-99-22(Equipment building thermal env except)Envelope as modified 11-0-2  
 CED1-100-22(Mass walls) Envelope as modified 12-0-1  
 CED1-105-22(Relocate mass wall criteria) Envelope disapproved 11-0-2  
 CED1-101-22(Frame wall factor consistency) Envelope disapproved 6-3-5  
 CED1-143-22(Frame walls single target) Envelope disapprove 6-3-4  
 CED1-109-22(Steel frame u-factor framing) Envelope disapprove 5-4-4  
 CED1-111-22(Table C402.1.3 footnote i) Envelope as modified 12-0-2  
 CED1-112-22(C402.1.3 conflicting language) Envelope approve 12-0-1  
 CED1-113-22(R-Table "other" wall and roof assemblies)Envelope disapprove 8-3-2  
 CED1-114-22(Stud cavity insulation) Envelope disapprove 11-0-2  
 CED1-115-22(CEPI-27 deletion of section) Envelope approve 12-0-1  
 CED1-116-22(Assembly construction section removal)Envelope disapprove 11-0-1  
 CED1-162-22(Demand responsive space cond.) HVACR disapprove 7-1-4  
 CED1-166-22(Parking garage ventilation mod) HVACR as modified 10-0-4  
 CED1-170-22(Demand response water heater exc) HVACR as modified 3-2-6  
 CED1-177-22(Mech systems SWH comm reqs) HVACR as modified 6-0-6  
 CED1-152-22(DOAS definition correction) HVACR disapprove 9-1-1  
 CECD1-12-22(DX DOAS committee proposal) HVACR approve 8-0-2  
 CED1-165-22(Demand control ventilation exception) HVACR as modified 7-3-2  
 CED1-167-22(Non-transient dwelling HRV/ERV exc) HVACR approve 8-0-2

## 8. Subcommittee Reports

## 9. Other business.

a. Public comment on any matters discussed at the meeting (Please limit comments to 2 minutes. Further comments can be directed to the Secretariat following the meeting to be considered at a future meeting.)

10. Next meeting Wednesday, March 22, 2023 at 2:00 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/>

Code Change Proposal Submittals

<https://energy.cdpaccess.com/login/>

FOR ADDITIONAL INFORMATION, PLEASE CONTACT:

Kristopher Stenger, AIA, Director of Energy Programs

International Code Council

[kstenger@iccsafe.org](mailto:kstenger@iccsafe.org)



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-040-22 EV ready space requirements modifications
CDP ID #	911
Code	IECC CE
Code Section(s)	C405.14
Location	base
Proponent	Ted Williams ngdllc@outlook.com
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: Committee desires to keep requirements for EV Charging including the number of spaces in the body of the standard based on prior actions.
Recommendation	DISAPPROVE
Vote	12 - 0 - 1
Recommendation Date	February 10, 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 #	CED1-038-22 EV charging infrastructure in appendix
CDP ID #	764
Code	IECC CE
Code Section(s)	C405.14
Location	appendix
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: The committee wishes to include the EV charging requirements to all occupancies previously required including R-2 occupancies.
Recommendation	DISAPPROVE
Vote	14 - 0 - 1
Recommendation Date	February 10, 2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>    X    </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-039-22 EV Ready requirements
CDP ID #	800
Code	IECC CE
Code Section(s)	C405.14
Location	base
Proponent	Bryan Holland     bryan.holland@nema.org
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: Provides important technical revisions, clarity and more enforceable language for EV charging.
Recommendation	APPROVE AS SUBMITTED
Vote	9 - 5 - 2
Recommendation Date	February 10, 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 #	CED1-016-22 EV Power transfer
CDP ID #	777
Code	IECC CE
Code Section(s)	C103.2
Location	base
Proponent	Sean Denniston sean@newbuildings.org
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reasons: Based on action taken on CED1-39.
Recommendation	DISAPPROVE
Vote	12 - 0 - 2
Recommendation Date	February 10, 2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>    X    </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-041-22 EV charging
CDP ID #	675
Code	IECC CE
Code Section(s)	C405.14.1
Location	base
Proponent	Alex Smith asmith@nahb.org
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: Maintaining significant EV charging requirements are needed in R2 occupancies to support GHG reduction efforts. Possible conflicts with residential code.
Recommendation	DISAPPROVE
Vote	11 - 0 - 2
Recommendation Date	February 10, 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 #	CED1-043-22 EV charging requirements
CDP ID #	823
Code	IECC CE
Code Section(s)	C405.14.1
Location	base
Proponent	Amy Martino     amartino@buildingsitesynergy.com
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: Maintaining a 3 ft. requirement is critical to providing future connections and this does not improve the technical requirements of the first draft.
Recommendation	DISAPPROVE
Vote	9 - 0 - 6
Recommendation Date	February 10, 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 #	CED1-042-22 EV charging
CDP ID #	704
Code	IECC CE
Code Section(s)	C405.14.1
Location	base
Proponent	Charles Eley charles@eley.com
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: The subcommittee felt that it was important to keep the EV Ready column to be consistent with local policies requiring EV Ready installations and to allow changes in values.
Recommendation	DISAPPROVE
Vote	10 - 4 - 2
Recommendation Date	February 24, 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 #	CED1-045-22 EV Ready requirements
CDP ID #	888
Code	IECC CE
Code Section(s)	C405.14.1 Table
Location	base
Proponent	Sam Bauer sam@theadhocgroup.com
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: Proposal would harmonize the requirements for B, E, I and M and S-2 and reduces the long-term costs associated with EV charging.
Recommendation	APPROVED
Vote	12 - 1 - 1
Recommendation Date	February 24, 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 #	CED1-044-22 EV charging level 3 Group M
CDP ID #	890
Code	IECC CE
Code Section(s)	C405.14.1
Location	base
Proponent	Andrew Poliakoff andrew.poliakoff@electrifyamerica.com
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: The proposal is not substantiated with a cost effectiveness study showing the offset of DCFC to the table percentages for EVSE and EV-Ready Spaces. There were also concerns about proposed calculations.
Recommendation	DISAPPROVE
Vote	9 - 4 - 2
Recommendation Date	February 24, 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 #	CED1-046-22 EV performance
CDP ID #	838
Code	IECC CE
Code Section(s)	C405.14.2
Location	base
Proponent	Don Chandler don.chandler@aesengr.com
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: Based on action taken on 139 during last meeting.
Recommendation	DISAPPROVE
Vote	9 - 0 - 5
Recommendation Date	February 24, 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 #	CED1-047-22 EVSE interoperability
CDP ID #	896
Code	IECC CE
Code Section(s)	C405.14.4
Location	base
Proponent	Sam Bauer sam@theadhocgroup.com
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: This is not an ANSI Standard, and there were concerns about other protocols that may be used, and about missing sections not being referenced.
Recommendation	DISAPPROVE
Vote	12 - 0 - 1
Recommendation Date	February 24, 2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u> X </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____



