

Council Business Meeting

December 3, 2019

Agenda Item	Resolution Supporting a Strengthened 2021 International Energy Conservation Code (IECC)	
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SUMMARY

The Council is asked to read, by title only, and adopt a Resolution to Support Voting in Favor of Strengthening the 2021 International Energy Conservation Code (IECC). The resolution would direct eight City votes to be cast in support of a strengthened 2021 International Energy Conservation Code (IECC) and would be in line with the recommendations provided by the Energy Efficiency Code Coalition (EECC) voters' guide.

POLICIES, PLANS & GOALS SUPPORTED

The 2021 IECC Voters Guide as created by EECC makes voting recommendations which would significantly strengthen the 2021 International Energy Conservation Code. Many of the voting recommendations support the following goals, strategies and actions contained within Ashland's 2017 Climate and Energy Action Plan.

CEAP Goals Supported

Overall Goal 1. Reduce Community GHG Emissions.

Overall Goal 2. Prepare Ashland to be more resilient to climate change.?

Goal BE 1. Reduce GHG emissions associated with Ashland's building energy use.

Goal BE 2. Increase energy and water efficiency in City and Private buildings.

Goal ULT 4. Support local and regional sustainable growth.

Goal CC 1. Increase awareness of city climate goals and needs.

Goal CC 2. Integrate climate change considerations into day-to-day City operations, planning, and decision making.

Goal ULT 4. Support local and regional sustainable growth.

CEAP Strategies Supported

Strategy BE-1. Support cleaner energy sources.

Strategy BE-2. Encourage increased building energy efficiency and conservation

Strategy ULT-3. Support more-efficient vehicles

Strategy CC-4. Engage with other governments and organizations around regional, statewide, national, and international climate policy and action.

CEAP Actions Supported

Action BE-1-2. Promote switching to low and non-carbon fuels.

Action BE-2-1. Increase outreach efforts to expand participation in energy efficiency programs and promote climate-friendly building and construction.

Action BE-5-1. Encourage heat-tolerant building approaches such as cool roofs and passive cooling.

PREVIOUS COUNCIL ACTION

1. Acceptance of CEAP 3/7/2017 Council meeting
(<http://www.ashland.or.us/Agendas.asp?AMID=6575&Display=Minutes>)
2. Resolution 2019-27 establishing climate action as a Value Service

BACKGROUND AND ADDITIONAL INFORMATION

The IECC is referred to as America’s “Model” energy code. Every three years, officials from municipalities and states across the nation vote on proposed changes to the IECC to incorporate new building technologies and practices as they evolve over time to ensure that new homes and commercial buildings meet modern-day minimum levels of safety, fire protection, and efficiency. Only Governmental Member Representatives & Honorary Members have the right to vote. The number of ICC representatives allowed per Governmental Member is based upon population. Ashland has a total of 8 voting members which are made up of two governmental units. The Community Development Department, Building Division and the Fire Department, each of which represents 4 voting members. The voting for the 2021 code cycle will take place between November 18th and December 5th of 2019.

According to statements on their website, the Energy-Efficient Codes Coalition (EECC) is a group of building sector advocates and supporters who are committed to improving the energy efficiency of the International Energy Conservation Code (IECC). Their ultimate goal is to set America’s model building energy code on a glide-path to net-zero energy construction. The 2021 IECC Voters Guide presented by the EECC, claims to outline the most important energy efficiency and climate proposals that have the greatest potential to reduce energy use and carbon emissions in residential and commercial buildings by at least 10% of current code requirements.

The City of Ashland has an opportunity to engage in the 2021 IECC code cycle, and spread its influence to other governments and organizations around regional, statewide, national, and international, by casting its eligible governmental member representative votes as recommended by the EECC 2021 IECC Voters Guide.

FISCAL IMPACTS

Support for the resolution does present any immediate fiscal impacts to the City of its citizens. If the 2021 IECC is approved and adopted by the State of Oregon, potential financial impacts associated with supporting the EECC 2021 IECC Voters guide could include higher upfront construction costs and lower utility bills for the life of the buildings. Additional impacts include a decreased carbon footprint, and measureable energy savings.

STAFF RECOMMENDATION

Staff recommends approval of the resolution.

ACTIONS, OPTIONS & POTENTIAL MOTIONS

I move to approve the Resolution to Support Voting in Favor of Strengthening the 2021 International Energy Conservation Code (IECC) by endorsing the recommendations by the Energy-Efficient Codes Coalition; or
I move to not approve the Resolution to Support Voting in Favor of Strengthening the 2021 International Energy Conservation Code (IECC)

REFERENCES & ATTACHMENTS

Attachment 1: Resolution

Attachment 2: EECC 2021 IECC Voters Guide

Attachment 3: Summary of IECC RE (Residential) Proposals and Online Voting Recommendations

Attachment 4: Summary of IECC CE (Commercial & Residential) Proposals and Online Voting Recommendations

Attachment 5: ASHRAE 90.1 Climate Zone Mapping Chart

1 **RESOLUTION NO. 2019-33**

2 RESOLUTION TO SUPPORT VOTING IN FAVOR OF STRENGTHENING THE 2021
3 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) BY ENDORSING THE
4 RECOMMENDATIONS PUT FORTH BY THE ENERGY-EFFICIENT CODES COALITION

5 **RECITALS:**

6 A. The City of Ashland (City) has an interest in implementation of its Climate and Energy
7 Action Plan (CEAP) which provides a strategic blueprint toward reducing Ashland’s
8 contribution to climate change by decreasing greenhouse gas emissions, and preparing the City’s
9 communities, systems and resources to be more resilient to climate change impacts.

10 B. The City Council recognizes that Ashland’s residential, multi-family and commercial
11 buildings represent a large source of energy use and waste.

12 C. The City Council finds that it is in its interest to cast its votes in support of a strengthened
13 International Energy Conservation Code (IECC) that has the potential to result in a reduction in
14 energy and carbon emissions in residential and commercial buildings by at least 10%.

15 **NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ASHLAND, OREGON,**

16 **RESOLVES AS FOLLOWS:**

17 SECTION 1. Eligible voters in the Fire Department and Building Division shall fully participate
18 in the November-December International Code Council (ICC) online voting and support
19 proposals that will increase the efficiency of this year’s International Energy Conservation Code
20 (IECC) by up to 10%.

21 SECTION 2. All of the City of Ashland’s eligible votes shall be cast consistent with the City’s
22 energy and climate goals, strategies and actions as described in the Climate and Energy Action
23 Plan (CEAP) and shall be cast in line with the U.S. Mayor’s recognized IECC voting guide and
24 fact sheets developed by the broad-based Energy Efficient Code Coalition (EECC), which
25 identifies IECC proposals that employ existing technologies to improve new building efficiency,
26 as well as those that would weaken efficiency.

27 SECTION 3. This resolution shall be effective immediately upon Council action.
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ADOPTED by the City Council this _____ day of _____, 2019.

ATTEST:

Melissa Huhtala, City Recorder

SIGNED and APPROVED this _____ day of _____, 2019.

John Stromberg, Mayor

Reviewed as to form:

David H. Lohman, City Attorney

2021 IECC

Energy-Efficient Codes Coalition 2021 IECC Voters Guide

Thank you for doing your part to significantly strengthen the 2021 International Energy Conservation Code! This document outlines the most important energy efficiency and climate proposals—those that have the greatest potential to reduce energy use and carbon emissions in residential and commercial buildings by at least 10%.

