



## International Energy Conservation Code Consensus Committee-Residential

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

[Webex Meeting Link](#)

March 23, 2023

2:00 PM EST to 5 PM EST (3 hours)

**Committee Chair:** JC Hudgison, CBO, Assoc. AIA

**Committee Vice Chair:** Bridget Herring & Robin Yochum, LEED Green Associate

1. Call to order.
2. Meeting Conduct.
  - 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.

4. Approve Agenda

5. Approve Minutes-March 16, 2023

6. Administrative issues-staff

7. Action Items

Tabled items from 3/16

RED1-89-22(Renewables contract length)	Modeling as modified 13-1-2
REPCD1-1-22	
RED1-38-22(Annual energy cost performance exception)	Modeling disapproved 11-1-1
RED1-52-22(Simulated performance compliance)	Modeling disapproved 11-1-1
RED1-44-22(R405.2.3 exception)	Modeling disapproved 13-1-2
RED1-39-22(Exception for R405.2)	Modeling disapproved 13-0-0
RED1-48-22(Simulated performance compliance)	Modeling disapproved 12-1-0
RED1-50-22(Simulated performance compliance)	Modeling disapproved 12-1-0
RED1-53-22(Simulated performance compliance)	Modeling disapproved 12-1-0

RED1-45-22(R405.2.3 modification)	Modeling disapproved 12-1-0
RED1-37-22(Annual energy cost performance)	Modeling disapproved 12-1-0
RED1-51-22(Simulated performance compliance)	Modeling disapproved 12-1-0
REPCD1-2-22	
RED1-69-22(ERI path stringency)	Modeling disapproved 10-6-2
New items for review	
IRCED1-1-22(Construction Documents)	Admin disapprove 5-0
RECD1-2-22(WDMA reference)	Admin approve 5-0
RED1-6-22(AISI update)	Admin approve 5-0
RED1-364-22(Grammatical correction)	Admin disapprove 5-0
RED1-103-22(Remove solar ready provisions)	Electrical disapprove 10-0
RED1-105-22(Solar ready requirements)	Electrical disapprove 10-0
RED1-104-22(Solar ready exception)	Electrical disapprove 5-4-1
RED1-136-22(Solar ready zone modifications)	Electrical disapprove 5-2-2
RED1-133-22(Add exceptions R404.6)	Electrical disapprove 7-2
RED1-137-22(Elec service reserved space for renew)	Electrical split
RED1-138-22(Elec interconnection renewables)	Electrical approve 5-4
IRCED1-5-22(Specific locations)	Electrical disapprove 9-0
RED1-267-22(Alterations)	Existing Bldg disapprove 7-0
RED1-268-22(Alterations)	Existing Bldg as modified 7-0
RED1-269-22(Roof alterations)	Existing Bldg disapprove 7-0
RECD1-3-22(WDMA proposal)	Envelope approve 14-6
RED1-183-22(window installation)	Envelope disapprove 20-0
RED1-227-22(Window insulation)	Envelope disapprove 19-0
RED1-232-22(Fenestration modifications)	Envelope disapprove 20-0
RED1-234-22(Insulation around windows)	Envelope disapprove 18-0
RED1-225-22(Rim joists)	Envelope disapprove 10-9-1
RED1-226-22(Sealed air barrier)	Envelope approve 18-0-1
RED1-228-22(Above grade walls)	Envelope disapprove 9-8-1
RED1-231-22(Electrical boxes)	Envelope approve 14-4-1
RED1-233-22(Fireplace requirements)	Envelope approve 18-1
RED1-243-22 PI & II(Relocate rooms cont. fuel burning app)	Envelope approve 15-1-2
RED1-244-22(Air-sealed outlet boxes)	Envelope disapprove 12-6-1
RED1-245-22(Air-sealed outlet boxes)	Envelope approve 11-8
RED1-247-22(Attic ventilation)	Envelope disapprove 14-1-4
RED1-248-22(Attic ventilation)	Envelope disapprove 14-8-3

8. Other business.

9. Upcoming meetings. March 30 at 2 PM EST

10. Adjourn.

FOR FURTHER IECC Residential INFORMATION BE SURE TO VISIT THE ICC WEBSITE:

[IECC Residential Website](#)

Join by phone

1-844-740-1264 USA Toll Free

+1-415-655-0003 US Toll

Director of Energy Programs  
International Code Council  
[kstenger@iccsafe.org](mailto:kstenger@iccsafe.org)

FOR ADDITIONAL INFORMATION, PLEASE  
CONTACT:

Kristopher Stenger, AIA, CBO



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-089-22 Renewables contract length
CDP ID #	1072
Code	IECC RE
Code Section(s)	RC103.3
Location	appendix
Proponent	Diana Burk     diana@newbuildings.org
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-089-22 was submitted by Diana Burk modifying Power Purchase Agreement to Renewable energy contract with a duration of not less than 15 years.
Recommendation	<b>Approve As Modified</b> Motion: Jay Crandell Second: Shilpa Surana Reason Statement: Consistent with duration of purchased power in other parts of code and simplify requirement to avoid equation of original proposal.
Vote	Approve 13-1 [2 Abstain, 5 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-038-22 Annual Energy Cost performance Exception
CDP ID #	1170
Code	IECC RE
Code Section(s)	R405.2
Location	appendix
Proponent	Eric Tate eric.tate@atmosenergy.com
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-038-22 was submitted by Eric Tate removing all K tables and providing a simple reference to ASHRAE Standard 105. RED1-038,044, 052 combined for voting.
Recommendation	<b>Disapprove As Modified</b> Motion: Brain Shanks Second: Aaron Gary Reason Statement: The proposal lacks information to provide guidance to the modelers.
Vote	Disapprove 11-1 [1 Abstain,8 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-052-22 Simulated performance compliance
CDP ID #	1410
Code	IECC RE
Code Section(s)	R405.2
Location	base
Proponent	Ted Williams ngdlc@outlook.com
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-052-22 was submitted by Subcommittee member Ted Williams removing all K tables and providing a simple reference to ASHRAE Standard 105. RED1-038,044, 052 combined for voting.
Recommendation	<b>Disapprove As Modified</b> Motion: Brain Shanks Second: Aaron Gary Reason Statement: The proposal lacks information to provide guidance to the modelers.
Vote	Disapprove 11-1 [1 Abstain,8 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-044-22 R405.2.3 exception correction
CDP ID #	1111
Code	IECC RE
Code Section(s)	R405.2
Location	base
Proponent	Gary Heikkinen gary.heikkinen@nwnatural.com
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-044-22 was submitted by Gary Heikkinen including Table K6 with other tables in ASHRAE Std 105-2021 . RED1-038,044, 052 combined for voting.
Recommendation	<b>Disapprove As Modified</b> Motion: Ted Williams Second: Vladimir Kochkin Reason Statement: The proposal lacks information to provide guidance to the modelers.
Vote	Approve 1-13 [1 Abstain,6 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-039-22 Exception for R405.2
CDP ID #	1065
Code	IECC RE
Code Section(s)	R405.2
Location	base
Proponent	Steven Rosenstock srosenstock@eei.org
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-039-22 was submitted by Steve Rosenstock proposing to use site energy as the basis of comparison.
Recommendation	<b>Disapprove As Modified</b> Motion: Gayathri Vijayakumar Second: Ted Williams Reason Statement: SC voted to Disapprove the addition of a new exception because it added complexity to the code and a simpler solution to avoiding the use of a 0.0 source energy multiplier would be preferred. It was not clear why an exception to use site energy savings for all-electric buildings was needed, given that the energy cost savings would yield the same results.
Vote	Disapprove 13-0 [0 Abstain,8 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____



Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-048-22 Simulated Building performance
CDP ID #	1382
Code	IECC RE
Code Section(s)	R405.2
Location	base
Proponent	Kevin Duell kevin.duell@nwnatural.com
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-048-22 was submitted by Kevin Duell revising Part 3 and Exception 1
Recommendation	<p><b>Disapprove As Modified</b></p> <p>Motion: Gayathri Viajayakumar Second: Aaron Gary</p> <p>Reason Statement: SC voted to Disapprove based on prior Disapproval on RED1-38, 52, and 44 which also contained edits related to the ASHRAE Std 105 tables. Based on the discussion, the SC was not convinced to add references to new tables from the Appendix but also not convinced to delete the current tables that were previously approved by the Main Committee. The other changes contained in RED1-48 and 50 related to the energy cost savings requirement are similar to RED1-53 and the SC agreed to vote on that change in the context of RED1-53.</p>
Vote	Disapprove 12-1 [0 Abstain,8 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	

Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-050-22 Simulated performance compliance
CDP ID #	1383
Code	IECC RE
Code Section(s)	R405.2
Location	base
Proponent	Ian Casey     ian.casey@nwnatural.com
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-050-22 was submitted by Ian Casey suggesting to use Table K2 and K6 to avoid unnecessary cost burden.
Recommendation	<p><b>Disapprove As Modified</b></p> <p>Motion: Gayathri Vijayakumar  Second: Aaron Gary  Reason Statement: SC voted to Disapprove based on prior Disapproval on RED1-38, 52, and 44 which also contained edits related to the ASHRAE Std 105 tables. Based on the discussion, the SC was not convinced to add references to new tables from the Appendix but also not convinced to delete the current tables that were previously approved by the Main Committee. The other changes contained in RED1-48 and 50 related to the energy cost savings requirement are similar to RED1-53 and the SC agreed to vote on that change in the context of RED1-53.</p>
Vote	Disapprove 12-1 [0 Abstain,8 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	

Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-053-22 Simulated performance compliance
CDP ID #	1491
Code	IECC RE
Code Section(s)	R405.2
Location	base
Proponent	Renee Lani rlani@apga.org
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-053-22 was submitted by Renee Lani proposing homes with fuel-burning fuel burning appliances should be the same
Recommendation	<p><b>Disapprove As Modified</b></p> <p>Motion: Gayathri Vijayakumar          Second: Vladimir Kochkin          Reason Statement: SC voted to Disapprove given that the current multipliers (85 and 80) were proposed when introducing equipment efficiency to R405 and were evaluated by PNNL. Based on previous discussions, to allow equipment efficiency to be modeled required an increase in the amount of savings required and also a decision of the type/efficiency of equipment that is modeled in the Standard Reference Design. Based on those discussions and the analysis by PNNL, the SC was not convinced to decrease the required savings from 80% to 85% for homes with fuel burning appliances without modeled data to support the change.</p>
Vote	Disapprove 12-1 [0 Abstain,8 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee _____ To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	

Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-045-22 R405.2.3 modification
CDP ID #	1105
Code	IECC RE
Code Section(s)	R405.2
Location	base
Proponent	Gary Heikkinen gary.heikkinen@nwnatural.com
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-045-22 was submitted by Gary Heikkinen proposing the proposed design is less than or equal to the better performance standard of 80% of the annual energy cost of the standard design for all buildings.
Recommendation	<p><b>Disapprove As Modified</b></p> <p>Motion: Gayathri Vijayakumar          Second: Alamelu Brooks</p> <p>Reason Statement: SC voted to Disapprove given that the current multipliers (85 and 80) were proposed when introducing equipment efficiency to R405 and were evaluated by PNNL. Based on previous discussions, to allow equipment efficiency to be modeled required an increase in the amount of savings required and also a decision of the type/efficiency of equipment that is modeled in the Standard Reference Design. Based on those discussions and the analysis by PNNL, the SC was not convinced to increase the required savings from 85% to 80% for homes without fuel burning appliances without modeled data to support the change.</p>
Vote	Disapprove 12-1 [0 Abstain,8 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	



Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-037-22 Annual Energy Cost Performance
CDP ID #	1454
Code	IECC RE
Code Section(s)	R405.2
Location	base
Proponent	Eric Tate eric.tate@atmosenergy.com
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-037-22 was submitted by Eric Tate proposing to eliminate larger increment of cost energy reduction for fuel burning space and water heating appliances.
Recommendation	<p><b>Disapprove As Modified</b></p> <p>Motion: Gayathri Vijayakumar          Second: Alamelu Brooks</p> <p>Reason Statement: SC voted to Disapprove given that the current multipliers (85 and 80) were proposed when introducing equipment efficiency to R405 and were evaluated by PNNL. Based on previous discussions, to allow equipment efficiency to be modeled required an increase in the amount of savings required and also a decision of the type/efficiency of equipment that is modeled in the Standard Reference Design. Based on those discussions and the analysis by PNNL, the SC was not convinced to increase the required savings from 85% to 80% for homes without fuel burning appliances without modeled data to support the change.</p>
Vote	Disapprove 12-1 [0 Abstain,8 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	

Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-051-22 Simulated Performance Compliance
CDP ID #	1406
Code	IECC RE
Code Section(s)	R405.2
Location	base
Proponent	Ted Williams      eric.tate@atmosenergy.com
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-051-22 was submitted by Econ Subcommittee member Ted Williams proposing to eliminate the bias in favor of electric space heating and water heating is likely to increase carbon emissions
Recommendation	<p><b>Disapprove As Modified</b></p> <p>Motion: Gayathri Vijakumar  Second: Alamelu Brooks  Reason Statement: SC voted to Disapprove given that the current multipliers (85 and 80) were proposed when introducing equipment efficiency to R405 and were evaluated by PNNL. Based on previous discussions, to allow equipment efficiency to be modeled required an increase in the amount of savings required and also a decision of the type/efficiency of equipment that is modeled in the Standard Reference Design. Based on those discussions and the analysis by PNNL, the SC was not convinced to increase the required savings from 85% to 80% for homes without fuel burning appliances without modeled data to support the change.</p>
Vote	Disapprove 12-1 [0 Abstain,8 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	

Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-069-22 ERI path stringency
CDP ID #	1349
Code	IECC RE
Code Section(s)	R406.5 table
Location	base
Proponent	Amy Boyce amy.boyce@imt.org
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	RECPI-069-22 was submitted by Amy Boyce making more stringent Energy Rating Index with OPP column values based on climate zones
Recommendation	<p><b>Disapprove As Modified</b></p> <p>Motion: Amy Boyce Second: Rob Salcido</p> <p>Reason Statement: The purpose of this proposal is to maintain the same ERI targets required in the 2021 IECC, in order to help ensure that the ERI path is no less efficient in the 2024 IECC. Table R406.5 of the 2021 IECC establishes maximum ERI targets, and Section R401.2.5 applies a 5% improvement to the scores in this table. This improvement was adopted as part of a 5% efficiency improvement for prescriptive, performance, and ERI compliance paths and was overwhelmingly approved by Governmental Member Voting Representatives in RE209-19. In the current update cycle, the supporters of REPI-21 argued that the 5% improvement to the ERI scores belonged in Table R406.5, and not in R401.2.5, but when broad changes were adopted into the ERI in proposal REPI-126, the updated ERI targets did not include the full 5% improvement. We believe an additional 5% improvement (beyond the scores above) is warranted, since the target for the 2024 IECC prescriptive path is roughly a 5% improvement as well.</p>
Vote	Approve 6-10 [1 Abstain,4 Not Present]
Recommendation Date	02/28/2023
Next Step	To Subcommittee _____ To Advisory Group _____ To Consensus Committee _____
Consensus Committee	

Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	IRCED1-1-22 Construction documents
CDP ID #	1153
Code	IRC
Code Section(s)	N1101.6
Location	base
Proponent	Fredric Zwerg fredric.zwerg@swgas.com
Proposal Status	SC rev
Subcommittee	RE Admin
Subcommittee Notes	No conflict present with this definition. Disapproval is consistent with committee action on RED1-4-22
Recommendation	Disapproval
Vote	5-0-0
Recommendation Date	3.01.2023
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	





## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RECD1-2-22 WDMA proposal
CDP ID #	
Code	IECC RE
Code Section(s)	Chapter 6
Location	
Proponent	IECC RE Administration subcommittee
Proposal Status	SC rev
Subcommittee	RE Admin
Subcommittee Notes	
Recommendation	update reference standards
Vote	approve 5-0
Recommendation Date	
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	

# RECD1-2-22

IECC: 6 AAMA, AAMA Chapter 06, CSA Chapter 06, 6 WDMA, WDMA Chapter 06

Proponents: Richard Potts, chair of Consistency and Administration subcommittee

## 2024 International Energy Conservation Code [CE Project]

Delete and substitute as follows:

### ~~AAMA~~

~~American Architectural Manufacturers Association  
1827 Walden Office Square Suite 550  
Schaumburg, IL 60173-4268~~

### FGIA

Fenestration & Glazing Industry Alliance (formerly AAMA)  
1900 E. Golf Road, Suite 250  
Schaumburg, IL 60173

Revise as follows:

### AAMA

American Architectural Manufacturers Association  
1827 Walden Office Square Suite 550  
Schaumburg, IL 60173-4268

AAMA/WDMA/CSA 101/1.S.2/A440 North American Fenestration Standard/Specification for ~~Windows, Doors, and Skylights~~ windows, doors, and skylights  
~~—17.22:~~

### CSA

CSA Group  
8501 East Pleasant Valley Road  
Cleveland, OH 44131-5516

AAMA/WDMA/CSA 101/1.S.2/A440 North American Fenestration Standard/Specification for ~~Windows, Doors and Unit Skylights~~ windows, doors, and skylights  
~~—17.22:~~

### WDMA

Window and Door Manufacturers Association  
~~2025 M Street NW, Suite 800~~ 2001 K Street NW, Suite 300  
Washington, DC ~~20036-3309~~ 20006

### WDMA

Window and Door Manufacturers Association  
2025 M Street NW, Suite 800  
Washington, DC 20036-3309

AAMA/WDMA/CSA 101/1.S.2/A440 North American Fenestration Standard/Specification for ~~Windows, Doors and Skylights~~ windows, doors, and skylights  
~~—17.22:~~

**Reason:** This proposal provides corrections to the listing of the *North American Fenestration Standard/Specification for windows, doors, and skylights* which is a referenced standard in Chapter 4 the IECC. There have been recent changes to the names and/or locations of the promulgating organizations. In addition, the title was slightly incorrect and the standard has also been updated. The American Architectural Manufacturers Association (AAMA) has changed its name to the Fenestration & Glazing Industry Alliance (FGIA) and also changed its office address.