## International Energy Conservation Code Code Change Proposal Tracking Sheet



Date	
Proposal #	CED1-048-22 EV circuit capacity management
CDP ID #	811
Code	IECC CE
Code Section(s)	C405.14.5.1
Location	base
Proponent	Emily Kelly emily.kelly@chargepoint.com
Proposal Status	SC review
Subcommittee	CE Elec, Light
Subcommittee Notes	Reason: Based on our actions from #CED1-39 from our last meeting.
Recommendation	DISAPPROVE
Vote	12 - 0 - 1
Recommendation Date	February 24, 2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>    X    </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____





## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CECD1-11-22 Low-sloped roof definition
CDP ID #	
Code	IECC CE
Code Section(s)	C202
Location	base
Proponent	IECC-C Envelope and embodied carbon subcommittee (Tom Culp, chair)
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> The definition of slopes, with regard to roofing, is clarified.
Recommendation	<p><b>Approve as modified</b></p> <p><b>Modification:</b>  <del>LOW SLOPE</del><del>LOW SLOPED ROOF.</del> A <del>roof</del> having a slope less than 2 units vertical in 12 units horizontal (<u>17-percent slope</u>) <u>as applied to roofs.</u></p> <p style="background-color: yellow; text-align: center;">&lt;ANY TEXT IN ORIGINAL PROPOSAL THAT IS NOT SHOWN REMAINS UNCHANGED&gt;</p>
Vote	<b>Approve as modified</b> 12-0-2 (CNV)
Recommendation Date	2/16/23
Next Step	To Subcommittee _____ To Advisory Group _____ To Consensus Committee <u>    X    </u> _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____

Date 	
 <b>International Energy Conservation Code Code Change Proposal Tracking Sheet</b>	

Proposal #	CE1-145-22 C503.2.1 remove redundant sentence
CDP ID #	761
Code	IECC CE
Code Section(s)	C503.2.1
Location	base
Proponent	Jay Crandell jcrandell@aresconsulting.biz
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> Removes redundant text and clarifies requirements for item 1.
Recommendation	<p><b>Approve as modified</b></p> <p><b>Modification:</b>  C503.2.1 . Insulation complying with Section C402.1 and Section C402.2.1, or an <i>approved</i> design that minimizes deviation from the insulation requirements, shall be provided for the following roof alterations:</p> <ol style="list-style-type: none"> <li>An alteration of roof-ceiling construction <u>other than reroofing</u> where <u>existing there is no</u> insulation <u>located below the roof deck or on an attic floor</u> above conditioned space <u>does not comply with Table C402.1.2.</u></li> </ol> <p style="background-color: yellow; text-align: center;"><b>&lt;ANY TEXT IN ORIGINAL PROPOSAL THAT IS NOT SHOWN REMAINS UNCHANGED&gt;</b></p>
Vote	<b>Approve as modified</b> 13-0-1 (CNV)
Recommendation Date	2/16/23
Next Step	To Subcommittee _____ To Advisory Group _____ To Consensus Committee <u>      X      </u>
Consensus Committee	

Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-146-22 Roof alterations
CDP ID #	762
Code	IECC CE
Code Section(s)	C503.2.1
Location	base
Proponent	Jeff Mang jeff@jcmangconsulting.com
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> Clarifies requirements for roof replacements where insulation is located entirely above deck.
Recommendation	<p><b>Approve as modified</b></p> <p><b>Modification:</b>  <b>C503.2.1</b> Insulation complying with Section C402.1 and Section C402.2.1, or an <i>approved</i> design that minimizes deviation from the insulation requirements, shall be provided for the following roof alterations:</p> <p>1. An alteration to roof-ceiling construction where there is no insulation above conditioned space,</p> <p><del>2. Roof replacement, including any reroofing roof alteration other than a roof recover, where the roof assembly contains includes insulation for roofs with insulation entirely above the roof deck.</del></p> <p><u>2. Roof replacement or a roof alteration that includes removing and replacing the roof covering, where the roof assembly includes insulation entirely above the roof deck.</u></p> <p>&lt;ANY TEXT IN ORIGINAL PROPOSAL THAT IS NOT SHOWN REMAINS UNCHANGED&gt;</p>
Vote	<b>Approve as modified</b> 13-0-1 (CNV)
Recommendation Date	2/16/23

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 #	CED1-099-22 Equipment building thermal envelope exception
CDP ID #	793
Code	IECC CE
Code Section(s)	C402.1.1.3
Location	base
Proponent	Sumit Sunthankar ssunthankar@ciscocems.com
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> This proposal as modified addresses the types of heating systems available for these types of buildings.
Recommendation	<p><b>Approve as modified</b></p> <p><b>Modification:</b> C402.1.1.3 Equipment Building. Buildings that comply with the following shall be exempt from the <i>building thermal envelope</i> provisions of this code:</p> <ol style="list-style-type: none"> <li>1. Are separate buildings with floor area not more than 1,200 square feet (110 m<sup>2</sup>).</li> <li>2. Are intended to house electric equipment with installed equipment power totaling not less than 7 watts per square foot (75 W/m<sup>2</sup>) and not intended for human occupancy.</li> <li>3. Have a heating system capacity not greater than <del>(17,000 Btu/hr) (5 kW)</del> <u>(20,000 Btu/hr) (6kW)</u> and a heating thermostat setpoint that is restricted to not more than 50°F (10°C).</li> <li>4. Have an average wall and roof <i>U</i>-factor less than 0.200 in <i>Climate Zones</i> 1 through 5 and less than 0.120 in <i>Climate Zones</i> 6 through 8.</li> <li>5. Comply with the roof solar reflectance and thermal emittance provisions for <i>Climate Zone</i> 1.</li> <li><del>6. Equipment buildings intended to house environmentally sensitive equipment, not intended for human occupancy, and not exceeding 1000 sq. ft. will be exempt from the building thermal envelope provisions of this code.</del></li> </ol>
Vote	<b>Approve as modified 11-0-1 (CNV)</b>
Recommendation Date	2/16/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>    X    </u>
Consensus Committee	

Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-100-22 Mass walls
CDP ID #	856
Code	IECC CE
Code Section(s)	C402.1.2
Location	base
Proponent	Martha Vangeem martha.vangeem@gmail.com
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> This clarifies the text and section numbers for mass walls and floors.
Recommendation	<p><b>Approve as modified</b></p> <p><b>Modification:</b></p> <p>C402.1.2.1.3 Mass walls and floors. Compliance with required maximum U-factors for mass walls and mass floors in accordance with Table C402.1.2 shall be permitted for assemblies complying with Section C402.1.3. <b>3 6</b>.</p> <p>C402.1.3.6 Mass walls and <u>mass</u> floors. Compliance with required <u>maximum U-factors for mass walls and mass floors in accordance with Table C402.1.2 and</u> minimum R-values for insulation components applied to mass walls and mass floors in accordance with Table C402.1.3 shall be permitted for assemblies complying with the following:</p> <p><b>&lt;ANY TEXT IN ORIGINAL PROPOSAL THAT IS NOT SHOWN REMAINS UNCHANGED&gt;</b></p>
Vote	<b>Approve as modified</b> 12-0-1 (CNV)
Recommendation Date	2/16/23
Next Step	To Subcommittee _____ To Advisory Group _____ To Consensus Committee <u>    X    </u>



Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-105-22 Relocate mass wall criteria
CDP ID #	722
Code	IECC CE
Code Section(s)	C402.1.2.1.4
Location	base
Proponent	Jay Crandell jcrandell@aresconsulting.biz
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> Disapproved based on action taken on CED1-100 which resolved the concern.
Recommendation	<b>Disapprove</b>
Vote	<b>Disapprove</b> 11-0-2 (CNV)
Recommendation Date	2/16/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <input checked="" type="checkbox"/> _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____

Date



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-101-22 Frame wall factor consistency
CDP ID #	831
Code	IECC CE
Code Section(s)	C402.1.2 Table
Location	base
Proponent	Jeff Bradley jbradley@awc.org
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> The proposal contains an arbitrary assignment to the modification of U-values that were derived from a process that used an energy savings and cost-effectiveness analyses. This proposal also does not contain recommendations to also correlate the related R-values in Table C402.1.3 even though the proposal modifies the related U-factors to Table C402.1.2. Further, the IECC should not unfairly provide an advantage to competing materials.
Recommendation	<b>Disapprove</b>
Vote	<b>Disapprove</b> 6-3-5 (CNV)
Recommendation Date	2/16/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>  X  </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____

Date	
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## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-143-22 Frame walls single target
CDP ID #	794
Code	IECC CE
Code Section(s)	C407.4.1(1) Table
Location	base
Proponent	Jeff Bradley jbradley@awc.org
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> It was determined that the existing language “same as proposal” was sufficient and that the proposal did not offer an improvement. In addition, the language was felt to be confusing as the use of two sentences offered greater confusion. The net result of this proposal also provided an advantage to a competing material because the list of wall types in the proposal only included three of the four listed in the U-factor and R-value tables and excluded “metal framed”.
Recommendation	<b>Disapprove</b>
Vote	<b>Disapprove</b> 6-3-4 (CNV)
Recommendation Date	2/16/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>    </u> X <u>    </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-109-22 Steel frame u-factor framing clarification
CDP ID #	765
Code	IECC CE
Code Section(s)	C402.1.2.2
Location	base
Proponent	Jay Crandell jcrandell@aresconsulting.biz
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> The Draft #1 language that was approved in 2022 was preferred. In addition, the proposal did not contain further supplemental information that would support technical merits of the proposal's recommendations, nor how to verify the proposal was more accurate than the Draft #1 language as the proponent states. Further, the proposal does not address why the decisions by the IECC Commercial Consensus Committee and IECC Commercial Envelope Subcommittee for accepting CEP1-43-21 were not appropriate.
Recommendation	<b>Disapprove</b>
Vote	<b>Disapprove</b> 5-4-4
Recommendation Date	2/16/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>    X    </u>
Consensus Committee	
Committee Response	

Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-111-22 Table C402.1.3 footnote i										
CDP ID #	760										
Code	IECC CE										
Code Section(s)	C402.1.3										
Location	base										
Proponent	Jay Crandell jcrandell@aresconsulting.biz										
Proposal Status	SC review										
Subcommittee	CE Envelope										
Subcommittee Notes	<b>Reason:</b> addresses errata of footnote omitted but previously approved as part of CEPI-38; additional revisions were made for clarity of application.										
Recommendation	<p><b>Approve as modified</b></p> <p><b>Modification:</b></p> <p style="text-align: center;"><b>TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE ALTERNATIVES <sup>a</sup></b></p> <p>Portions of table not shown remain unchanged.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 20%; text-align: center;">Walls, above grade<sup>d</sup></th> </tr> </thead> <tbody> <tr> <td><b>Mass<sup>f</sup></b></td> <td></td> </tr> <tr> <td><b>Metal building</b></td> <td></td> </tr> <tr> <td><b>Metal framed <sup>h,i</sup></b></td> <td></td> </tr> <tr> <td><b>Wood framed and other <sup>h,i</sup></b></td> <td></td> </tr> </tbody> </table> <p><i>i. For metal framed walls and wood framed walls wWhere the required R-value in Table C402.1.3 is met by using continuous insulation such that cavity insulation is not required, the wall assembly framing is permitted to be spaced at any spacing up to and including 24 inches on center.</i></p> <p style="background-color: yellow; text-align: center;"><b>&lt;ANY TEXT IN ORIGINAL PROPOSAL THAT IS NOT SHOWN REMAINS UNCHANGED&gt;</b></p>		Walls, above grade <sup>d</sup>	<b>Mass<sup>f</sup></b>		<b>Metal building</b>		<b>Metal framed <sup>h,i</sup></b>		<b>Wood framed and other <sup>h,i</sup></b>	
	Walls, above grade <sup>d</sup>										
<b>Mass<sup>f</sup></b>											
<b>Metal building</b>											
<b>Metal framed <sup>h,i</sup></b>											
<b>Wood framed and other <sup>h,i</sup></b>											
Vote	<b>Approve as modified</b> 12-0-2 (CNV)										
Recommendation Date	2/16/23										

