

International Energy Conservation Code Consensus Committee-Residential

Draft Meeting Agenda (2/17 posting) Webex Meeting Link

February 24, 2022 2:00 PM EST to 5 PM EST (2.5 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 <u>Council Policy 7</u> Committees: Section 5.1.10 Representation of Interests

c. ICC <u>Code of Ethics</u>: 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.

- 3. Roll Call.
- 4. Approve Agenda
- 5. Approval of Minutes
- 6. Administrative issues-staff
- 7. Action Items
 - a. Code Change Proposals

CEPI-15-21 Part II (Emittance definition) (Admin approve 5-0) CEPI-15-21 Part III (Emittance definition) (Admin approve 5-0) REPI-11-21 (Reflective Insulation) (Admin as modified 5-2) REPI-45-21 (Air Barrier Criteria) (Envelope deny 11-5) REPI-47-21 (Air Sealing Ceiling Attic) (Envelope approve 18-0) REPI-51-21 (Air Sealing Separation Wall) (Envelope deny 15-1) REPI-52-21 (Air Sealing Shower Tub Fireplace) (Envelope approve 18-0) REPI-53-21 (Air Sealing Utility Boxes) (Envelope as modified 15-4) REPI-57-21 (Air Barrier Testing) (Envelope deny 16-0) REPI-66-21 (Air Barrier Boxes) (Envelope approve 14-6) REPI-74-21 (Fireplace Pilot Lights) (HVACR approve unanimously)

REPI-121-21 (Performance Compliance) (Econ/Modeling approve) REPI-122-21 (Performance Path) (Econ/Modeling as modified 13-3) REPI-129-21 (ERI on-site renew backstop) (Econ/Modeling approve) REPI-128-21 (ERI envelope backstop) (Econ/Modeling deny) IRCEPI-5-21 (Source Energy Multiplier) (Econ/Modeling deny 16-0) CEPI-17-21 Part II (Roof Replacement) (Existing Bldg deny unanimously) REPI-147-21 (Roof Replacement Exception)(Existing Bldg deny 5-1-1) REPI-148-21 (Bldg Envelope Air Barrier) (Existing Bldg deny 5-1-1) REPI-149-21 (Roof Membrane Peel Replace)(Existing Bldg deny 5-1-1) CEPI-12-21 Part II (Biomass definition) (Elec. Pwr/Light as modified 10-2) REPI-112 21 Part I (Light Cntrl Large Home)(Elec. Pwr/Light as modified) REPI-112 21 Part II (Light Cntrl Large Home)(Elec. Pwr/Light as modified) REPI-102-21 Part I (Lighting Efficacy) (Elec. Pwr/Light approve 11-0-1) REPI-102-21 Part II (Lighting Efficacy) (Elec. Pwr/Light approve 11-0-1) (Elec. Pwr/Light deny 11-0-1) REPI-100-21 (High Efficacy lighting) REPI-103-21 (High Efficacy Light sources) (Elec. Pwr/Light deny 11-0-1)

- 8. Subcommittee Reports
 Subcommittee guidance
 a. Economics, Modeling, and Whole-Building Metrics
 1. Cost Effectiveness
- 9. Other business.
- 10. Upcoming meetings. March 3 at 2 PM EST
- 11. Adjourn.

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

FOR ADDITIONAL INFORMATION, PLEASE CONTACT:

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



Proposal #	CEPI-015-21 Part I Emittance definition	
CDP ID #	102	
Code	IECC RE	
Code Section(s)	R202 New Section n	
Location	base	
Proponent	Amanda Hickman amanda@thehickmangroup.com	
Proposal Status	SC rev	
Subcommittee	RE Envelope	
Subcommittee Notes	This definition will be helpful to have to account for new technology coming into the field. This definition is consistent with ASHRAE and ASTM.	
Recommendation	Motion to approve.	
Vote	5-0	
Recommendation Date	1/18/22	
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX	
Consensus Committee		
Committee Response		
Vote	Affirmative Negative Table To Subcommittee	
Date		



Proposal #	CEPI-015-21 Part II Emittance definition		
CDP ID #	102		
Code	IECC IRC		
Code Section(s)	R202 New Section n		
Location	base		
Proponent	Amanda Hickman amanda@thehickmangroup.com		
Proposal Status	SC rev		
Subcommittee	RE Envelope		
Subcommittee Notes	This definition will be helpful to have to account for new technology coming into the field. This definition is consistent with ASHRAE and ASTM.		
Recommendation	Motion to approve.		
Vote	5-0		
Recommendation Date	1/18/22		
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX		
Consensus Committee			
Committee Response			
Vote	Affirmative Negative Table To Subcommittee		
Date			