The Window & Door Manufacturers Association relocated its office.

Also, the title of *AAMA/WDMA/CSA 101/1.S.2/A440: North American Fenestration Standard/Specification for windows, doors, and skylights* has been inconsistently referenced in the code.

**Cost Impact:** The code change proposal will neither increase nor decrease the cost of construction.  
No change in cost



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-006-22    AISI update
CDP ID #	962
Code	IECC RE
Code Section(s)	Chapter 6
Location	base
Proponent	Jonathan Humble    Jhumble@steel.org
Proposal Status	SC rev
Subcommittee	RE Admin
Subcommittee Notes	Necessary change to update the standard
Recommendation	Approval
Vote	5-0-0
Recommendation Date	3.01.2023
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-364-22 Grammatical correction
CDP ID #	1026
Code	IECC RE
Code Section(s)	R401.2.1
Location	
Proponent	Michele DeFrance mdefrance@portlandmaine.gov
Proposal Status	SC rev
Subcommittee	RE Admin
Subcommittee Notes	
Recommendation	Correction not necessary prefer existing language
Vote	Disapprove 5-0
Recommendation Date	
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-103-22
CDP ID #	
Code	IECC RE
Code Section(s)	R404.6.1
Location	
Proponent	Residential Electrical, Power, Lighting and Renewables Subcommittee
Proposal Status	
Subcommittee	RE EPLR
Subcommittee Notes	The proposal was to move mandatory requirements into an appendix. However an appendix already exists for solar-ready zones and this appendix would not be needed.
Recommendation	Disapproval
Vote	10-0-0
Recommendation Date	3/6/23
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 #	RED1-105-22
CDP ID #	
Code	IECC RE
Code Section(s)	R401.3; N1101.14
Location	
Proponent	Residential Electrical, Power, Lighting and Renewables Subcommittee
Proposal Status	
Subcommittee	RE EPLR
Subcommittee Notes	The proposal was not clearly worded regarding panel capacity. Did this refer to space in the panel, size of the panel or load capacity? Not a strong proposal.
Recommendation	Disapprove
Vote	10-0-0
Recommendation Date	
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 #	RED1-104-22
CDP ID #	
Code	IECC RE
Code Section(s)	R401.3; R404.6.1 exc. 6
Location	
Proponent	Residential Electrical, Power, Lighting and Renewables Subcommittee
Proposal Status	
Subcommittee	RE EPLR
Subcommittee Notes	Considerable discussion regarding referencing the Commercial code in the Residential code. The final vote reflects that the majority did not agree with doing so. There was also concern regarding the 15-year timeframe for the renewable energy contract.
Recommendation	Disapprove
Vote	5-4-1
Recommendation Date	
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 #	RED1-136-22
CDP ID #	
Code	IECC RE
Code Section(s)	R404.6.1; N1104.6.1
Location	
Proponent	Residential Electrical, Power, Lighting and Renewables Subcommittee
Proposal Status	
Subcommittee	RE EPLR
Subcommittee Notes	There were concerns regarding changing the solar ready zone from 500 to 300 square feet (46 m ) of roof area. The 500 square feet was previously agreed upon. Same issue for eliminating exc. 7 for units less than 1,500 square feet.
Recommendation	Disapprove
Vote	5-2-2
Recommendation Date	
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 #	RED1-133-22
CDP ID #	
Code	IECC RE
Code Section(s)	R404.6
Location	
Proponent	Residential Electrical, Power, Lighting and Renewables Subcommittee
Proposal Status	
Subcommittee	RE EPLR
Subcommittee Notes	There were concerns that the Renewable Portfolio Standard can vary from state to state and would be difficult for an AHJ to verify.
Recommendation	Disapprove
Vote	7-2-0
Recommendation Date	
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 #	RED1-137-22
CDP ID #	
Code	IECC RE
Code Section(s)	R404.6.1.3
Location	
Proponent	Residential Electrical, Power, Lighting and Renewables Subcommittee
Proposal Status	
Subcommittee	RE EPLR
Subcommittee Notes	The proposal would change the word, "Solar" to "Renewable" in recognition that there are other types of renewable electrical energy besides solar. The subcommittee could not agree on this change and is referred to the full Consensus Committee.
Recommendation	No recommendation
Vote	4-4-1
Recommendation Date	
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 #	RED1-138-22
CDP ID #	
Code	IECC RE
Code Section(s)	R404.6.1.4
Location	
Proponent	Residential Electrical, Power, Lighting and Renewables Subcommittee
Proposal Status	
Subcommittee	RE EPLR
Subcommittee Notes	This proposal clarifies the requirements for location and labeling of the electrical interconnection for future renewable energy installations. Similar to RED1-137-22, it changes the wording "Solar" to "Renewable".
Recommendation	Approve
Vote	5-4-0
Recommendation Date	
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 #	IRCED1-5-22
CDP ID #	
Code	IECC RE
Code Section(s)	N1104.2.2
Location	
Proponent	Residential Electrical, Power, Lighting and Renewables Subcommittee
Proposal Status	
Subcommittee	RE EPLR
Subcommittee Notes	The substantiation for this proposal addressed only the automatic light in a garage door opener. However this code section addresses all types of luminaires in garages as well as unfinished basement, laundry rooms and utility rooms.
Recommendation	Disapprove
Vote	9-0-0
Recommendation Date	
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 #	RED1-267-22 Alterations
CDP ID #	1127
Code	IECC RE
Code Section(s)	R503.1.1
Location	base
Proponent	Lucyna de Barbaro ldebarbaro@rtpittsburgh.org
Proposal Status	SC rev
Subcommittee	RE Existing Bldg
Subcommittee Notes	Reason statement: Code language as proposed is confusing.
Recommendation	Motion for disapproval by Jim Zengel Second by Paul Demers
Vote	Disapprove carries unanimously
Recommendation Date	
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-268-22 Alterations
CDP ID #	1210
Code	IECC RE
Code Section(s)	R503.1.1
Location	base
Proponent	Jay Crandell      jcrandell@aresconsulting.biz
Proposal Status	SC rev
Subcommittee	RE Existing Bldg
Subcommittee Notes	Reason statement: Clarifies several sections of the code, fits appropriately in the IECC standard.
Recommendation	Motion to approve as modified Paul Demers Clifford Swope seconds
Vote	Motion carries unanimously
Recommendation Date	
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-269-22 Roof alterations
CDP ID #	978
Code	IECC RE
Code Section(s)	R503.1.1.2
Location	base
Proponent	Aaron Phillips aPhillips@asphaltroofing.org
Proposal Status	SC rev
Subcommittee	RE Existing Bldg
Subcommittee Notes	Reason statement: Aaron (proponent) asks for disapproval.
Recommendation	Motion for disapproval by Jim Zengel Second by Seth Wiley
Vote	Motion for disapproval carries unanimously
Recommendation Date	
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RECD1-3-22 WDMA proposal
CDP ID #	
Code	IECC RE
Code Section(s)	Chapter 6
Location	base
Proponent	Envelope and Embodied energy subcommittee
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	The previous language had some unintended consequences and possibly voiding the manufacturer's warranty. Multiple members expressed the need to modify the language of the insulation criteria. Proposed language provides clarity and resolves issues related to unintended consequences and is preferred to the language currently in draft 1, although some committee members expressed a desire for some further modification for consideration by main cmte.
Vote	14-6-0 for approval
Recommendation Date	3/8/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee __X_____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	