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 #	CED1-112-22 C402.1.3 conflicting language fix
CDP ID #	865
Code	IECC CE
Code Section(s)	C402.1.3
Location	base
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason Statement:</b> Conflicting language is corrected. As written the code requires all buildings to comply with Group R requirements.
Recommendation	<b>Approve as submitted</b>
Vote	<b>Approve as submitted</b> 12-0-1
Recommendation Date	2/16/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>    X    </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-113-22 R-Table "other" wall and roof assemblies
CDP ID #	763
Code	IECC CE
Code Section(s)	C402.1.3 Table
Location	base
Proponent	Jay Crandell jcrandell@aresconsulting.biz
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> This would complicate the code for the user by not allowing an R-value path for "other" categories and metal frame walls that aren't cold form steel.
Recommendation	<b>Disapprove</b>
Vote	<b>Disapprove 8-3-2 (CNV)</b>
Recommendation Date	2/16/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____ X _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____  To Subcommittee _____

Date	
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## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-114-22 Stud cavity insulation
CDP ID #	848
Code	IECC CE
Code Section(s)	C402.1.3.1
Location	base
Proponent	Brian Trimble btrimble@imiweb.org
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> Does not consider horizontal framing applications for layered insulation.
Recommendation	<b>Disapprove</b>
Vote	<b>Disapprove</b> 11-0-2 (CNV)
Recommendation Date	2/16/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____X_____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____

Date	
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## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-115-22 CEPI-27 as modified deletion of section
CDP ID #	758
Code	IECC CE
Code Section(s)	C402.1.3.3
Location	base
Proponent	Jay Crandell jcrandell@aresconsulting.biz
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason Statement:</b> These deletions were previously agreed on. In CEPI-27 (as modified/replaced) three subsections were deleted from the original proposal. However, in the public review draft, these sections were not shown as deleted. This proposal makes those deletions as a procedural "correction" to the draft.
Recommendation	<b>Approve as submitted</b>
Vote	<b>Approve as submitted</b> 12-0-1
Recommendation Date	2/16/23
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 #	CED1-116-22 Assembly construction section removal
CDP ID #	891
Code	IECC CE
Code Section(s)	C402.1.3.4
Location	base
Proponent	Martha Vangeem martha.vangeem@gmail.com
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason:</b> Based on prior action on CED1-115.
Recommendation	<b>Disapprove</b>
Vote	<b>Disapprove</b> 11-0-1 (CNV)
Recommendation Date	2/16/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <input checked="" type="checkbox"/> _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-162-22 DR HVAC Requirements exception for R-2 Occupancies
CDP ID #	678
Code	IECC CE
Code Section(s)	C403.4.6
Location	base
Proponent	Alex Smith asmith@nahb.org
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason Statement:</b> There is not a large additional cost to provide DR-capable thermostats compared to a standard programmable thermostat, but there is a large cost to replace a non-DR thermostat if a DR-thermostat is needed to participate in a program.
Recommendation	<b>Disapprove as modified</b> <b>See the full proposal below</b>  <b>Note: the modification removes the proposed energy credit additions, as they are included in CED1-161.</b>
Vote	<b>Disapprove as modified 7-1-4</b>
Recommendation Date	2/15/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>  X  </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____  To Subcommittee _____

Date	
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# 2024 International Energy Conservation Code [CE Project]

Revise as follows:

**C403.4.6 Demand responsive controls.** Buildings shall be provided with demand responsive controls capable of executing the following actions in response to a demand response signal:

1. Automatically increasing the zone operating cooling set point by the following values: 1°F (0.5°C), 2°F (1°C), 3°F (1.5°C), and 4°F (2°C).
2. Automatically decreasing the zone operating heating set point by the following values: 1°F (0.5°C), 2°F (1°C), 3°F (1.5°C), and 4°F (2°C).

Where a demand response signal is not available the heating and cooling system controls shall be capable of performing all other functions. Where thermostats are controlled by direct digital control including, but not limited to, an energy management system, the system shall be capable of demand responsive control and capable of adjusting all thermal set-points to comply. The demand responsive controls shall comply with either Section C403.4.6.1 or Section C403.4.6.2

**Exceptions:**

1. Group I occupancies
2. Group H occupancies
3. Group R-2 occupancies
- ~~4.~~ Controls serving data center systems
- ~~5.~~ Occupancies or applications requiring precision in indoor temperature control as approved by the code official
- ~~6.~~ Controls that serve only fossil fuel equipment

**TABLE C406.2(1) BASE ENERGY CREDITS FOR GROUP R-2, R-4, AND I-1 OCCUPANCIES<sup>a</sup>**

ID	Energy Credit Measure	Section	Climate Zone																		
			0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
E01	Envelope Performance	C406.2.1.1	Determined in accordance with Section C406.2.1.1																		
E02	GA reduction (15E)	C406.2.1.2	8	13	7	11	6	8	9	6	1	24	8	9	30	15	5	32	28	31	36
E03	Envelope leak reduction	C406.2.1.3	15	10	12	8	6	16	13	5	1	7	7	9	65	16	1	73	43	52	26
E04	Add Roof Insulation	C406.2.1.4	1	1	1	1	1	1	4	3	1	5	3	4	6	5	1	7	7	6	8
E05	Add Wall Insulation	C406.2.1.5	10	10	6	8	5	6	8	4	1	8	3	4	11	7	1	14	12	13	13
E06	Improve Fenestration	C406.2.1.6	7	7	4	6	9	11	13	3	1	22	5	10	27	18	7	41	33	22	21
H01	H AC Performance	C406.2.2.1	20	19	16	17	14	13	11	11	5	13	10	8	15	12	7	18	14	17	19
H02	Heating efficiency	C406.2.2.2	x	x	x	x	x	x	3	1	1	6	2	3	10	5	2	14	10	13	16
H03	Cooling efficiency	C406.2.2.3	7	6	4	4	3	3	1	1	1	1	1	1	1	1	x	x	x	x	x
H04	Residential H AC control	C406.2.2.4	9	10	8	22	20	25	16	17	32	21	24	17	23	27	16	21	24	18	18
H05	DOAS/fan control	C406.2.2.5	32	31	27	28	23	23	28	21	12	42	24	24	56	36	19	73	54	70	79
W01	SHW preheat recovery	C406.2.3.1 <sup>a</sup>	61	63	74	74	85	88	101	100	121	103	109	122	102	111	130	93	106	99	96