Proposal #	REPI-011-21 Reflective Insulation	
CDP ID #	101	
Code	IECC RE	
Code Section(s)	R303.1.1 New Section y	
Location	base	
Proponent	Amanda Hickman amanda@thehickmangroup.com	
Proposal Status	SC rev	
Subcommittee	RE Envelope	
Subcommittee Notes		
Recommendation	Approve this proposal changing the definition of reflective insulation to say; "A material with a surface emittance of 0.1 or less in an assembly consisting of one or more enclosed reflective air spaces."	
Vote	5-2	
Recommendation Date	1/18/22	
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX	
Consensus Committee		
Committee Response		
Vote	Affirmative Negative Table To Subcommittee	
Date		



Proposal #	REPI-047-21 Air Sealing Ceiling Attic	
CDP ID #	405	
Code	IECC RE	
Code Section(s)	R402.4.1.1 table New Section n	
Location	base	
Proponent	Robby Schwarz robby@btankinc.com	
Proposal Status	SC rev	
Subcommittee	RE Envelope	
Subcommittee Notes		
Recommendation	Proposal clarifies that dropped ceilings are inside the thermal envelope. The subcommittee agreed it was a need update and voted unanimously to approve.	
Vote	18 yes / 0 no	
Recommendation Date	2/2/2022	
Next Step	To Subcommittee To Advisory Group To Consensus Committee_X	
Consensus Committee		
Committee Response		
Vote	Affirmative Negative Table To Subcommittee	
Date		



Proposal #	REPI-051-21 Air Sealing Separation Wall	
CDP ID #	409	
Code	IECC RE	
Code Section(s)	R402.4.1.1 table New Section n	
Location	base	
Proponent	Robby Schwarz robby@btankinc.com	
Proposal Status	SC rev	
Subcommittee	RE Envelope	
Subcommittee Notes	Subcommittee agreed in principle.	
Recommendation	This proposal specifies that area separation walls need to be insulated. It was well received by SC with a small minority having issues with the use of "area separation wall" instead of "common wall" and with contradictions withing the insulation provisions. Ultimately SC overwhelmingly voted to Disapprove.	
Vote	15 yes / 1 no	
Recommendation Date	2/2/2022	
Next Step	To Subcommittee To Advisory Group To Consensus Committee _X	
Consensus Committee		
Committee Response		
Vote	Affirmative Negative Table To Subcommittee	
Date		



Proposal #	REPI-052-21 Air Sealing Shower Tub Fireplace	
CDP ID #	377	
Code	IECC RE	
Code Section(s)	R402.4.1.1 table New Section n	
Location	base	
Proponent	Robby Schwarz robby@btankinc.com	
Proposal Status	SC rev	
Subcommittee	RE Envelope	
Subcommittee Notes		
Recommendation	Proposal clarifies that fireplaces need to be insulated like exterior walls. The proponent modified based on SC feedback and the modification was well received by SC who voted unanimously to approve as modified by M-1.	
Vote	18 yes / 0 no	
Recommendation Date	2/2/2022	
Next Step	To Subcommittee To Advisory Group To Consensus Committee	
Consensus Committee		
Committee Response		
Vote	Affirmative Negative Table To Subcommittee	
Date		

Table R402.4.1.1AIR BARRIER AND INSULATION INSTALATION .

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA
Nodified Version 1	Hee An air barrier installed at exterior walls adjacent	
Shower, tub, <u>and</u>	to showers and tubs shall separate insulation in the	Exterior <u>framed</u> walls adjacent to showers,
fireplaces adjacent to	building thermal envelope exterior insulated framed	and-tubs, and fireplace shall be insulated
the building thermal	wall from the shower <u>s,</u> or tub <u>s, and fireplaces</u>	and when insulated with air permeable
envelope.	assemblies.	insulation shall be enclosed by an air barrier
on exterior walls		assembly.

Cost Statement:

• Although the proposed language is designed primarily to clarify the requirements of the code in this section, specifically regarding the area created by framed fireplace boxes, it will increase the cost of construction. The proposal also addresses the need to air seal tub and shower drain trap penetrations which have been demonstrated to largely contribute to air infiltration and building durability through condensation control.