## RECD1-3 PROPOSED MODIFICATION NOT HEARD BY SUBCOMMITTEE AS PART OF RECOMMENDATION

Floor modification in red from the proponents of RED1-183-22 (Weston), RED1-227-22 (Weston), RED1-232-22 (Drumheller, Hatfield), RED1-234-22 (Crandell)

Windows, skylights and doors	The <del>space</del> <u>rough opening gap</u> between framing and <u>the frames of skylights, and the jambs of windows and doors</u> , shall be sealed <u>in accordance with fenestration manufacturer's instructions.</u>	Insulation shall not be required in the rough opening gap <u>except as required by the fenestration manufacturer's instructions.</u> <del>Framing cavities around windows, skylights, and doors shall be completely filled with insulation or insulated per window manufacturer's instructions.</del>
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## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-183-22 window installation
CDP ID #	1312
Code	IECC RE
Code Section(s)	N1102.5.1.1 table
Location	base
Proponent	Theresa Weston holtweston88@gmail.com
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	disapproval requested by proponent based on committee action on RECD1-3
Vote	20-0-0 for disapproval
Recommendation Date	3/8/23
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 #	RED1-227-22 window insulation
CDP ID #	1277
Code	IECC RE
Code Section(s)	R402.5.1.1
Location	base
Proponent	Theresa Weston holtweston88@gmail.com
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	disapproval requested by proponent based on committee action on RECD1-3
Vote	19-0-0 for disapproval
Recommendation Date	3/8/23
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 #	RED1-232-22 Fenestration modifications
CDP ID #	1403
Code	IECC RE
Code Section(s)	R402.5.1.1 table
Location	base
Proponent	Craig Drumheller cdrumheller@wdma.com
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	disapproval requested by proponent based on committee action on RECD1-3
Vote	20-0-0 for disapproval
Recommendation Date	3/8/23
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 #	RED1-234-22 Insulation around windows
CDP ID #	1338
Code	IECC RE
Code Section(s)	R402.5.1.1 table
Location	base
Proponent	Jay Crandell jcrandell@aresconsulting.biz
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	disapproval requested by proponent based on committee action on RECD1-3
Vote	18-0-0
Recommendation Date	3/8/23
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 #	RED1-225-22 Rim joists
CDP ID #	1005
Code	IECC RE
Code Section(s)	R402.5.1.1
Location	base
Proponent	Robby Schwarz robby@btankinc.com
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	The proposal does not offer clarity in proper code language and offers concepts and permissive language.
Vote	10-9-1 for disapproval
Recommendation Date	3/8/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee_X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

## RED1-225-22 – Modification NOT HEARD BY SUBCOMMITTEE

**Proponents:** Robert Schwarz, representing BUILDTank, Inc. (robby@btankinc.com)

### 2024 International Energy Conservation Code [RE Project]

#### Add new text as follows:

**R402.2.12 Rim joist and sill plate requirements.** Where a floor system's rim joist rests upon a sill plate ~~on top of a foundation wall that separates conditioned from unconditioned space,~~ the junction of the sill plate to the foundation shall be sealed. Capillary break materials installed between the sill plate and the foundation shall not be used as air sealing materials unless specifically designed and installed for such use.

Where a floor system's ~~For all~~ rim joists separating conditioned from unconditioned space, the rim joist to the sill plate or top plate, and the rim joist to subfloor connections shall be air sealed. Rim joists in cantilever floor systems or floors over garage shall be air sealed.

Rim joists which are part of the thermal envelope assembly shall be insulated to ~~at least~~ the same R-value as ~~the~~ proposed for the above grade exterior wall. The insulation shall be in continuous alignment with the air barrier and when air permeable insulation is used shall be enclosed. within an air barrier system, on six sides. ~~Enclosure may be accomplished by installing a finished surface on the underside of the floor system.~~

#### Revise as follows.

TABLE R402.5.1.1 AIR BARRIER, AIR SEALING AND INSULATION INSTALLATION<sup>a</sup>

COMPONENT	AIR BARRIER CRITERIA INSULATION	INSTALLATION CRITERIA
Rim Joist	Rim joists shall include an air barrier. The junctions of the rim board to the sill plate and the rim board and the subfloor shall be air sealed.	<u>Rim joist shall be insulated per Section R402.2.12</u> <del>Rim joists shall be insulated so that the insulation maintains permanent contact with the exterior rim board.<sup>b</sup></del>

b. Insulation full enclosure is not required in unconditioned/ventilated attic spaces ~~and at rim joists.~~