ID	Energy Credit Measure	Section	Climate Zone																			
			0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8	
W02	Heat pump water heater	C406.2.3.1b	50	52	62	61	72	74	86	85	104	88	94	106	88	96	112	81	92	87	84	
W03	Efficient gas water heater	C406.2.3.1c	38	39	46	46	53	55	63	62	76	64	68	76	64	69	81	58	66	62	60	
W04	SHW pipe insulation	C406.2.3.2	7	7	8	7	8	8	8	9	10	8	9	9	7	8	9	6	7	6	6	
W05	Point of use water heaters	C406.2.3.3a	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
W06	Thermostatic bal. valves	C406.2.3.3b	3	3	3	3	3	3	3	3	4	3	3	4	3	3	4	3	3	3	2	
W07	SHW heat trace system	C406.2.3.3c	12	12	13	13	14	15	15	15	18	14	15	16	13	14	16	11	13	11	10	
W08	SHW submeters	C406.2.3.4	11	11	13	13	15	16	18	18	22	19	20	22	19	20	24	17	20	18	18	
W09	SHW distribution sizing	C406.2.3.5	45	46	55	54	63	65	74	73	89	75	80	89	74	81	95	68	77	72	70	
W10	Shower heat recovery	C406.2.3.6	15	16	19	19	22	23	26	26	32	27	29	32	27	29	34	25	28	27	26	
P01	Energy monitoring	C406.2.4	3	3	2	3	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	
<del>X01</del>	<del>Demand Responsive Space Conditioning (R-2)</del>	<del>C406.2.X</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	<del>TBD</del>	
C01	Cighting Performance	C406.2.5.1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
C02	Cighting dimming H tuning	C406.2.5.2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
C03	Increase occp. sensor	C406.2.5.3	3	3	4	4	4	4	3	4	3	2	3	2	1	1	2	1	1	1	1	
C04	Increase daylight area	C406.2.5.4	5	5	5	5	5	5	4	4	4	4	4	3	3	4	3	2	3	3	2	
C05	Residential light control	C406.2.5.5	8	8	9	9	9	9	8	8	10	6	8	7	4	6	8	3	5	4	3	
C06	Cight power reduction	C406.2.5.7	2	2	2	2	2	2	2	2	2	1	2	1	1	1	1	1	1	1	1	
001	Efficient elevator	C406.2.7.1	4	4	4	4	5	5	5	5	5	4	5	5	4	4	5	4	4	4	3	
002	Commercial kitchen equip.	C406.2.7.2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
003	Residential kitchen equip.	C406.2.7.3	15	15	17	16	17	18	17	18	20	16	17	18	15	16	18	13	15	13	12	
004	Fault detection	C406.2.7.4	3	3	2	3	2	2	2	2	1	2	2	1	1	2	1	3	2	3	3	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-166-22 Clarifications to Parking Garage Ventilation
CDP ID #	677
Code	IECC CE
Code Section(s)	C403.7.2
Location	base
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason Statement:</b> The proposal adds clarity to the parking garage ventilation requirements.
Recommendation	<b>Approve as modified</b> <b>See the full proposal below</b>
Vote	<b>Approve as modified 9-0-4</b>
Recommendation Date	2/15/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>  X  </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	

# 2024 International Energy Conservation Code [CE Project]

Revise as follows:

**C403.7.2 Parking garage ventilation systems.** ~~Where~~ ventilation systems are employed in enclosed parking garages used for storing or handling automobiles operating under their own power shall comply with Section 404.1 of the *International Mechanical Code* and the following: ~~meet all of the following:~~

1. Separate ventilation systems and control systems shall be provided for each parking garage section.
2. Control systems for each parking garage section shall ~~automatically detect and control contaminant levels in accordance with the *International Mechanical Code*, and shall~~ be capable of and configured to reduce fan airflow to not less than 0.05 cfm per square foot [0.0025 m<sup>3</sup>/(s • m<sup>2</sup>)] of the floor area served and not more than 20 percent or less of the design capacity.
3. The ventilation system for each parking garage section shall have controls and devices that result in fan motor demand of no more than 30 percent of design wattage at 50 percent of the design airflow.

**Exception:** Garage ventilation systems serving a single parking garage section having a total ventilation system motor nameplate horsepower (ventilation system motor nameplate kilowatt) not exceeding 5 hp (3.7 kW) at fan system design conditions and where the parking garage section has no mechanical cooling or mechanical heating.

~~Nothing in this section shall be construed to require more than one parking garage section in any parking structure.~~

**PARKING GARAGE SECTION.** A part of an enclosed parking garage that is separated from all other parts of the garage by full-height solid walls or operable openings that are intended to remain closed during normal operation and where vehicles cannot pass to other parts of the garage. A parking garage can have one or more parking garage sections and parking garage sections can include multiple floors. ~~It may include multiple floors if there are ramps to allow vehicles to pass between the floors.~~



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-170-22 Provide Exception for R-2 Occupancies for DR Water Heater Controls
CDP ID #	665
Code	IECC CE
Code Section(s)	C404.10
Location	base
Proponent	Greg Johnson gjohnsonconsulting@gmail.com
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<b>Reason Statement:</b> The reason statement as submitted stands, other than the removal of new credits for providing DR controls in R-2 occupancies. The new credits are not needed because another proposal, CED1-176, if passed, would provide credits when DR controls are not required.
Recommendation	<b>Approve as modified</b> <b>See the full proposal below</b>
Vote	<b>Approve as modified</b> 3-2-6
Recommendation Date	2/15/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <input checked="" type="checkbox"/> _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____

# 2024 International Energy Conservation Code [CE Project]

Revise as follows:

C404.10 Demand responsive water heating. Electric storage water heaters with a rated water storage volume of 40 gallons (150L) to 120 gallons (450L) and a nameplate input rating equal to or less than 12kW shall be provided with demand responsive controls in accordance with Table C404.10 or another equivalent approved standard.