Proposal #	REPI-053-21 Air Sealing Utility Boxes	
CDP ID #	378	
Code	IECC RE	
Code Section(s)	R402.4.1.1 table New Section n	
Location	base	
Proponent	Robby Schwarz robby@btankinc.com	
Proposal Status	SC rev	
Subcommittee	RE Envelope	
Subcommittee Notes		
Recommendation	Revised by proponent to meet suggestions from SC. Latest version was well received, meeting initial intention. With confusion alleviated the subcommittee voted to Approve as Modified	
Vote	15 yes / 4 no	
Recommendation Date	2/2/2022	
Next Step	To Subcommittee To Advisory Group To Consensus Committee_X	
Consensus Committee		
Committee Response		
Vote	AffirmativeNegativeTable To Subcommittee	
Date		

REPI53 Electrical, communication, and other equipment boxes, housings, and enclosures

COMPONENT	AIR BARRIER, AIR SEALING CRITERIA	
		INSULATION INSTALLATION CRITERIA
Electrical /phone box on exterior walls , communication, and other equipment boxes, housings, and enclosures	The air barrier shall be installed behind electrical and communication boxes. Alternatively, air-sealed boxes shall be installed. Boxes, housings, and enclosures that penetrate the <i>air barrier</i> shall be caulked, taped, gasketed, or otherwise sealed to the <i>air barrier</i> element being penetrated.	Boxes, housing, and enclosure shall be buried in or surrounded by insulation
	All concealed openings into the box, housing, or enclosure shall be sealed. The continuity of the air barrier shall be maintained around boxes, housings, and enclosures that penetrate the air barrier Alternatively, air-sealed boxes shall be installed in accordance with R402.4.6	

TABLE R402.4.1.1—continued AIR BARRIER, AIR SEALING AND INSULATION INSTALLATION^a



Proposal #	REPI-057-21 Air Barrier Testing	
CDP ID #	542	
Code	IECC RE	
Code Section(s)	R402.4.1.2 New Section n	
Location	base	
Proponent	Lisa Rosenow Irosenow@evergreen-tech.net	
Proposal Status	SC rev	
Subcommittee	RE Envelope	
Subcommittee Notes	Subcommittee found language confusing.	
Recommendation	The proposal was intended to align residential with commercial air leakage testing standards. However, SC found proposal confusing and votes to disapprove unanimously.	
Vote	16 yes / 0 no	
Recommendation Date	2/2/2022	
Next Step	To SubcommitteeX To Advisory Group To Consensus Committee	
Consensus Committee		
Committee Response		
Vote	AffirmativeNegativeTable	
	To Subcommittee	
Date		



Proposal #	REPI-066-21 air barrier boxes	
CDP ID #	141	
Code	IECC RE	
Code Section(s)	R402.4.6 New Section n	
Location	base	
Proponent	Megan Hayes Megan.Hayes@nema.org	
Proposal Status	SC rev	
Subcommittee	RE Envelope	
Subcommittee Notes		
Recommendation	The proponent presented a modified version coordinated with REPI 53 that expands the terminology for electrical boxes and simplifies the language pertaining to the use of the referenced standard. There was some debate over the language used. Proposal recommended to be Approved as Modified.	
Vote	14 yes / 6 no	
Recommendation Date	2/2/2022	
Next Step	To Subcommittee To Advisory Group To Consensus Committee_X	
Consensus Committee		
Committee Response		
Vote	AffirmativeNegativeTable To Subcommittee	
Date		

Revised REPI-66-21 IECC-R: R402.4.6 Proponent: National Electrical Manufacturers Association (NEMA)

Revise text as follows:

R402.4.6 (N1102.4.6) <u>Air-Sealed</u> Electrical and Communication <u>Outlet</u> Boxes (air-sealed boxes). <u>Air-sealed</u> electrical and communication <u>outlet</u> boxes installed in <u>that penetrate the air</u> <u>barrier of</u> the building thermal envelope shall be <u>caulked</u>, taped, gasketed, or otherwise sealed to the <u>air barrier element being penetrated</u>. <u>Air-sealed boxes shall be buried in or</u> <u>surrounded by tightly fitted insulation</u>. to limit air leakage between conditioned and unconditioned spaces. Air-sealed electrical and communication outlet boxes shall be tested <u>and</u> <u>marked</u> in accordance with NEMA OS 4., <u>Requirements for Air-Sealed Boxes for Electrical and</u> Communication Applications and shall have an air leakage rate of not greater than 2.0 cfm (0.944 L/s) at a pressure differential of 1.57 psf (75 Pa). Electrical and communication outlet boxes shall be marked "NEMA OS 4" or "OS 4" in accordance with NEMA OS 4. Electrical and communication outlet <u>boxes</u> shall be installed <u>per the</u> <u>in accordance with the</u> manufacturer's instructions. and with any supplied components required to achieve compliance with NEMA OS 4.