We think all of these are important for your vote. If your time is limited, please focus on the priority proposals in the rows that are **bold and highlighted**. A **GREEN PROPOSAL NUMBER** indicates a vote to approve the proposal under consideration, which might be As Submitted (AS), As Modified by Committee (AM) or As Modified by Public Comment (AMPC). A **RED PROPOSAL NUMBER** indicates a vote to disapprove the proposal.

Code Change Proposal and Vote Brief Residential Proposal Description

<input type="checkbox"/> RE7	AMPC1	Increases lighting efficiency
<input type="checkbox"/> RE10	D	Adds definition for sampling
<input type="checkbox"/> RE20	AMPC1	Provides more information about code edition and compliance path
<input type="checkbox"/> RE21	AS	Requires certificates include heating, cooling equipment sizing and Energy Rating Index scores
<input type="checkbox"/> RE29	AS	Improves wall insulation in Climate Zones 4 and 5
<input type="checkbox"/> RE32	AS	Adds slab insulation in Climate Zones 3, improves performance in Climate Zones 4 and 5
<input type="checkbox"/> RE33	AS	Improves ceiling insulation in Climate Zones 2 and 3
<input type="checkbox"/> RE34	AM	Eliminates floor insulation loophole in Climate Zones 5, 6, 7, and 8
<input type="checkbox"/> RE35	AMPC1	Improves window efficiency in Climate Zones 3 and 4
<input type="checkbox"/> RE36	AS	Improves ceiling insulation in Climate Zones 4 - 8
<input type="checkbox"/> RE37	AS	Improves window thermal performance in Climate Zone 5
<input type="checkbox"/> RE40	D	Weakens wall insulation based on framing factor
<input type="checkbox"/> RE43	D	Adds sampling for testing and inspections
<input type="checkbox"/> RE95	D	Adds sampling for air leakage testing
<input type="checkbox"/> RE102	D	Creates a loophole for multifamily leakage testing
<input type="checkbox"/> RE110	D	Removes duct sealing requirements
<input type="checkbox"/> RE112	AS	Requires duct testing
<input type="checkbox"/> RE116	D	Changes requirements and adds exemption for duct testing
<input type="checkbox"/> RE117	D	Changes requirements and adds exemption for duct testing
<input type="checkbox"/> RE119	D	Changes duct testing conditions, may increase air leakage
<input type="checkbox"/> RE121	D	Adds sampling for duct testing
<input type="checkbox"/> RE126	AS	Encourages higher efficiency water heating sources
<input type="checkbox"/> RE139	AS	Requires balanced heat recovery or energy recovery ventilation in Climate Zones 7 and 8
<input type="checkbox"/> RE145	AS	Requires dimmers on some lighting fixtures
<input type="checkbox"/> RE147	AS	Requires electric circuits and receptacles near gas- and propane- equipment
<input type="checkbox"/> RE148	AM PC1 and PC2	Closes loophole for exterior lighting in multifamily

Code Change Proposal and Vote	Brief Residential Proposal Description
<input type="checkbox"/> RE151 AS	Adds performance path thermal envelope backstop
<input type="checkbox"/> RE156 D	Creates trade-off that allows efficiency reductions in buildings with renewable energy
<input type="checkbox"/> RE157 AS	Removes loophole by deleting reference to sampling
<input type="checkbox"/> RE165 D	Creates efficiency loophole for ducts within the home
<input type="checkbox"/> RE166 D	Changes energy modeling for water heating
<input type="checkbox"/> RE171 D	Changes energy modeling for HVAC distribution systems
<input type="checkbox"/> RE176 D	Creates thermal envelope trade-off for minimum-efficiency equipment
<input type="checkbox"/> RE182 AS	Improves Energy Rating Index envelope backstop in homes built with renewables
<input type="checkbox"/> RE184 AS	Limits potential Energy Rating Index efficiency trade-off for renewable energy
<input type="checkbox"/> RE186 D	Creates efficiency rollback for homes built under the Energy Rating Index path
<input type="checkbox"/> RE190 D	Eliminates Energy Rating Index compliance path thermal envelope backstop
<input type="checkbox"/> RE192 AS	Lowers Energy Rating Index values
<input type="checkbox"/> RE196 D	Weakens ERI compliance path thermal envelope backstop
<input type="checkbox"/> RE204 AS	Requires renewable energy credits are retained or retired by homeowners
<input type="checkbox"/> RE208 D	Creates equipment trade-off scheme
<input type="checkbox"/> RE209 AS	Creates Flex Points Package option to give builders options, provide flexibility, and deliver 5% energy savings
<input type="checkbox"/> RE217 D	Creates exemption from insulation in roof replacement
<input type="checkbox"/> RE223 AMPC2	Provides jurisdictions with an optional net-zero energy homes appendix without sacrificing efficiency
<input type="checkbox"/> RE224 I & II D & D	Adds ASHRAE 90.2 stretch codes appendix

Code Change Proposal and Vote	Brief Commercial Proposal Description
<input type="checkbox"/> CE1 I & II D & D	Expands IECC scope beyond efficiency and creates potential trade-offs
<input type="checkbox"/> CE2 D	Expands IECC scope beyond efficiency and adds confusing definitions
<input type="checkbox"/> CE3 I & II D & D	Expands IECC scope beyond efficiency and applies rigid cost-effectiveness requirements
<input type="checkbox"/> CE5 I & II D & D	Expands IECC scope beyond efficiency and adds competing priorities
<input type="checkbox"/> CE6 I D	Expands IECC scope beyond efficiency and adds other priorities
<input type="checkbox"/> CE7 I & II D & D	Expands IECC scope beyond efficiency and includes energy production and storage
<input type="checkbox"/> CE9 II AS	Adds energy conservation to alternative compliance path considerations
<input type="checkbox"/> CE12 II AS	Requires efficiency backstop for above-code programs
<input type="checkbox"/> CE21 AMPC1	Clarifies bio-gas and biomass definitions to renewable energy definition
<input type="checkbox"/> CE35 AM	Clarifies wall, above-grade definitions and improves insulation
<input type="checkbox"/> CE43 D	Adds unclear and unenforceable compliance option for data centers
<input type="checkbox"/> CE44 AMPC2	Creates compliance option for some multifamily units
<input type="checkbox"/> CE49 AS	Improves performance path energy efficiency
<input type="checkbox"/> CE54 II D	Weakens efficiency in buildings built in tropical zone
<input type="checkbox"/> CE55 AS	Requires that certificates include thermal envelope measures and scores
<input type="checkbox"/> CE56 AS	Adds minimal efficiency requirements for greenhouses
<input type="checkbox"/> CE57 D	Exempts utility buildings from envelope requirements
<input type="checkbox"/> CE61 AS	Improves roof insulation in Climate Zones 4, 5, 6, 7, and 8