Exceptions:

1. Water heaters that provide a hot water delivery temperature of 180°F (82°C) or greater.
2. Water heaters that comply with Section IV, Part HLW or Section X of the ASME Boiler and Pressure Vessel Code.
3. Water heaters that use 3-phase electric power.

#### 4 Water heaters in R-2 occupancies.

TABLE C406.2(1) BASE ENERGY CREDITS FOR GROUP R-2, R-4, AND I-1 OCCUPANCIES<sup>a</sup>

ID	Energy Credit Measure	Section	Climate Zone																		
			0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
E01	Envelope Performance	C406.2.1.1	Determined in accordance with Section C406.2.1.1																		
E02	GA reduction (15E)	C406.2.1.2	8	13	7	11	6	8	9	6	1	24	8	9	30	15	5	32	28	31	36
E03	Envelope leak reduction	C406.2.1.3	15	10	12	8	6	16	13	5	1	7	7	9	65	16	1	73	43	52	26
E04	Add Roof Insulation	C406.2.1.4	1	1	1	1	1	1	4	3	1	5	3	4	6	5	1	7	7	6	8
E05	Add Wall Insulation	C406.2.1.5	10	10	6	8	5	6	8	4	1	8	3	4	11	7	1	14	12	13	13
E06	Improve Fenestration	C406.2.1.6	7	7	4	6	9	11	13	3	1	22	5	10	27	18	7	41	33	22	21
H01	HVAC Performance	C406.2.2.1	20	19	16	17	14	13	11	11	5	13	10	8	15	12	7	18	14	17	19
H02	Heating efficiency	C406.2.2.2	x	x	x	x	x	x	3	1	1	6	2	3	10	5	2	14	10	13	16
H03	Cooling efficiency	C406.2.2.3	7	6	4	4	3	3	1	1	1	1	1	1	1	1	x	x	x	x	x
H04	Residential HVAC control	C406.2.2.4	9	10	8	22	20	25	16	17	32	21	24	17	23	27	16	21	24	18	18
H05	DCASIfan control	C406.2.2.5	32	31	27	28	23	23	28	21	12	42	24	24	56	36	19	73	54	70	79
W01	SHW preheat recovery	C406.2.3.1 a	61	63	74	74	85	88	101	100	121	103	109	122	102	111	130	93	106	99	96
W02	Heat pump water heater	C406.2.3.1 b	50	52	62	61	72	74	86	85	104	88	94	106	88	96	112	81	92	87	84
W03	Efficient gas water heater	C406.2.3.1 c	38	39	46	46	53	55	63	62	76	64	68	76	64	69	81	58	66	62	60
W04	SHW pipe insulation	C406.2.3.2	7	7	8	7	8	8	8	9	10	8	9	9	7	8	9	6	7	6	6
W05	Point of use water heaters	C406.2.3.3 a	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

ID	Energy Credit Measure	Section	Climate Zone																			
			0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8	
W06	Thermostatic bal. valves	C406.2.3.3b	3	3	3	3	3	3	3	3	3	3	4	3	3	4	3	3	4	3	3	2
W07	SHW heat trace system	C406.2.3.3c	12	12	13	13	14	15	15	15	15	18	14	15	16	13	14	16	11	13	11	10
W08	SHW submeters	C406.2.3.4	11	11	13	13	15	16	18	18	22	19	20	22	19	20	24	17	20	18	18	
W09	SHW distribution sizing	C406.2.3.5	45	46	55	54	63	65	74	73	89	75	80	89	74	81	95	68	77	72	70	
W10	Shower heat recovery	C406.2.3.6	15	16	19	19	22	23	26	26	32	27	29	32	27	29	34	25	28	27	26	
P01	Energy monitoring	C406.2.4	3	3	2	3	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	
<del>X01</del>	<del>Demand Response Water Heater (R-2)</del>	<del>C406.2.X</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	<del>FBD</del>	
L01	Lighting Performance	C406.2.5.1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
L02	Lighting dimming H tuning	C406.2.5.2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
L03	Increase occp. sensor	C406.2.5.3	3	3	4	4	4	4	3	4	3	2	3	2	1	1	2	1	1	1	1	
L04	Increase daylight area	C406.2.5.4	5	5	5	5	5	5	4	4	4	4	4	3	3	4	3	2	3	3	2	
L05	Residential light control	C406.2.5.5	8	8	9	9	9	9	8	8	10	6	8	7	4	6	8	3	5	4	3	
L06	Light power reduction	C406.2.5.7	2	2	2	2	2	2	2	2	2	1	2	1	1	1	1	1	1	1	1	
001	Efficient elevator	C406.2.7.1	4	4	4	4	5	5	5	5	5	4	5	5	4	4	5	4	4	4	3	
002	Commercial kitchen equip.	C406.2.7.2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
003	Residential kitchen equip.	C406.2.7.3	15	15	17	16	17	18	17	18	20	16	17	18	15	16	18	13	15	13	12	
004	Fault detection	C406.2.7.4	3	3	2	3	2	2	2	2	1	2	2	1	1	2	1	3	2	3	3	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-177-22 Mechanical systems SWH commissioning reqs
CDP ID #	775
Code	IECC CE
Code Section(s)	C408.2
Location	base
Proponent	Aaron McEwin amcewin@jordanskala.com
Proposal Status	SC review
Subcommittee	CE HVACR & WH
Subcommittee Notes	Reason Statement: To clarify the commissioning requirements for simple systems and the exception for certain components within dwelling units.
Recommendation	Approve As Modified (see modifications below)
Vote	Approve As Modified 6-0-6
Recommendation Date	2/23/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <input checked="" type="checkbox"/> _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____



Date	
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Revise as follows:

**C408.2 Mechanical systems and service water-heating systems commissioning and completion requirements.** Prior to the final mechanical and plumbing inspections, the *registered design professional or approved agency* shall provide evidence of mechanical systems *commissioning* and completion in accordance with the provisions of this section.

*Construction document* notes shall clearly indicate provisions for *commissioning* and completion requirements in accordance with this section and are permitted to refer to specifications for further requirements. Copies of all documentation shall be given to the owner or owner's authorized agent and made available to the *code official* upon request in accordance with Sections C408.2.4 and C408.2.5.

**Exceptions:** The following systems are exempt:

1. Buildings with less than 10,000 square feet (929 m<sup>2</sup>) gross conditioned floor area and combined heating, cooling, and service water-heating capacity of less than 960,000 Btu/h (280kW).