Clean version:

R402.4.6 (N1102.4.6) Air-Sealed Electrical and Communication Boxes. Air-sealed electrical and communication boxes that penetrate the *air barrier* of the *building thermal envelope* shall be caulked, taped, gasketed, or otherwise sealed to the *air barrier* element being penetrated. Air-sealed boxes shall be buried in or surrounded by tightly fitted insulation. Air-sealed boxes shall be tested and marked in accordance with NEMA OS 4. Air-sealed boxes shall be installed in accordance with the manufacturer's instructions.

Reason: This editorial revision better aligns the language being used in Table R402.4.1.1 (N1102.4.6) by clarifying the requirements only apply where air-sealed boxes are selected as permitted by Table R402.4.1.1 (N1102.4.1.1).

Cost Impact: There is no increase or decrease cost in construction as this proposal simply adds clarity to the original intent of R402.4.6.



Proposal #	REPI-074-21 Fireplace Pilot lights	
CDP ID #	81	
Code	IECC RE	
Code Section(s)	R403.1.3 New Section y	
Location	base	
Proponent	Nicholas O'Neil noneil@energy350.com	
Proposal Status	SC rev	
Subcommittee	RE HVACR & WH	
Subcommittee Notes		
Recommendation		
Vote	unanimously	
Recommendation Date	2/7/22	
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX	
Consensus Committee		
Committee Response		
Vote	AffirmativeNegativeTable To Subcommittee	
Date		



Proposal #	REPI-121-21 Performance Path
CDP ID #	
Code	IECC RE
Code Section(s)	R405.2
Location	base
Proponent	Stephen Rosenstock srosenstock@eei.org
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	Proposal initially offered 2 reference points for source energy factors: IGCC and ASHRAE, after discussion motion was as modified with IGCC reference stricken
Recommendation	Motion to approve as modified (with removal of reference to IGCC)
Vote	17 -1 in favor, 1 abstention
Recommendation Date	Jan 26 th , 2022
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	



Proposal #	REPI-122-21 Performance Path
CDP ID #	178
Code	IECC RE
Code Section(s)	R405.2, R405.4, R405.4.1, R405.4.2, TABLE R405.4.2(1) New Section n
Location	base
Proponent	Vladimir Kochkin vkochkin@nahb.org
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	
Recommendation	See modified language below
Vote	As modified 13-3
Recommendation Date	2/9/22
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	

REPI-122 Modification – new modified language is in yellow

Building	Standard Reference Design	Proposed Design
Component		
	For other than electric heating without a heat pump: as proposed. Where the proposed design utilizes electric heating without a heat pump, the standard reference design shall be an air source heat pump meeting the requirements of Section C403 of the IECC—Commercial Provisions. Capacity: sized in accordance with Section R403.7.	As proposed
	Fuel Type/Capacity: Same as proposed design	As proposed
Heating	Product class: Same as proposed design	As proposed
systems	Efficiencies:	As proposed
Systems	Heat pump: Complying with 10 CFR §430.32 (2021)	As proposed
	Furnaces: Complying with 10 CFR §430.32 (2021) and For non-condensing For condensing Roilers: Complying with 10 CFR §430.32 (2021) and	Non-condensing as proposed Condensing as proposed
	For condensing	Non-condensing as proposed Condensing as proposed



Proposal #	REPI-129-21 ERI On-site renewable backstop
CDP ID #	313
Code	IECC RE
Code Section(s)	R406.3, R406.3.1, R406.3.2 New Section n
Location	base
Proponent	William Fay bill@energyefficientcodes.org
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	
Recommendation	Approve
Vote	Approve 11-7
Recommendation Date	2/9/22
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	



Proposal #	REPI-128-21 ERI envelope backstop
CDP ID #	490
Code	IECC RE
Code Section(s)	R406.3, R406.3.1, R406.3.2 New Section n
Location	base
Proponent	Joe Cain JoeCainPE@gmail.com
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	
Recommendation	Deny in favor of REPI-129-21
Vote	Disapproval
Recommendation Date	2/9/22
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	