Code Change Proposal and Vote	Brief Commercial Proposal Description
<input type="checkbox"/> CE63 AS	Improves above-grade wall insulation in Climate Zones 4, 5, 6, 7, and 8
<input type="checkbox"/> CE64 AS	Improves below-grade wall insulation in Climate Zones 4, 5, 6, 7, and 8
<input type="checkbox"/> CE65 AS	Corrects joist-framing insulation error in Climate Zone 1
<input type="checkbox"/> CE66 AS	Improves floor insulation in Climate Zones 4, 5, 6, 7, and 8
<input type="checkbox"/> CE68 AS	Corrects roof insulation error in Climate Zone 1
<input type="checkbox"/> CE69 AS	Improves slab edge insulation in Climate Zones 7 and 8
<input type="checkbox"/> CE73 AS	Corrects roof insulation error in Climate Zone 1
<input type="checkbox"/> CE75 AS	Corrects wall insulation error in Climate Zone 5 and 7
<input type="checkbox"/> CE79 AM	Reorganizes and reclassifies current slab-on-grade insulation requirements
<input type="checkbox"/> CE80 AS	Designates airspace requirements as mandatory
<input type="checkbox"/> CE93 I D	Creates storm shelter fenestration loophole
<input type="checkbox"/> CE96 AM	Adds air leakage testing requirement in multifamily
<input type="checkbox"/> CE97 AM	Adds air leakage testing requirement for more buildings
<input type="checkbox"/> CE99 AM	Requires air barrier verification certification
<input type="checkbox"/> CE104 D	Creates equipment room insulation loophole
<input type="checkbox"/> CE111 AM	Requires fault detection for large heating and cooling systems
<input type="checkbox"/> CE140 AMPC1	Requires efficient fans in multifamily buildings
<input type="checkbox"/> CE150 I & II D & D	Requires removable protective barrier on piping insulation and lowers efficiency
<input type="checkbox"/> CE162 AM	Increases lighting efficiency on some fixtures
<input type="checkbox"/> CE181 AMPC1	Adds manual option for lighting controls
<input type="checkbox"/> CE199 AMPC1, PC2, PC3	Requires lighting controls for parking garages
<input type="checkbox"/> CE209 AM	Requires efficient lighting for plant growth in buildings
<input type="checkbox"/> CE215 AM	Establishes energy monitoring system requirements
<input type="checkbox"/> CE216 AM	Adds automatic plug load control requirements
<input type="checkbox"/> CE217 I, II AM, AS	Makes buildings electric vehicle ready
<input type="checkbox"/> CE218 AM	Gives builders points-based options, adds flexibility, and delivers 2.5% energy savings
<input type="checkbox"/> CE219 AS	Increases points-based compliance option efficiency
<input type="checkbox"/> CE220 AS	Increases points-based compliance option efficiency
<input type="checkbox"/> CE226 AM	Adds multifamily lighting to the points based options
<input type="checkbox"/> CE240 AS	Adds efficient kitchen equipment to the points based option
<input type="checkbox"/> CE247 AS	Updates performance path assumptions for above-grade walls
<input type="checkbox"/> CE256 D	Creates unneeded exception for roof insulation replacement in existing buildings
<input type="checkbox"/> CE261 AS	Revises change-of-occupancy or use requirements
<input type="checkbox"/> CE262 AS	Adds energy storage system space in solar-ready zone appendix
<input type="checkbox"/> CE263 I,II,III D, D, D	Creates new appendix that requires solar without efficiency
<input type="checkbox"/> CE265 D	Adds option to trade off on-site energy storage systems for efficiency

For a more complete summary and discussion of IECC's recommendations on these and other proposals, see the [Detailed IECC Online Voting Guides](#). For questions, comments and more information, please contact:

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Summary of IECC RE (Residential) Proposals and Online Voting Recommendations

Detailed Online Voting Recommendations

**Final Post-PCH Version
November 8, 2019**

The IECC is the nation’s model building energy code and is revised every three years. Online voting by ICC Governmental Member Voting Representatives is the culmination of years of work by numerous stakeholders and determines the content of the next version of the IECC. To vote on these proposals, go to www.cdpassess.com and vote between 11/18/19 and 12/5/19.

This Guide has been prepared by the EECC to provide a brief outline of the RE Proposals (for residential buildings) and EECC’s voting recommendations for ICC Governmental Member Voting Representatives for purposes of the ICC’s Online Voting process. We strongly encourage Voting Representatives to vote on all of the proposals listed below if possible. Previous hearings, including the recent Public Comment Hearings, have pared down the proposals for consideration by online voters. This document does not include those proposals that have been resolved through the consent agenda or where EECC offers no voting recommendation (see earlier versions of EECC’s guides for info on these proposals) and only includes the voting options available to online voters. For more information, see www.energyefficientcodes.com.

The summaries and recommendations below reflect careful consideration by the EECC Technical Committee and, as such, represent the EECC’s views at this time. Included for many of the proposals is a brief analysis and support for EECC’s recommendations. This document is not intended as a substitute for reviewing and assessing the actual proposals and public comments as published by ICC, and we encourage a full review. EECC makes no representations or warranties as to this document or its use. **See also EECC's separate summary for CE proposals, which addresses commercial and some additional residential building proposals.**

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
RE7	AS	AMPC1	AMPC1	Improves lighting efficacy requirements to 65 lumens/watt for lamps and 45 lumens/watt for luminaires; renames <i>high-efficacy lamps</i> as <i>high-efficacy light sources</i> ; excludes kitchen appliance lighting fixtures.	Substantial energy savings. See also RE145.
RE10	AS	D	D	Adds new definition of <i>sampling</i> , a process where <100% of units are randomly inspected and/or tested to code requirements.	By definition, sampling a few homes for compliance does not guarantee that every home complies with the IECC. Sampling results should not be allowed to demonstrate code compliance.
RE20	D	AMPC1	AM PC1	Requires certificate to include the applicable code edition and compliance path selected.	This is useful information for code compliance and future homeowners.
RE21	D	D	AS	Requires certificate to include area-weighted average efficiency values where available, sizes of HVAC equipment, and ERI score (both with and without on-site generation).	Further improves the permanent certificate of energy-related information required to be posted in each home by providing additional useful information for the future use of the homeowner.
RE29	D	D	AS	Increases wall insulation in climate zones 4-5 from R-20 or 13+5 to R-20+5 or 13+10; adjusts equivalent U-factor requirements accordingly.	Reasonably improves the efficiency of wall insulation.

KEY:

PC – Public Comment

AS – Approve as Submitted

AM – Approve As Modified by Committee

AM PC 1 – Approve As Modified by Public Comment 1, etc.

D – Disapprove

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
RE32	D	D	AS	Adds slab R-value requirement of R-10 at 2 ft in cz 3; increases slab insulation depth from 2 to 4 ft in cz 4 and 5.	Reasonably improves the efficiency of slab insulation.
RE33	D	D	AS	Increases ceiling insulation requirement in cz 2 and 3 from R-38 to R-49; makes corresponding changes to equivalent U-factors in Table R402.1.4.	Reasonably improves the efficiency of ceiling insulation.
RE34	AM	AM	AM	Eliminates loophole that allows floor insulation to be reduced to R-19 in cz 5-8 in the prescriptive path where space is insufficient for full insulation depth.	Reasonably improves the efficiency of floor insulation by eliminating inefficient loophole.
RE35	AS	AMPC1	AMPC1	Revises fenestration U-factor from 0.32 to 0.30 in cz 3-4; adds new footnote in cz 3-8 that permits fenestration U-factor of 0.32 where wind-borne debris protection is required or windows are installed above 4,000 ft.	Reasonably improves the efficiency of windows (U-factor).
RE36	D	D	AS	Revises ceiling insulation requirement in cz 4-8 from R-49 to R-60; makes corresponding changes to equivalent U-factors in Table R402.1.4.	Reasonably improves the efficiency of ceiling insulation.
RE37	D	D	AS	Adds fenestration SHGC requirement of 0.40 in climate zone 5.	Reasonably improves efficiency by establishing a maximum fenestration SHGC.
RE40	AS	D	D	Permits R-18 wall insulation in place of R-20 in cz 3-8 where framing factor is $\leq 20\%$.	Rolls back current IECC energy efficiency
RE43	D	D	D	Adds new provisions for batch sampling and outlines process under which one dwelling out of five is required to demonstrate compliance through testing and inspection after showing compliance with first five units; adds new definition of <i>batch sampling</i> ; expands sampling to cover units "other than stacked multiple-family dwelling unit projects" where sampling plan is approved.	Sampling is inadequate as it does not guarantee that every home complies with the IECC.
RE47	AM	AM	D	Creates new exception from access hatch and door insulation requirements that allows reduced R-value and U-factor requirements for pull-down stair-type access hatches in cz 1-4; clarifies that reductions from exceptions do not apply to U-factor alternative or Total UA approaches.	The proposed new exception will reduce efficiency.
RE59	AM	AM	AM	Divides the requirements that apply to basement walls and insulation into prescriptive and mandatory sections; designates basement wall insulation installation as "mandatory." <i>Modification deletes "mandatory" designation.</i>	