#### Reason:

The energy code defines the building thermal envelope, air barrier, and continuous air barrier systems as assemblies of building materials brought together in the construction process for specific purposes. By doing so the code does not say that the air or thermal control layer is one defined surface within an assembly. It also does not say that it can't be one defined layer. In Table R402.4.1.1 now R402.5.1.1, it talks about air barriers inside, such as behind a tube, and

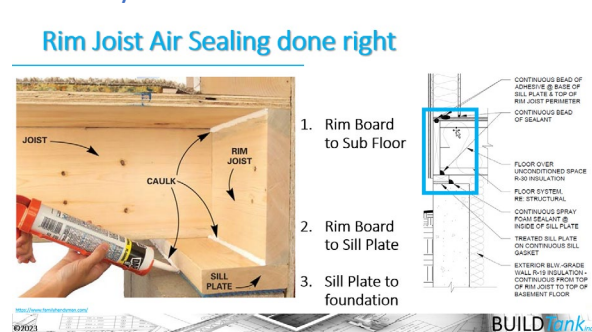
outside, like on the exterior side of a knee wall. Consistently the code talks about the assembly and as I read it, it says that you can choose to have one primary air barrier either on the exterior or interior but that does not negate the requirement of the continuity of what could be called the supplemental air barrier. For example, if a taped zip system is installed as the primary exterior air barrier it would not negate the requirements to maintain the continuity of the interior supplemental air barrier behind the tub or fireplace etc. So, the code is promoting a belts and suspenders assembly approach not just to get the control of air flow through our assemblies from an energy perspective, but also to control moisture/vapor control. Just like building science is recognizing the synergy of assemblies the suite of I-code is a family of code that work synergistically to create performance from the perspectives of health and safety, long term durability, resiliency, and energy efficiency. The notion of enclosing air permeable insulation in an air barrier system of assembly makes sense from an energy perspective to achieve its rated R-value but also from a building durability and performance perspective to control moisture moving with air through the insulation to the first condensing surface. This is what this proposal is about. Stop the moisture damage that we are seeing at the rim joist and get better energy performance as well.

This proposal modification address the few areas of concern that were mentioned at the envelope subcommittee hearing during the incredibly tight vote to disapprove this proposal (10/9). Specifically the committee is coming to terms that we should not be pointing to the R or U-value tables for insulation requirements as performance approaches can determine alternative well performing thermal assemblies. Second, it appears that the building science regarding enclosing fibrous air permeable insulation is sound to incorporate in the code but the idea of speaking about six sided enclosure is not comprehensive enough to describe all possible applications. Therefore, this phrase has been removed from the modification. In addition, the idea of achieving enclosure by installing a finished material like drywall on the unenclosed surface of a floor system, for example in a conditioned but not finished basement, has been removed due to objections and potential miss understanding.

Rim joist at foundations and between floor are notoriously leaky and difficult to insulate. They are one of the first areas of the Building Thermal Envelope that are addresses when seeking to build a more airtight house, yet the IECC continues not to address them well or call them out specifically in the installation sections or R402. A specific requirement section is needed to address them. This proposal deals with the air leakage issues and the insulation issues. For too long fibrous insulation has been allowed to be installed in locations without complete enclosure. Fibrous air permeable insulation in any cavity must be enclosed within an air barrier system. This cavity is not tall, but convection through the material occurs because it is often open to large volume spaces, the greater volume of the basement or crawl space for example. Building durability is often associated with this location and lack of enclosure when warm moist air migrates through air permeable insulation and condenses on the rim joist surface. The code often calls out for interior air barrier installation to enclose insulation and prevent warm moist air from migrating toward the first condensing surface. This is just a continuation of this requirement in a building that has not been addressed by the code in the past to prevent



continued failures at that location. This modification addresses concerns some raised regarding the air sealing section of this proposal. It specially addresses sealing the sill plate to the foundation in the specific location where rim joist are adjacent to the foundation as well as, sealing the rim joist to the sill or top plate and the subfloor in all location where the rim joist assembly is located.



Some believe that the above grade wall definition should be enough to ensure that the rim joist is insulated to the same R-value as the above grade wall. However, it is common to see the Rim Joist insulated with less R-value and different insulation material than used in the above grade wall. This section just makes it clear that the minimum requirement for R-value is the same as that proposed for the above grade walls and the rim joist as they are both unique and separate building envelope assemblies. This does not preclude the option of installing the less R-value than is called out in the R-value table it merely indicates that alternative software modeling approaches must be used to demonstrate compliance when it is proposed to insulate the rim joist differently than the above grade wall.

**Cost Impact:** The code change proposal will increase the cost of construction. This will impact the first cost of construction as it is a new code requirement to enclose the fibrous insulation installed in the rim/band joist. However, performance will improve, and operational cost and comfort will be impacted positively.



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-226-22 Sealed air barrier
CDP ID #	1035
Code	IECC RE
Code Section(s)	R402.5.1.1
Location	base
Proponent	Alex Smith asmith@nahb.org
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	Helps clarify the code by reducing potential for misinterpretation.
Vote	18-0-1 for approval
Recommendation Date	3/8/23
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 #	RED1-228-22 Above grade walls
CDP ID #	1007
Code	IECC RE
Code Section(s)	R402.5.1.1 table
Location	base
Proponent	Robby Schwarz robby@btankinc.com
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	Too much uncertain terminology and insulating headers provides additional challenges.
Vote	9-8-1 for disapproval
Recommendation Date	3/8/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee_X_____
Consensus Committee	
Committee Response	
Vote	Affirmative_____ Negative_____ Table_____ To Subcommittee_____
Date	

# RED1-228-22 – Modification NOT REVIEWED BY SUBCOMMITTEE

Proponents: Robert Schwarz, representing BUILDTank, Inc. (robby@btankinc.com)

## Existing 2021 IECC definition included for context.

**ABOVE-GRADE WALL.** A wall more than 50 percent above grade and enclosing *conditioned space*. This includes between-floor spandrels, peripheral edges of floors, roof and basement knee walls, dormer walls, gable end walls, walls enclosing a mansard roof and *skylight* shafts.