Proposal #	IRCPI-005-21 Performance source energy multiplier
CDP ID #	524
Code	IRC
Code Section(s)	R405.2, N1105.2 New Section n
Location	base
Proponent	James Ranfone jranfone@aga.org
Proposal Status	SC rev
Subcommittee	RE Econ, Model, Metric
Subcommittee Notes	
Recommendation	
Vote	Disapproval 16-0
Recommendation Date	2/9/22
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	AffirmativeNegativeTable To Subcommittee
Date	



Proposal #	CEPI-017-21 Part II Roof Replacement
CDP ID #	412
Code	IECC RE
Code Section(s)	C202 New Section n
Location	base
Proponent	Marcin Pazera mpazera@pima.org
Proposal Status	SC rev
Subcommittee	RE Existing Buildings
Subcommittee Notes	Technical issues with terminology
Recommendation	Paul Demers – motion to disapprove Stephen Dent – second
Vote	Unanimous pass for disapproval
Recommendation Date	
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	



Proposal #	REPI-147-21 Roof Replacement exception
CDP ID #	370
Code	IECC RE
Code Section(s)	R503.1, R503.1.1 New Section n
Location	base
Proponent	Bill McHugh bill@mc-hugh.us
Proposal Status	SC rev
Subcommittee	RE Existing Bldg
Subcommittee Notes	Improve language to decrease responsibility proposal places on local building official.
Recommendation	Seth Wiley – motion to disapprove Paul Demers – second
Vote	Unanimous, motion to disapproved carries
Recommendation Date	2/8/2022
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	AffirmativeNegativeTable To Subcommittee
Date	



Proposal #	REPI-148-21 Building Envelope air barrier
CDP ID #	348
Code	IECC RE
Code Section(s)	R503.1.1 New Section n
Location	base
Proponent	Darren Meyers dmeyers@ieccode.com
Proposal Status	SC rev
Subcommittee	RE Existing Building
Subcommittee Notes	Need for broader code coordination
Recommendation	Seth Wiley - motion to disapprove Paul Demers – second
Vote	5 in favor, 1 oppose, motion to disapprove passes
Recommendation Date	2/8/2022
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	



Proposal #	REPI-149-21 Roof Membrane Peel Replacement
CDP ID #	369
Code	IECC RE
Code Section(s)	R503.1.1 New Section n
Location	base
Proponent	Bill McHugh bill@mc-hugh.us
Proposal Status	SC rev
Subcommittee	RE Existing Bldg
Subcommittee Notes	Technical items need clarification
Recommendation	Jim Z – motion to approve as written – no second Seth Wiley – motion to disapprove Paul Demers – second
Vote	5 for, 2 against, 1 abstain, motion to disapprove passes
Recommendation Date	2/8/2022
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	AffirmativeNegativeTable To Subcommittee
Date	



Proposal #	CEPI-012-21 Part II Biomass definition
CDP ID #	249
Code	IECC RE
Code Section(s)	R202 New Section n
Location	base
Proponent	Diana Burk diana@newbuildings.org
Proposal Status	SC rev
Subcommittee	RE Elec, Light
Subcommittee Notes	
Recommendation	Follow approval from commercial committee. Modification to remove comma between biofuel and feedstock
Vote	As modified 10-2
Recommendation Date	2.14.22
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	



Proposal #	REPI-112-21 Part I Lighting control system large home
CDP ID #	487
Code	IECC RE
Code Section(s)	R404.4 New Section y
Location	base
Proponent	Michael Jouaneh mjouaneh@lutron.com
Proposal Status	SC rev
Subcommittee	RE Elec, Light
Subcommittee Notes	
Recommendation	
Vote	As modified
Recommendation Date	2/14/22
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	



Proposal #	REPI-112-21 Part II Lighting control system large home
CDP ID #	581
Code	IRC
Code Section(s)	N1104.4 New Section y
Location	base
Proponent	Michael Jouaneh mjouaneh@lutron.com
Proposal Status	SC rev
Subcommittee	RE Elec, Light
Subcommittee Notes	
Recommendation	
Vote	As modified
Recommendation Date	2/14/22
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	AffirmativeNegativeTable To Subcommittee
Date	

Topic: (for internal use)

Lighting control system for large homes

Summary Purpose/Reason/Background (for internal use)

Require large homes to install lighting control system.