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
RE60	D	AM PC2	AM PC2	Divides the requirements that apply to slab-on-grade floors into prescriptive and mandatory sections; designates as "mandatory" the insulation installation requirements.	
RE61	D	D	D	Deletes requirement for crawl space insulation to extend vertically or horizontally from the finished grade for 24 inches; adds requirement that insulation extend down from the sill plate on top of the crawlspace wall to the floor of the crawlspace; requires vapor retarder to be sealed to the stem walls.	
RE95	D	D	D	Establishes air leakage test sampling options for R2 multifamily dwelling units; requires at least 15% to be tested and outlines details for process and sample group identification, as well as process after any failed tests.	Sampling does not guarantee that every home complies with the IECC and should not be allowed to demonstrate code compliance.
RE102	AS	D	D	Adds options to test multifamily buildings for air leakage as a single zone, multiple zones, or individual dwelling units per ASTM E779.	This proposal could promote gaming; it could also allow too much air leakage between individual units of a multifamily dwelling.
RE107	D	AM PC1	AM PC1	Specifies natural gas systems and equipment that are not permitted to have continuously burning pilot lights.	By limiting continuously burning pilot lights, this proposal will save energy.
RE110	D	D	D	Creates a new exception from sealing requirements for ducts or portions located completely inside the building thermal envelope.	Duct systems must be sealed in order for the conditioned air to reach the intended space regardless of location; proponent acknowledges that this proposal could lead to occupant discomfort.
RE112	AS	AS	AS	Requires ducts located within building thermal envelope to be tested for total leakage to ≤ 8.0 cfm/sq.ft.	All ducts (regardless of location) should be tested for and achieve reasonable levels of tightness. Excessively leaky ducts will fail to properly deliver conditioned air, resulting in discomfort and potentially additional energy use as occupants offset discomfort by adjusting the thermostat.
RE116	D	D	D	Requires ducts to be tested to ≤ 4 cfm/sq.ft. for both total leakage and leakage to the outdoors; adds exception that allows systems serving < 1500 sq.ft. to be tested to 60 cfm/sq.ft.	Very concerned regarding exception for smaller dwelling units and the option to test ducts for leakage to outdoors.
RE117	D	D	D	Requires ducts to be tested to ≤ 4 cfm/sq.ft. regardless of duct location; adds exception for systems serving < 1500 sq.ft. to test to ≤ 60 cfm/sq.ft.	Very concerned regarding exception for smaller dwelling units and the option to test ducts for leakage to outdoors.
RE119	AS	D	D	Adds an alternative to test duct leakage to outside conditioned space.	Rolls back current IECC requirements, resulting in reduced energy efficiency.

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
RE121	D	D	D	Establishes duct leakage test sampling options for R2 multifamily dwelling units; requires at least 15% to be tested and outlines details for process and sample group identification, as well as process after any failed tests.	By definition, sampling does not guarantee that every home complies with the IECC and should not be allowed to demonstrate code compliance.
RE130	AS	AS	AS	Requires mechanical ventilation systems to be tested; allows code official to require test to be conducted by approved third party.	
RE139	AS	AS	AS	Requires dwelling units in cz 7-8 to be provided with balanced HRV or ERV.	
RE145	D	D	AS	Requires all permanently-installed lighting fixtures to contain only high-efficacy lamps and to be controlled with a dimmer, occupant sensor, or other control (with some exceptions); revises definition of <i>high-efficacy lamps</i> to an efficacy ≥ 70 lumens/watt; adds new definitions for <i>dimmer</i> and <i>occupant sensor control</i> .	
RE147	D	D	AS	Requires electric circuits and receptacles to be installed near gas or propane water heater, dryer, or cooking equipment.	Will facilitate future switching to all-electrical appliances if desired.
RE148	D	AM PC1 and PC2	AM PC1 and PC2	Requires multifamily residential buildings to comply with exterior lighting requirements of commercial chapter.	
RE151	D	D	AS	Requires homes built to performance path to meet or exceed 2009 IECC envelope requirements.	Establishes a reasonable thermal envelope backstop (mandatory minimum envelope efficiency) for trade-offs under the performance compliance path.
RE156	D	D	D	Adds new section to performance path recognizing on-site renewable energy as a reduction in energy use of the building.	The addition of on-site renewables as a trade-off for energy efficiency to the scope of the performance compliance path would substantially roll back the efficiency of the code. Renewable energy is important and should be added to buildings where appropriate, but should not replace long-term energy efficiency measures. This proposal would substantially reduce long-term energy savings, comfort and sustainability and should be rejected as in past code cycles. See RE156, PC3 for further discussion of reasons for disapproval.
RE157	D	AS	AS	Deletes incomplete language regarding batch sampling of buildings from performance path compliance report.	By definition, sampling does not guarantee that every home complies with the IECC and should not be allowed to demonstrate code compliance.
RE165	AM	AM	D	Adds a default duct system efficiency to performance path for systems located inside conditioned space and verified pre-drywall.	This new default value awards too much efficiency credit for an untested system. The system should actually be tested.

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
RE166	AS	AS	D	Adds details to standard reference assumption for service water heating efficiency and draw based on federal regulations; deletes reference to irrelevant footnotes.	Does not appear necessary and may cause confusion in application of the performance path, which could roll back efficiency.
RE171	D	D	D	Sets the standard reference assumption for thermal distribution system efficiency at 0.88, irrespective of whether system is tested or whether it is a non-ducted system.	This change rolls back energy efficiency by setting a lower standard than the current standard for many thermal distribution systems.
RE176	D	D	D	Adds efficiency trade-offs for heating, cooling, and water heating equipment in the performance path, based on federal minimum efficiencies.	This proposal rolls back the code, creating an enormous equipment trade-off loophole and a major reduction in energy efficiency. These types of equipment trade-offs have been consistently rejected by the ICC during every code development cycle since 2009 and by almost all states. Proposal would allow trade-offs that take advantage of free-ridership created by the difference between the efficiencies of commonly-installed HVAC and water heating equipment and the outdated federal minimum efficiencies that are proposed to be included in the standard reference baseline. Such trade-offs also trade away efficiency of much longer-life thermal envelope components for shorter-life equipment components. See RE176, PC2 for further discussion of reasons for disapproval.
RE182	D	D	AS	Moves current thermal envelope backstop for ERI compliance with on-site power production from footnote to main text; updates backstop from 2015 to 2018 edition of IECC.	This proposal is a reasonable and important improvement to update the current thermal envelope backstop applicable to the ERI with onsite power production.
RE184	D	D	AS	Specifies that for ERI compliance purposes, any reduction in energy use associated with on-site renewable energy shall not exceed 5% of total energy use.	This proposal does not affect the installation or amount of on-site renewable energy; it simply limits the amount of compliance credit that can be claimed under the ERI compliance approach for such energy to ensure that a reasonable level of efficiency is also installed and not traded off.
RE186	AS	AS	D	Replaces current exception that specifies a different ventilation rate in the ERI than is contained in RESNET/ICC 301.	This proposal may be misinterpreted by some in a manner resulting in reduced efficiency in the ERI.
RE190	D	D	D	Deletes thermal envelope backstop that applies to ERI path where on-site renewable energy is incorporated into ERI calculation; adds renewable energy to the scope of ERI; reduces ERI scores to 2015 IECC values.	Eliminating this backstop and allowing unlimited trade-offs between on-site generation and the permanent building envelope could wipe out all the efficiency gains made in the IECC over the past decade for those that comply under the ERI path when including on-site generation.