**CONTINUOUS INSULATION (ci).** Insulating material that is continuous across all structural members without thermal bridges other than fasteners and service openings. It is installed on the interior or exterior, or is integral to any opaque surface, of the *building envelope*.

## 2024 International Energy Conservation Code [RE Project]

Revise as follows:

TABLE R402.5.1.1 AIR BARRIER, AIR SEALING AND INSULATION INSTALLATION<sup>a</sup>

COMPONENT	AIR BARRIER/SEAL CRITERIA	INSULATION INSTALLATION CRITERIA
Above Grade Walls	<p>The junction of <del>between</del> the foundation and sill plate shall be <u>air sealed</u>.</p> <p><u>The junction between of the interior and exterior top plates and the drywall or other finished interior material adjacent to unconditioned space shall be air sealed.</u></p> <p><del>The junction of the top plate and the top of exterior walls shall be sealed.</del></p> <p><u>The junction of the bottom plate to the subfloor on exterior walls separating conditioned space from unconditioned space shall be air sealed.</u></p> <p><del>Knee walls shall be sealed.</del></p>	<p><u>Air permeable insulation installed in wall cavities shall be enclosed in an air barrier assembly. <del>on six sides.</del></u></p> <p><u>Building thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.</u></p> <p><u>Where interior walls meet exterior insulated wall framing the junction shall be framed to receive insulation material having a thermal resistance, R-value, of not less than R-3 per inch, unless continuous insulation is installed on the above grade wall, or a framed uninsulated corner assembly is required for structural design.</u></p> <p><del>to maintain the continuity of the installed cavity insulation.</del></p> <p><u>Corners in exterior insulated framed walls shall be framed to receive insulation material having a thermal resistance, R-value, of not less than R-3 per inch, unless continuous insulation is installed on the above grade wall, or a framed uninsulated corner assembly is required for structural design.</u></p> <p><del>documented to impact the structural integrity of the building.</del></p> <p><u>Cavities within <del>Corners in exterior</del> and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance, R value, of not less than R-3 per inch.</u></p> <p><u>Headers shall not be installed in exterior insulated walls unless the assembly is required for structural design.</u></p> <p><del>is documented to impact the structural integrity of the building.</del></p> <p><u>Headers <del>on</del> in exterior insulated walls in Climate zones 3-8, shall be insulated with material having a thermal resistance, R-value, of not less than R-5, unless continuous insulation is installed on</u></p>

		<p><a href="#">the above grade wall, or a framed uninsulated header assembly is required for structural design.</a></p> <p><del><a href="#">the assembly is documented to impact the structural integrity of the building.</a></del></p> <p>Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.</p>
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**Reason:** Above Grade wall is a defined term, Walls is not so the component name should be changed as proposed. The objective of table R402.4.1.1 is to offer guidance for how to create an airtight well insulated home that meets the air leakage requirements of the IECC. Air barrier and insulation installation are part of the equation to be able to accomplish this goal, but air sealing is another part of it that has been missing from the title. The tables name now accurately reflects the air sealing goal.

**Air barrier and air sealing criteria section:**

[A modification was made here to be clarify where the junction to be sealed is. Prior to the modification it talked about the top plate but did not describe the drywall or finish material that created the junction that needs to be sealed.](#)

Clarification of the language requiring drywall to be sealed to the top plate is needed to make it clear that all wall top plates (interior wall and exterior insulated wall top plates) that are adjacent to unconditioned space must be sealed. Believe it or not, in the field there is confusion regarding what exterior means. In a square house for example, does it mean four exterior walls, or does it mean top plates that are adjacent to unconditioned space, which would include interior walls that are adjacent to unconditioned space. The gained clarity of this air sealing activity addresses one of the largest air leakage sources on the high side of the home. NAIMA recently released “Five Priority Air Sealing Locations” from an Owens Corning study and listed the junction of the top plate and drywall adjacent to unconditioned spaces above as number one. They estimate that over 300 lineal feet of leakage is present. Multiply 300 feet by an 1/8” gap, and you get an almost 6060 window-sized hole to the outside at this location. Our field experience shows that the current language in this section of the code causes confusion because it says, “seal the junction of the top plate and exterior wall.” Many incorrectly assume that this means the top plate of the 4 exterior walls and not all top plates connected to the exterior or unconditioned space in a square house for example. This code change clearly breaks up the many requirements in this section into bite-size bits of understandable code language that those in the field that are applying the code need. For example, insulated corners and headers were jumbled together in one long sentence. Now, they are separated and clarified so the requirement is clear and understandable.

The junction of the bottom plate to the subfloor on exterior walls has not been addressed specifically by the IECC is one of the larges sources of air leakage in homes and therefore I have added this low hanging air sealing opportunity to the table.

A reference to knee walls has as a new section has been dedicated to the unique assembly in the 2024 IECC.

**Insulation Installation Criteria:**

Air permeable insulation must be enclosed in an air barrier to trap pockets of air that are required to resist the flow of energy. This new language proposed so the table is in alignment with manufacture installation instruction and quickly expresses what is required to executed properly in the field. In addition, ensuring that insulation is in alignment with the air barrier system is important. [There has been concern that the language is only pertinent for wood framed walls. The language explicitly states that the air permeable insulation installed in a wall cavity must be enclosed so, for example, for CMU walls or behind masonry it is not an issue.](#)

Corners and headers are significantly different assemblies to insulate. Headers, in particulate may not have a true cavity to insulate and may be better suited to insulate with foam board as a replacement material for ½” spacing material used in three ply headers. This proposal breaks the two assemblies into separately addressed assemblies. This also makes these two existing requirements stand out for better understanding and enforcement.

Corners are created in framed walls were interior walls meet exterior walls and when exterior insulated walls change direction to define conditioned space. I have broken these up because although both need to be insulated only the exterior insulated wall corner may create a case where structural integrity could impact that ability to insulate the framed corner. [Language was modified in the section addressing the two cased where framed walls create corners \(where interior walls meet exterior walls and traditionally framed corners\) so consistency with the language is maintained and to allow exceptions when continuous insulation is installed, or structural engineering trumps the ability to meet insulation requirement.](#)

With regards to headers, we have learned that they are not structurally needed in non-loadbearing walls yet continue to install them and in load bearing walls they are needed but create a significant cold surface that impact the energy and durability performance of the wall assembly. Therefore, these two situations have been described in the proposal with deference to documented situations where structural integrity of the assembly could be impacted.