ICC Code or Standard: (list the code the change applies to, ex. IECC, IRC, IEBC)

IECC

Affected Code Section: (list code sections to be revised or added)

R404.4

Proposed Change: (paste in code text, <u>underline new text</u>, strikethrough deleted text. Use one of the following at the beginning of each proposed section of code text as appropriate)

- 1. Add new definition as follows:
- 2. Revise as follows:
- 3. Add new text as follows:

Add new text as follows:

Dwelling units with greater than 5000 ft² (460 m²) of conditioned floor area shall have a lighting control system that has the capability to turn off all permanently installed interior luminaires from a control located at an exit door or have a lighting control system that has the capability to turn off all permanently installed interior lighting from remote locations.

Exceptions:

<u>1. Up to 5% of the total lighting power may remain uncontrolled.</u>

2. Spaces where lighting is controlled by a count-down timer or occupant sensor control.

Reason: (provide substantiation reason statements for the proposal)

This proposal is similar to what in ASHRAE 90.2. The intent to require lighting in large homes to have a control system or smart light fixtures such that the lighting can be shutoff from the exit or remote locations (e.g., using a phone app). This control strategy will save energy by allowing occupants to shutoff the lighting as they leave (or while they are away) so that unneeded lighting is not left on when no one is home. Note that the intent is for lighting to have the capability to be shutoff, not mandate lighting be shutoff.

Bibliography: (cite sources, studies, reports and supporting information)

ASHRAE 90.2 section 7.5.3.

https://www.bpa.gov/EE/Technology/EE-emerging-technologies/Projects-Reports-Archives/Documents/FutureResLightingPaper%20FINAL%20DRAFT%20docx%20-%202018-08-15.pdf [11% lighting savings from energy management system, cost is \$150 at high end. See page 37]

The median size of a completed single-family house was 2,261 square feet. https://www.census.gov/construction/chars/highlights.html

CEE_LightingMarketCharacterization.pdf (cee1.org)

Cost Impact: (select one of the following statements. Where desired, add supporting information)

- 1. The code change proposal will not increase or decrease the cost of construction
- 2. The code change proposal will decrease the cost of construction
- 3. The code change proposal will increase the cost of construction

The code change proposal will increase the cost of construction (but many of these homes will install a lighting control system or smart light fixtures anyway so may not be an increase in real world application). Cost effective based on ASRHAE 90.1 scalar ratio method. See separate cost effectiveness analysis file.



Proposal #	REPI-102-21 Part I Lighting efficacy
CDP ID #	460
Code	IECC RE
Code Section(s)	R404.1 New Section n
Location	base
Proponent	Michael Jouaneh mjouaneh@lutron.com
Proposal Status	SC rev
Subcommittee	RE Elec, Light
Subcommittee Notes	
Recommendation	
Vote	Approve 11-0-1
Recommendation Date	2/14/22
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	



Proposal #	REPI-102-21 Part II Lighting efficacy
CDP ID #	579
Code	IRC
Code Section(s)	N1104.1 New Section n
Location	base
Proponent	Michael Jouaneh mjouaneh@lutron.com
Proposal Status	SC rev
Subcommittee	RE Elec, Light
Subcommittee Notes	
Recommendation	
Vote	Approve 11-0-1
Recommendation Date	2/14/22
Next Step	To Subcommittee To Advisory Group To Consensus Committee X
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	



Proposal #	REPI-100-21 High Efficacy light definition and equipment
CDP ID #	314
Code	IECC RE
Code Section(s)	R404.1 New Section n
Location	base
Proponent	Steven Rosenstock srosenstock@eei.org
Proposal Status	SC rev
Subcommittee	RE Elec, Light
Subcommittee Notes	
Recommendation	Disapprove In favor of language in REPI-102 Part I
Vote	Disapproval 11-0-1
Recommendation Date	2/14/22
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	



Proposal #	REPI-103-21 Lighting high efficacy light sources
CDP ID #	140
Code	IECC RE
Code Section(s)	R404.1 New Section n
Location	base
Proponent	Megan Hayes Megan.Hayes@nema.org
Proposal Status	SC rev
Subcommittee	RE Elec, Light
Subcommittee Notes	
Recommendation	Disapprove In favor of language in REPI-102 Part I
Vote	Disapprove 11-0-1
Recommendation Date	2/14/22
Next Step	To Subcommittee To Advisory Group To Consensus CommitteeX
Consensus Committee	
Committee Response	
Vote	Affirmative Negative Table To Subcommittee
Date	