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
RE192	D	D	AS	Lowers ERI scores by 5-8 points to reflect 2015 IECC ERI values	It is important to maintain and increase efficiency under the ERI compliance path over time. This proposal improves efficiency by improving target ERI scores by replacing the 2018 IECC levels with the more efficient levels originally in the 2015 IECC.
RE196	D	D	D	Weakens the thermal envelope backstop for ERI-compliant homes with on-site renewable energy, replacing the 2015 IECC reference with a requirement that the envelope be "within 15%" of the current prescriptive table	This proposal will substantially weaken the backstop that applies to homes with on-site generation, allowing major trade-offs between on-site generation and the permanent building envelope that will lead to significantly less-efficient homes.
RE202	D	AM PC1	AM PC1	Requires compliance report generated by ERI software to indicate that the ERI path has been selected	
RE204	D	D	AS	Adds a requirement for homes where on-site renewable energy is used in ERI calculation to substantiate that renewable energy credits associated with on-site renewable energy are owned by or retired by the homeowner, or that an equivalent quantity of renewable energy certificates are conveyed to the homeowner; adds new definition of <i>renewable energy certificate (REC)</i>	
RE206	D	D	AS	Improves overall efficiency of IECC by 5% by requiring code user to select 5 Flex Points from table of additional efficiency measures; provides alternatives to comply via performance or ERI path by incorporating a 5% efficiency improvement	RE206 is a refined version of the Flex Points proposal offered by EECC in previous code cycles and offers the most flexibility through mix and match compliance options, along with a reasonable efficiency improvement. We prefer RE209, which received more votes at both the CAH and PCH.
RE207	D	D	AS	Improves overall efficiency of IECC by 10% by requiring code user to select 10 Flex Points from table of additional efficiency measures; provides alternatives to comply via performance or ERI path by incorporating a 10% efficiency improvement	RE207, as submitted, is basically RE206, but requires 10 efficiency points (10%) rather than 5 efficiency points (5%). We prefer RE209, which received more votes at both the CAH and PCH.
RE208	D	D	D	Adds a requirement to select 3 points from new table of energy efficiency measures; adds efficiency trade-offs for heating, cooling, and water heating equipment efficiency based on federal minimum efficiency baselines	This proposal would result in a huge efficiency rollback because it includes trade-offs for heating, cooling, and water heating equipment in the performance path; points tables also would create conflicts and would complicate future code improvements. See RE208, PC2 for further discussion of reasons for disapproval.

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
RE209	D	D	AS	Improves overall efficiency of IECC by roughly 5% by requiring code user to select from 5 Additional Efficiency Package Options; provides alternatives to comply via performance or ERI path by incorporating a 5% efficiency improvement	We strongly recommend adoption of RE209, which is an “additional energy efficiency package options” approach – offering a choice of five package options to achieve a substantial energy efficiency improvement. While this proposal is new to the IECC development process, a similar approach has been in the IECC Commercial Provisions for a number of cycles and can also be found in state energy codes. This approach is more simplified and straightforward than other efficiency option proposals and compliance should be straightforward for builders to achieve and code officials to enforce.
RE210	D	D	D	Adds new Pathway to Zero Energy Rating Index Compliance Alternative, based on ERI scores that are reduced to zero by 2042; requires code user to demonstrate ERI score with and without on-site renewables	We conceptually support increased efficiency over time. However, without a minimum thermal envelope trade-off backstop such as used for ERI compliance with on-site generation, this proposal could permit excessive reductions in efficiency for individual building components.
RE217	AMC	D	D	Creates an exception from roof replacement insulation requirements (explicitly stated to apply to “insulation entirely above the roof deck”) where required R-value cannot be installed due to “... thickness limitations presented by existing rooftop conditions ...”; requires “... maximum approved thickness of insulation compatible with the available space and existing uses...”	Roof replacement is one of the few opportunities to improve the efficiency of existing buildings; this proposal creates a broad exception that could potentially usurp the role of the code official to enforce the existing building section of the energy code in an effective and fair manner. The exception applies to a requirement (i.e. IEAD) that does not exist in the residential chapters of the IECC, creating an orphan provision that is irrelevant. Additionally, it introduces the term “rooftop conditions” that is undefined in the code, as well as the code-unenforceable word “including” followed by a laundry list of vague items. It also introduces a new requirement within an exception – “shall be installed” which is not acceptable code structure.
RE223	D	AM PC2	AM PC2	Adds new appendix with provisions for Zero Energy Residential Buildings; requires low ERI score without on-site power production and zero ERI where on-site power production is included; requires compliance with mandatory requirements and thermal envelope requirements of 2015 IECC	This proposal is important because it would establish a reasonable net zero option in an appendix for those jurisdictions interested in such an approach. It incorporates a substantial improvement in efficiency over the base code along with sufficient renewable energy to reach net zero. There are also requirements to meet mandatory measures and a reasonable thermal envelope backstop.
RE224 Part I	D	D	D	Adds new Stretch Energy Code appendix that requires compliance with ASHRAE/IES Standard 90.2.	For a stretch energy code, we would prefer that buildings also be required to meet IECC mandatory requirements and a strong envelope backstop such as the prescriptive requirements of the 2015 or 2018 IECC. Would also prefer requirements be set out in IECC rather than referencing another code. We prefer RE223.
RE224 Part II	D	D	D	Adds new Stretch Energy Code appendix that requires compliance with ASHRAE/IES Standard 90.2	



Summary of IECC CE (Commercial & Residential) Proposals and Online Voting Recommendations

Detailed Online Voting Recommendations

**Final Post-PCH Version
November 8, 2019**

The IECC is the nation’s model building energy code and is revised every three years. Online voting by ICC Governmental Member Voting Representatives is the culmination of years of work by numerous stakeholders and determines the content of the next version of the IECC. To vote on these proposals, go to www.cdpass.com and vote between 11/18/19 and 12/5/19.

This Guide has been prepared by the EECC to provide a brief outline of the CE Proposals (primarily commercial building-related but also some residential) and EECC’s voting recommendations for ICC Governmental Member Voting Representatives for purposes of the ICC’s Online voting process. We strongly encourage Voting Representatives to vote on all of the proposals listed below if possible. Previous hearings, including the recent Public Comment Hearings, have pared down the proposals for consideration by online voters. This document does not include those proposals that have been resolved through the consent agenda or where EECC offers no voting recommendation (see earlier versions of EECC’s guides for info on these proposals) and only includes the voting options available to online voters. For more information, see www.energyefficientcodes.com.