~~2. Systems included in Section C403.5 that serve individual dwelling units and sleeping units.~~

2. Components within dwelling units and sleeping units served by one of the following systems:

2.1. Simple unitary or packaged HVAC equipment listed in Table C403.3.2(1), Table C403.3.2(2), Table C403.3.2(4), Table C403.3.2(5) each serving one zone and controlled by a single thermostat in the zone served.

2.2 Two-pipe heating systems installed in the dwelling serving one or more zones, where no cooling system is installed.



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-152-22 DOAS definition correction
CDP ID #	697
Code	IECC CE
Code Section(s)	C202
Location	base
Proponent	Nicholas O'Neil noneil@energy350.com
Proposal Status	SC review
Subcommittee	CE HVACR & WH
Subcommittee Notes	<b>Reason Statement:</b> The existing language is sufficient. Subcommittee efforts to make modifications did not result in agreed-upon improvements.
Recommendation	Disapprove
Vote	Disapprove 9-1-1
Recommendation Date	2/23/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <input checked="" type="checkbox"/> _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CECD1-12-22 Update DX-DOAS Table
CDP ID #	1513
Code	IECC CE
Code Section(s)	Tables C403.3.2[12] and C403.3.2[13]
Location	base
Proponent	Laura Petrillo-Groh lpetrillogroh@ahrinet.org
Proposal Status	SC review
Subcommittee	CE Envelope
Subcommittee Notes	<p><b>Reason Statement: Reason:</b></p> <p>To ensure marketplace consistency with DOE’s adoption of ISMRE2 and IS COP2 levels based on AHRI 920-2020, this committee drafted proposal includes the following changes:</p> <ol style="list-style-type: none"> <li>1. Updates existing IECC 2021 ISMRE and IS COP standards to ISMRE2 and IS COP2 standards consistent with the Department of Energy final rule, published in the Federal Register on November 1, 2022. (87 FR 65651) <ol style="list-style-type: none"> <li>a. Note: The effective date of this rule was January 3, 2023. Compliance with the standards established for DX-DOASes in this final rule is required on and after May 1, 2024, so no date was proposed herein as standards will already be federally effective upon publication of UECC 2025.</li> </ol> </li> <li>2. For the four equipment classes covered by 90.1, but not considered by DOE, this proposal harmonizes with Addendum cv of ASHRAE Standard 90.1-2019, changing ISMRE and IS COP standards to ISMRE2 and IS COP2 standards based on an industry analysis. Four of these equipment classes were be combined into two.</li> <li>3. Adds AHRI Standard 920-2020 to Normative References in Section 6</li> </ol>
Recommendation	<b>Approve</b>
Vote	<b>Approve 8-0-2</b>
Recommendation Date	2/23/23
Next Step	<p>To Subcommittee _____</p> <p>To Advisory Group _____</p> <p>To Consensus Committee <u>    X    </u></p>

Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	

# **CECD1-12-22**

IECC: TABLE C403.3.2(12), TABLE C403.3.2(13), 6 AHRI, AHRI Chapter 06

Proponents: John Bade, representing ICC Commercial HVACR & water heading subcommittee

## **2024 International Energy Conservation Code [CE Project]**

Revise as follows:

**TABLE C403.3.2(12) ELECTRICALLY OPERATED DX-DOAS UNITS, SINGLE-PACKAGE AND REMOTE CONDENSER, WITHOUT ENERGY RECOVERY—MINIMUM EFFICIENCY REQUIREMENTS<sup>b</sup>**

EQUIPMENT TYPE	SUBCATEGORY OR RATING CONDITION	MINIMUM EFFICIENCY	TEST PROCEDURE <sup>a</sup>
Air cooled (dehumidification mode)	—	<del>4.0</del> <u>3.8</u> ISMRE <u>2</u>	AHRI 920
Air-source heat pumps (dehumidification mode)	—	<del>4.0</del> <u>3.8</u> ISMRE <u>2</u>	AHRI 920
Water cooled (dehumidification mode)	Cooling tower condenser water	<del>4.9</del> <u>4.7</u> ISMRE <u>2</u>	AHRI 920
	<del>Chilled water</del>	<del>6.0</del> ISMRE	
Air-source heat pump (heating mode)	—	<del>2.7</del> <u>2.05</u> ISCOP <u>2</u>	AHRI 920
Water-source heat pump (dehumidification mode)	Ground source, closed <u>and open</u> loop <sup>b</sup>	<del>4.8</del> <u>4.6</u> ISMRE <u>2</u>	AHRI 920
	<del>Ground water source</del>	<del>5.0</del> ISMRE	
	Water source	<del>4.0</del> <u>3.8</u> ISMRE <u>2</u>	
Water-source heat pump (heating mode)	Ground source, closed <u>and open</u> loop <sup>b</sup>	<del>2.0</del> <u>2.13</u> ISCOP <u>2</u>	AHRI 920
	<del>Ground water source</del>	<del>3.2</del> ISCOP	
	Water source	<del>3.5</del> <u>2.13</u> ISCOP <u>2</u>	

- 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. ~~This table is a replica of ASHRAE 90.1 Table 6.8.1-13 Electrically Operated DX-DOAS Units, Single Package and Remote Condenser, without Energy Recovery—Minimum Efficiency Requirements. For minimum efficiency compliance purposes, open loop systems shall be rated using closed-loop test conditions.~~

**TABLE C403.3.2(13) ELECTRICALLY OPERATED DX-DOAS UNITS, SINGLE-PACKAGE AND REMOTE CONDENSER, WITH ENERGY RECOVERY—MINIMUM EFFICIENCY REQUIREMENTS<sup>b</sup>**