For Headers a modification has been made so consistency with the language is maintained and to allow exceptions when continuous insulation is installed, or structural engineering trumps the ability to meet insulation requirement.

**Cost Impact:** The code change proposal will increase the cost of construction.

The proposed language will only **minimally** impact the cost of construction, but the increased clarity of existing requirements far outweighs any increase in cost. Only two new requirements have really been added by this proposal.

1. Sealing the bottom plate to the subfloor. This could add material and labor cost, however in order to meet the current level or air tightness is probably being done. In those areas that areas that are struggling to meet the air leakage requirement this low hanging fruit needs to be made clear.
2. The proposed requirement for headers to be insulated to R-5 will in cost neutral because insulated headers are already required but adds greater flexibility for implementation. In addition, there is now an allowance to not insulated headers in climates zones 0-2. When three ply header is replaced with a two-ply header the 1.5" space is often insulated with a material that has an R-value of 3 per inch. On the other hand, when half inch spacers are replaced with R2.5 1/2" foam board the material can achieve R5 but is not an R3 per inch.

**Bibliography:** This proposal aligns with ENERGY STAR requirements that are the basis of the creation of this table and have been adopted by the IECC in the past.

ENERGY STAR Requirements:

[https://www.energystar.gov/sites/default/files/Rater%20F%20v104%202018-07\\_10\\_Clean\\_fillable.pdf](https://www.energystar.gov/sites/default/files/Rater%20F%20v104%202018-07_10_Clean_fillable.pdf)

**2. Fully-Aligned Air Barriers** 6 At each insulated location below, a complete air barrier is provided that is fully aligned as follows:

Walls: At exterior vertical surface of wall insulation in all climate zones; also at interior vertical surface of wall insulation in Climate Zones 4-8 8

2.2 Walls behind showers, tubs, staircases, and fireplaces

2.3 Attic knee walls and skylight shaft walls

2.4 Walls adjoining porch roofs or garages

2.5 Double-walls and all other exterior walls

Footnote 8

All insulated vertical surfaces are considered walls (e.g., above and below grade exterior walls, knee walls) and must meet the air barrier requirements for walls.

**4. Air Sealing (Unless otherwise noted below, "sealed" indicates the use of caulk, foam, or equivalent material)**

4.3 Above-grade sill plates adjacent to conditioned space sealed to foundation or sub-floor. Gasket also placed beneath above-grade sill plate if resting atop concrete / masonry & adjacent to cond. Space.

4.4 Continuous top plate or blocking is at top of walls adjoining unconditioned space, and sealed.

4.5 Drywall sealed to top plate at all unconditioned attic / wall interfaces using caulk, foam, drywall adhesive (but not other construction adhesives), or equivalent material. Either apply sealant directly between drywall and top plate or to the seam between the two from the attic above.



## International Energy Conservation Code Code Change Proposal Tracking Sheet

Proposal #	RED1-231-22 Electrical boxes
CDP ID #	1040
Code	IECC RE
Code Section(s)	R402.5.1.1 table
Location	base
Proponent	Alex Smith    asmith@nahb.org
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	Proposal removes redundant language
Vote	14-4-1 for approval
Recommendation Date	3/8/23
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 #	RED1-233-22 Fireplace requirements
CDP ID #	1275
Code	IECC RE
Code Section(s)	R402.5.1.1 table
Location	base
Proponent	Shannon Corcoran SCorcoran@aga.org
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	Proposal removes redundant language
Vote	18-1-0 for approval
Recommendation Date	3/8/23
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 #	RED1-243-22 PI & II Relocate rooms containing fuel burning appl
CDP ID #	1281
Code	IECC RE
Code Section(s)	R402.5.4
Location	base
Proponent	Theresa Weston      holtweston88@gmail.com
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	Voted with part 2
Recommendation	Proposal moves the fuel-burning appliance section to a more appropriate section.
Vote	15-1-2 for approval
Recommendation Date	3/8/23
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 #	RED1-244-22 Air-sealed outlet boxes
CDP ID #	1136
Code	IECC RE
Code Section(s)	R402.5.6
Location	base
Proponent	Robby Schwarz robby@btankinc.com
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	Unneeded. Does not add clarity to the code and could add more confusion. Also cost concerns.
Vote	12-6-1 for disapproval
Recommendation Date	3/8/23
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 #	RED1-245-22 Air-sealed outlet boxes
CDP ID #	1140
Code	IECC RE
Code Section(s)	R402.5.6
Location	base
Proponent	Shane Hoeper shoeper@cityofdubuque.org
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	Motion to disapprove failed
Recommendation	There may not be insulation required depending upon the assembly; plus this is an air sealing section - not an insulation section
Vote	11-8-0 for approval
Recommendation Date	3/8/23
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 #	RED1-247-22 Attic ventilation
CDP ID #	1337
Code	IECC RE
Code Section(s)	R403.3.3
Location	base
Proponent	Craig Conner craig.conner@mac.com
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	Language is unclear as to the requirements and may create confusion in the industry
Vote	14-1-3
Recommendation Date	3/8/23
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 #	RED1-248-22 Attic ventilation
CDP ID #	1340
Code	IECC RE
Code Section(s)	R403.3.3?
Location	base
Proponent	Craig Conner craig.conner@mac.com
Proposal Status	SC rev
Subcommittee	RE Envelope
Subcommittee Notes	
Recommendation	Prior action of RED1-247 (Language is unclear as to the requirements and may create confusion in the industry)
Vote	14-0-3
Recommendation Date	3/8/23
Next Step	To Subcommittee To Advisory Group _____ To Consensus Committee <u>X</u> _____
Consensus Committee	
Committee Response	
Vote	Affirmative _____ Negative _____ Table _____ To Subcommittee _____
Date	