The summaries and recommendations below reflect careful consideration by the EECC Technical Committee and, as such, represent the EECC’s views at this time. Included for many of the proposals is a brief analysis and support for EECC’s recommendations. This document is not intended as a substitute for reviewing and assessing the actual proposals and public comments as published by ICC, and we encourage a full review. EECC makes no representations or warranties as to this document or its use. **See also EECC's separate summary for RE proposals, which also addresses residential building proposals.**

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
CE1 Part I	AS	AS	D	Expands scope of IECC to cover energy-using systems in areas outside the structure.	This proposal could significantly broaden the scope of the IECC into uncertain territory and apply code provisions across multiple buildings or building sites.
CE1 Part II	D	D	D	Expands scope of IECC to cover energy-using systems in areas outside the structure.	
CE2	D	D	D	Specifies that load shifting from on- to off-peak periods shall be considered part of the effective use of energy.	Time of use of energy is inherently a consideration as to the effective use of energy, making this proposal unnecessary. We believe this change would overemphasize this single consideration and possibly invite new trade-offs or measures that would weaken the overall efficiency of the code. In our view, the current intent of the IECC has worked well and does not require changes.
CE3 Part I	D	D	D	Adds renewable energy and energy storage systems to the scope of the IECC; also adds intent to achieve the most cost-effective means of compliance.	In our view, the current intent of the IECC has worked well and does not require changes -- energy conservation, not energy generation or storage, should be the focus of the IECC. This proposal would expand the scope of the IECC in ways that could lead to unanticipated negative consequences including reduced energy efficiency. Moreover, by adding a reference to the "most cost-effective means of compliance", this proposal could be read to imply a comparative cost-effectiveness test that would be very problematic and create confusion among code adopters and users.
CE3 Part II	D	D	D	Adds renewable energy and energy storage systems to the scope of the IECC; also adds intent to achieve the most cost-effective means of compliance.	

KEY:

PC – Public Comment

AS – Approve as Submitted

AM – Approve As Modified by Committee

AM PC 1 – Approve As Modified by Public Comment 1, etc.

D – Disapprove

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
CE5 Part I	AM	AM	D	Revises intent of IECC as regulating buildings for <i>"the health, safety, and welfare of the public while regulating the effective use and conservation of energy ..."</i>	We agree with the concept that the IECC has an important role in supporting life safety as part of the ICC's comprehensive set of life safety codes. However, we think that the intent of the IECC is the effective use and conservation of energy in order to promote life safety, health and the public welfare. We think the best course of action at this point is to retain the current scope of the IECC rather than creating inconsistent scoping provisions for residential versus commercial provisions.
CE5 Part II	D	D	D	Revises intent of IECC as regulating buildings "for <u>life safety along with</u> the effective use and conservation of energy ..."	
CE6 Part I	D	D	D	Revises intent of IECC as regulating buildings for "the effective use and conservation of energy <u>primarily for human comfort</u> over the useful life of each building."	While we agree that human comfort is an important consideration in energy conservation, we would not consider it the "primary" goal of the IECC. This proposal does not seem necessary and may be interpreted by some to exempt buildings that are not primarily used for human occupancy (warehouses) or preclude considerations other than comfort.
CE7 Part I	AM	AM	D	Adds energy production and storage to scope of IECC.	The proposed change could take the focus off the IECC's core objective of conserving the energy used in a building. The code is not written to comprehensively address energy production or storage in any significant way and this change would unnecessarily expand the scope of the code with potential negative consequences.
CE7 Part II	D	D	D	Adds energy production and storage to scope of IECC.	
CE9 Part II	D	AS	AS	Adds energy conservation to list of considerations when code official approves alternative materials, designs, or methods of construction.	Part I of this proposal was recommended for approval by the IECC-Commercial Committee and is on the consent agenda. Approval of Part II would make this provision consistent for both residential and commercial code provisions. Energy conservation should be considered on an equal footing with other considerations when a code official approves an alternative for compliance with the energy conservation code.
CE12 Part II	D	D	AS	Requires buildings constructed to approved above-code programs to also meet or exceed thermal envelope requirements of 2009 IECC.	A reasonable thermal envelope backstop (mandatory minimum envelope measures) should be established for above-code programs just like it is for the ERI compliance path.
CE21	D	AM PC1	AM PC1	Adds new definitions for <i>bio gas</i> and <i>biomass</i> ; revises definition of <i>on-site renewable energy</i> to cover bio gas, biomass, or extracted from hot fluid or steam heated within the earth.	These definitions will provide clear guidance to code officials as to what qualifies as biomass and biogas for IECC compliance.
CE35	AM	AM	AM	Revises definition for <i>wall, above-grade</i> to include between-floor spandrels, peripheral edges of floors, roof and knee walls, dormer walls, gable end walls, walls enclosing mansard roof, and skylight shafts.	This proposal closes a potential loophole in the current code and improves efficiency.
CE43	D	D	D	Creates new compliance option for data centers to comply with ASHRAE 90.4.	As written, this new compliance option may be incorrectly interpreted to cover more than just data centers, allowing code users to bypass key efficiency requirements.

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
CE44	D	AM PC2	AM PC2	Creates an exception from compliance with commercial code for dwelling units in R-2 buildings without systems serving multiple units, provided they comply with the ERI.	This proposal could provide an efficient option for demonstrating compliance, as long as each individual unit is verified to meet all the requirements of Section R406.
CE49	D	D	AS	Increases efficiency of the performance path by requiring proposed design to demonstrate energy cost $\leq 80\%$ of standard reference design building, rather than 85%.	This proposal reduces energy use for commercial buildings complying under the performance path by over 5%.
CE54 Part II	AS	D	D	Revises and further weakens tropical zone compliance alternative; allows buildings to comply with "limited air conditioning option" where $\leq 1/2$ of occupied space is air conditioned, renewable energy is used for 80% of water heating, glazing in conditioned spaces has ≤ 0.40 SHGC or ≤ 0.30 PF, operable fenestration provides ventilation area $\geq 14\%$ of floor area in each room or has equivalent ventilation, roof or ceiling is insulated to $\geq R-15$, etc.; allows buildings with no air conditioning to comply with no U-factor or SHGC requirements and very few other minimum requirements.	The requirements for the current tropical climate zone compliance alternative are less efficient than standard requirements in the IECC; the changes proposed in CE54 would result in even less efficiency. Also note that the companion proposal for a new compliance option for commercial buildings was rejected.
CE55	AS	AS	AS	Adds new requirement for thermal envelope certificate that includes R-values, U-factors, and SHGC values for thermal envelope components and the results of any testing performed on building.	The certificate requirement in the residential IECC has worked very well for many years, and this proposal would implement a similar certificate in the commercial chapter. This proposal was approved by the Committee 15-0.
CE56	D	D	AS	Adds requirements for mechanically heated or cooled greenhouses, which are currently exempt from envelope requirements of code; sets skylight U-factor at 0.5 and vertical fenestration U-factor at 0.7; revises definition of fenestration to include glazing materials used in greenhouses; revises definition of greenhouse to include only those structures erected for ≥ 180 days; adds new definition of internal curtain system; adds requirement for opaque envelope assemblies to comply with code.	These thermal envelope requirements would be some improvement over the current code for certain greenhouses.
CE57	D	D	D	Adds new category for low-energy buildings to cover buildings $\leq 1,100$ sq. ft. and used solely to house electric distribution system equipment.	This code change seems unnecessary and duplicative, particularly in light of current code language in section C402.1.2 and the approval of CE58. We are also concerned that this could be used to exempt a broader range of buildings than intended.