EQUIPMENT TYPE	SUBCATEGORY OR RATING CONDITION	MINIMUM EFFICIENCY	TEST PROCEDURE <sup>a</sup>
Air cooled (dehumidification mode)	—	<del>5.2</del> <u>5.0</u> ISMRE <sub>2</sub>	AHRI 920
Air-source heat pumps (dehumidification mode)	—	<del>5.2</del> <u>5.0</u> ISMRE <sub>2</sub>	AHRI 920
Water cooled (dehumidification mode)	Cooling tower condenser water	<del>5.3</del> <u>5.1</u> ISMRE <sub>2</sub>	AHRI 920
	<del>Chilled water</del>	<del>6.6</del> ISMRE	
Air-source heat pump (heating mode)	—	<del>3.3</del> <u>3.2</u> ISCOP <sub>2</sub>	AHRI 920
Water-source heat pump (dehumidification mode)	Ground source, closed <u>and open loop</u> <sup>b</sup>	<del>5.2</del> <u>5.0</u> ISMRE <sub>2</sub>	AHRI 920
	<del>Ground water source</del>	<del>5.8</del> ISMRE	
	Water source	<del>4.8</del> <u>4.6</u> ISMRE <sub>2</sub>	
Water-source heat pump (heating mode)	Ground source, closed and open loop <sup>b</sup>	<del>3.8</del> <u>3.5</u> ISCOP <sub>2</sub>	AHRI 920
	<del>Ground water source</del>	<del>4.0</del> ISCOP	
	Water source	<del>4.8</del> <u>4.04</u> ISCOP <sub>2</sub>	

- 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. ~~This table is a replica of ASHRAE 90.1 Table 6.8.1-14 Electrically Operated DX-DOAS Units, Single Package and Remote Condenser, with Energy Recovery—Minimum Efficiency Requirements. For minimum efficiency compliance purposes, open loop systems shall be rated using closed-loop test conditions.~~

**AHRI**

Air-Conditioning, Heating, & Refrigeration Institute  
~~2111~~ 2311 Wilson Blvd, Suite ~~500~~ 400  
 Arlington, VA 22201

**AHRI**

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 Arlington, VA 22201

~~920—2015~~:ANSI/AHRI 920-2020 Performance Rating of DX-Dedicated Outdoor Air System Units with Addendum 1:

**Reason:** To ensure marketplace consistency with DOE’s adoption of ISMRE2 and ISCOP2 levels based on AHRI 920-2020, this committee drafted proposal includes the following changes:

- Updates existing IECC 2021 ISMRE and ISCOP standards to ISMRE2 and ISCOP2 standards consistent with the Department of Energy final rule, published in the Federal Register on November 1, 2022. (87 FR 65651)
  - Note: The effective date of this rule was January 3, 2023. Compliance with the standards established for DX-DOASes in this final rule is required on and after May 1, 2024, so no date was proposed herein as standards will already be federally effective upon publication of UECC 2025.
- For the four equipment classes covered by 90.1, but not considered by DOE, this proposal harmonizes with Addendum cv of ASHRAE Standard 90.1-2019, changing ISMRE and ISCOP standards to ISMRE2 and ISCOP2 standards based on an industry analysis. Four of these equipment classes were be combined into two.
- Adds AHRI Standard 920-2020 to Normative References in Section 6

**Cost Impact:** The code change proposal will neither increase nor decrease the cost of construction. This change is not expected to change the cost of construction.



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-165-22 Demand control ventilation exception
CDP ID #	862
Code	IECC CE
Code Section(s)	C403.7.1
Location	base
Proponent	Thomas Nagy tnagy@enverid.com
Proposal Status	SC review
Subcommittee	CE HVACR & WH
Subcommittee Notes	Reason Statement: To clarify DCV exception for engineered ventilation systems and for alignment with the International Mechanical Code.
Recommendation	Approve As Modified (see modifications below)
Vote	Approve As Modified 7-3-2
Recommendation Date	2/23/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u> X </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____



Date	
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Add new text as follows:

**C403.7.1 Demand control ventilation.** Demand control ventilation (DCV) shall be provided for the following:

1. Spaces with ventilation provided by single-zone systems where an air-side economizer is provided in accordance with Section C403.5.
2. Spaces larger than 250 square feet (23.2 m<sup>2</sup>) in climate zones 5A, 6, 7, and 8 and spaces larger than 500 square feet (46.5 m<sup>2</sup>) in other climate zones which have a design occupant load of 15 people or greater per 1,000 square feet (93 m<sup>2</sup>) of floor area, as established in Table 403.3.1.1 of the International Mechanical Code, and are served by systems with one or more of the following:
  - 2.1 An air-side economizer.
  - 2.2 Automatic modulating control of the outdoor air damper.
  - 2.3 A design outdoor airflow greater than 3,000 cfm (1416 L/s)

Exceptions:

1. Spaces served by systems with energy recovery in accordance with Section C403.7.4.2 and that have a floor area less than:
  - 1.1 6000 square feet (2600 m<sup>2</sup>) in climate zone 3C.
  - 1.2 2000 square feet (190 m<sup>2</sup>) in climate zones 1A, 3B, and 4B.
  - 1.3 1000 square feet (90 m<sup>2</sup>) in climate zones 2A, 2B, 3A, 4A, 4C, 5 and 6.
  - 1.4 400 square feet (40 m<sup>2</sup>) in climate zones 7 and 8.
2. Multiple-zone systems without direct digital control of individual zones communicating with a central control panel.
3. Spaces served by multiple-zone systems with a system design outdoor airflow less than 750 cfm (354 L/s).
4. Spaces where more than 75 percent of the space design outdoor airflow is required for makeup air that is exhausted from the space or transfer air that is required for makeup air that is exhausted from other spaces.
5. Spaces with one of the following occupancy classifications as defined in Table 403.3.1.1 of the *International Mechanical Code*: correctional cells, education laboratories, barber, beauty and nail salons, and bowling alley seating areas.
6. ~~Spaces using air cleaning in compliance with the ASHRAE 62.1 Indoor Air Quality Procedure.~~ Spaces where the *registered design professional* demonstrates an engineered ventilation system design that complies with the following:
  - 6.1 ~~It prevents the maximum concentration of contaminants from exceeding that obtainable by the required rate of outdoor air ventilation, and~~
  - 6.2 ~~It allows the required minimum design rate of outdoor air to be reduced by no less than 15%.~~



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	CED1-167-22 Nontransient dwelling units HRV/ERV exception
CDP ID #	679
Code	IECC CE
Code Section(s)	C403.7.4
Location	base
Proponent	Alex Smith asmith@nahb.org
Proposal Status	SC review
Subcommittee	CE HVACR & WH
Subcommittee Notes	Reason Statement: To remove the “corridor” related criteria for the HRV/ERV exception for very small dwelling units (500 sqft and less) in certain climate zones which was restrictive and had questionable cost-effectiveness.
Recommendation	Approve
Vote	Approve 8-0-2
Recommendation Date	2/23/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u> X </u>
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	