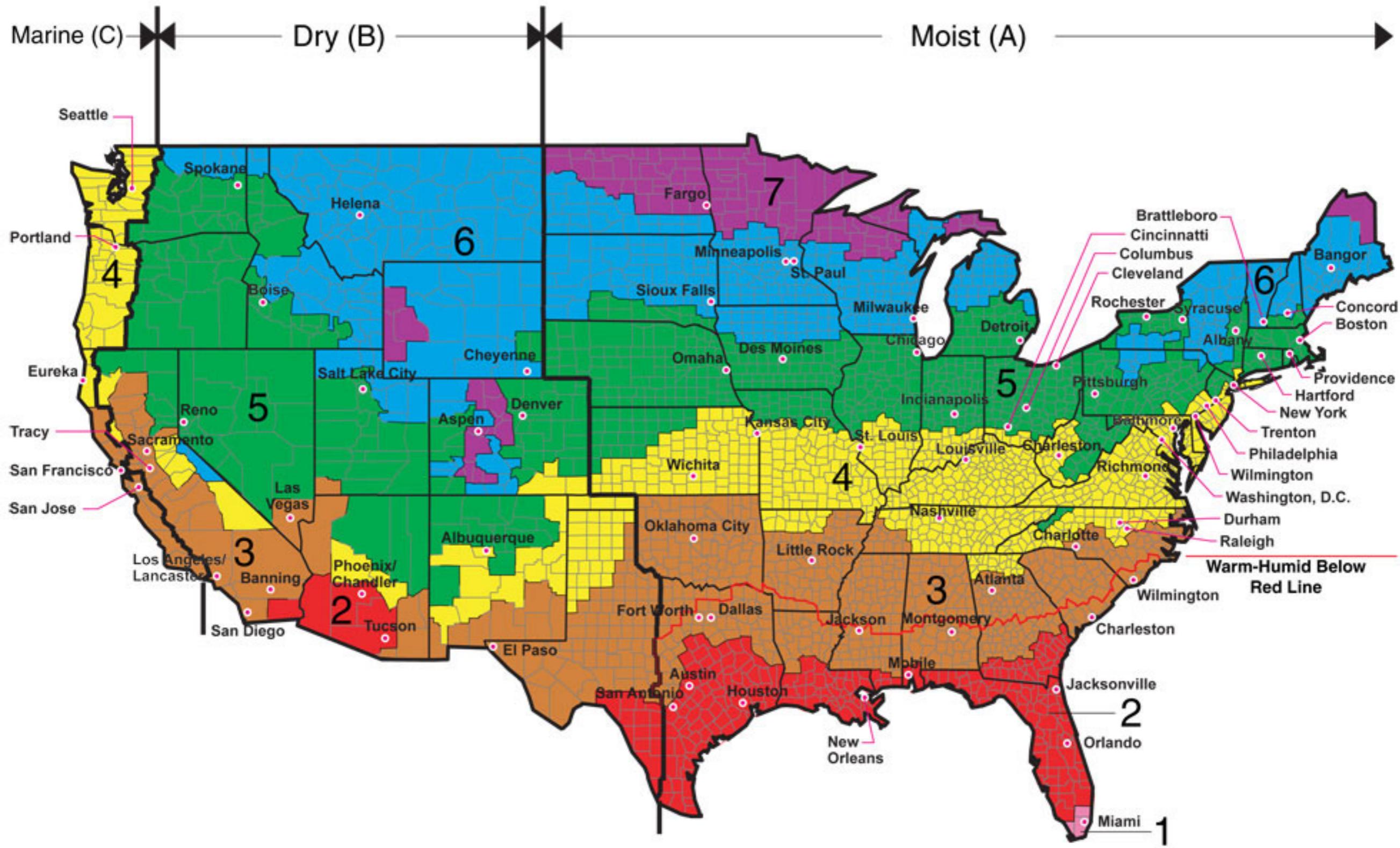
Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
CE61	AS	AS	AS	Improves roof insulation requirements by adopting more efficient requirements from ASHRAE Std. 90.1.	The Committee recommended approval of these increases in stringency by a vote of 14-1. The modified values were produced by the ASHRAE consensus process and found to be cost-effective. It is reasonable to only adopt ASHRAE values that would improve efficiency and not roll back current values in the IECC that are more stringent than corresponding ASHRAE 90.1 values.
CE63	AS	AS	AS	Improves above-grade wall insulation requirements by adopting more efficient requirements from ASHRAE Std. 90.1.	The Committee recommended approval of these increases in stringency by a vote of 13-2. The modified values were produced by the ASHRAE consensus process and found to be cost-effective. It is reasonable to only adopt ASHRAE values that would improve efficiency and not roll back current values in the IECC that are more stringent than corresponding ASHRAE 90.1 values.
CE64	AS	AS	AS	Improves below-grade wall insulation requirements by adopting more efficient requirements from ASHRAE Std. 90.1.	The Committee recommended approval of these increases in stringency by a vote of 14-1. The modified values were produced by the ASHRAE consensus process and found to be cost-effective. It is reasonable to only adopt ASHRAE values that would improve efficiency and not roll back current values in the IECC that are more stringent than corresponding ASHRAE 90.1 values.
CE65	AS	AS	AS	Corrects joist-framing insulation R-value in cz 1 to be consistent with requirement in U-factor table.	The Committee recommended approval of this correction by a vote of 14-1.
CE66	AS	AS	AS	Improves floor insulation requirements by adopting more efficient requirements from ASHRAE Std. 90.1.	The Committee recommended approval of these increases in stringency by a vote of 12-3. The modified values were produced by the ASHRAE consensus process and found to be cost-effective. It is reasonable to only adopt ASHRAE values that would improve efficiency and not roll back current values in the IECC that are more stringent than corresponding ASHRAE 90.1 values.
CE68	AS	AS	AS	Improves slab-on-grade floor insulation requirements by adopting more efficient requirements from ASHRAE Std. 90.1.	The Committee recommended approval of these increases in stringency by a vote of 13-2. The modified values were produced by the ASHRAE consensus process and found to be cost-effective. It is reasonable to only adopt ASHRAE values that would improve efficiency and not roll back current values in the IECC that are more stringent than corresponding ASHRAE 90.1 values.
CE69	AS	AS	AS	Improves unheated slab insulation requirements in cz 7-8 by adopting more efficient requirements from ASHRAE Std. 90.1.	The Committee recommended approval of these increases in stringency by a vote of 11-4. The modified values were produced by the ASHRAE consensus process and found to be cost-effective. It is reasonable to only adopt ASHRAE values that would improve efficiency and not roll back current values in the IECC that are more stringent than corresponding ASHRAE 90.1 values.

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
CE73	AS	AS	AS	Corrects U-factor requirement for roof insulation for All Other metal buildings in cz 1, making it consistent with corresponding R-value in Table C402.1.3.	The Committee recommended approval of this correction by a vote of 13-2.
CE75	AS	AS	AS	Corrects U-factors for wall insulation in cz 5 & 7, making them consistent with corresponding R-values in Table C402.1.3.	The Committee recommended approval of this correction by a vote of 13-2.
CE79	AM	AM	AM	Revises and moves current provisions related to slab-on-grade perimeter insulation into new section outlining slab insulation installation requirements; reclassifies section as Prescriptive, not Mandatory.	
CE80	AS	AS	AS	Designates requirements related to airspaces as "mandatory."	
CE93 Part I	D	D	D	Creates exception from fenestration U-factor and SHGC requirements for storm shelters complying with ICC 500.	This proposal reduces efficiency by exempting such buildings from all fenestration U-factor and SHGC requirements. This overbroad approach is unnecessary. If the specific fenestration U-factor and SHGC for the window used does not meet the prescriptive requirements, it can be offset by improving the performance of the rest of the building.
CE96	AM	AM	AM	Adds new definition for <i>testing unit enclosure area</i> ; requires dwelling and sleeping unit enclosures to be air leakage tested to ≤ 0.30 cfm/sq.ft.; provides option for sampling and several exceptions; requires testing 2 units after each failed sample.	While we are concerned with the option for sampling (and would like to see it removed or at least strengthened in the future), an air leakage testing requirement for these buildings would improve energy efficiency over the current code. See CE97.
CE97	AM	AM	AM	Requires most buildings not in occupancy groups R and I to be tested for air leakage at ≤ 0.40 cfm/sq.ft.; permits area-weighted averaging; provides remedial measures for buildings that test >0.40 cfm/sq.ft, but ≤ 0.60 cfm/sq.ft.	While we are concerned with the option for sampling (and would like to see it removed or at least strengthened in the future), an air leakage testing requirement for these buildings would improve energy efficiency over the current code. See CE96.
CE99	AM	AM	AM	Adds new requirement that continuous air barrier be verified by code official, registered design professional, or approved agency; requires final commissioning report of air barrier.	Verification of the air barrier through a review of construction documents and during construction will improve the quality and efficiency of buildings.
CE104	D	D	D	Deletes requirements to insulate and seal rooms containing fuel-burning appliances.	This proposal would reduce energy efficiency and could result in indoor air quality issues. The Committee recommended disapproval 15-0.
CE111	AM	AM	AM	Adds new Fault Detection and Diagnostics requirements for certain large HVAC systems; exempts R1 and R2 occupancies.	FDD systems will help quickly identify problems in large HVAC systems, and will ultimately save energy. The Committee recommended approval as modified 15-0.

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
CE140	AM	AM PC1	AM PC1	Sets efficiency requirements for low-capacity mechanical system ventilation fans; requires air flow and efficacy to be listed or derived from listed power and air flow.	
CE150 Part 1	AS	AS	D	Requires protective barrier on piping insulation to be removable for equipment maintenance.	This proposal would eliminate the use of vapor retarder systems, which also provide protection from physical damage, because they are not readily removable. Also, adding a protective cover to a below ambient system that is not a vapor retarder may cause condensation and loss of efficiency in the system.
CE150 Part 2	AS	AS	D	Requires protective barrier on piping insulation to be removable for equipment maintenance.	
CE162	AM	AM	AM	Requires 90% of permanently installed lighting serving dwelling units to be provided by lamps with efficacy of ≥ 65 lm/W or luminaires with efficacy of ≥ 45 lm/W, or to comply with either specific application controls or lighting power requirements; sets out specific requirements for lighting for refrigerated applications; excludes refrigerated applications and kitchen appliance lighting.	Will improve lighting efficiency.
CE181	AS	AM PC1	AM PC1	Clarifies that spaces required to have light-reduction controls shall have a manual control that allows occupant to reduce connected lighting load by either a switched intermediate step or by continuous dimming control; maintains that light-reduction control is an intermediate step or dimmed level and is not inclusive of full on or full off.	List of methods for light-reduction controls includes all light sources and not just fluorescent; coordinates changes proposed in CE179 and CE181.
CE199	AM	AM PC1, PC2, PC3	AM PC1, PC2, PC3	Adds specific lighting control requirements for parking garages; creates an exception to lighting power reduction requirement where lighting zones are provided with < 1.5 foot-candles of illumination on the floor; specifies that parking garage lighting shall be controlled by occupant sensor requirements or time-switch control, as well as lighting controls; and requires automatic power reduction to luminaires within 20 ft. of perimeter wall openings.	
CE209	AM	AM	AM	Establishes photon efficiency requirements for lighting for plant growth and maintenance; adds reference to ANSI/ASABE S640; designates new section as "Mandatory."	

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
CE215	AM	AM	AM	Adds new requirements for energy monitoring systems for new buildings $\geq 25,000$ sq. ft.; exempts Group R-2 occupancies provided the space has its own utility services and meters and has less than 5,000 sq. ft. conditioned floor area.	
CE216	AM	AM	AM	Adds automatic receptacle control requirements to specific rooms and locations within a building; designates requirements as mandatory.	
CE217 Part I	AM	AM	AM	Adds new requirement for EV charging in commercial buildings; adds new definitions for <i>electric vehicle supply equipment</i> , <i>EV capable space</i> , and <i>EV ready space</i> ; adds definition for <i>electric vehicle</i> ; adds details to types of receptacles that must be included in EV ready space; designates EV charging as mandatory.	
CE217 Part II	D	D	AS	Adds new requirement for EV charging in residential buildings; adds new definitions for <i>electric vehicle supply equipment</i> , <i>EV capable space</i> , and <i>EV ready space</i> .	
CE218	AM	AM	AM	Replaces Additional Efficiency Package Options with new points-based tables for Group B, R&I, E, M, and "Other" occupancies; requires new buildings to achieve 10 points from tables.	The proposal appears to increase energy efficiency by generally requiring more building options to be incorporated than under the current code to achieve 10 points (which is estimated by proponents as roughly 2.5% overall improvement in building energy efficiency). The proposal also creates the framework to add additional options in the future by allowing more granularity and flexibility.
CE219	D	D	AS	Requires compliance with two Additional Efficiency Options rather than one.	See CE220; requiring two options will double the efficiency from this provision.
CE220	D	D	AS	Requires compliance with two Additional Efficiency Options rather than one.	See CE219
CE226	AM	AM	AM	Replaces Additional Efficiency Package Options with a new points-based option with tables of measures for Group B, R&I, E, M, and "Other" occupancies; requires new buildings to achieve 10 points from tables or to comply with one of the modified Additional Efficiency Options; reduces lighting power density by 15% below current allowance; excludes kitchen appliance light fixtures.	This proposal is consistent with CE218, with an added revision to lighting credits.

Prop. #	Cmtee Result	PCH Result	EECC Vote Recommendation	Proposal Summary	EECC Analysis, Support for Recommendation and Notes
CE240	AS	AS	AS	Revises Additional Efficiency Package Options to add a new points-based option with tables of measures for Group B, R&I, E, M, and "Other" occupancies; requires new buildings to achieve 10 points from tables; adds new Efficiency Option with increased efficiency kitchen equipment for Group A-2 or other facilities that include a commercial kitchen with certain equipment.	
CE247	AS	AS	AS	Corrects standard reference design assumptions for above-grade wall assemblies in performance path.	Proposal will improve efficiency of performance path by removing unnecessary trade-off credit. Committee recommended approval by a vote of 12-3.
CE256	D	D	D	Adds new exception to roof replacement above-deck insulation requirements in alterations where required R-value cannot be provided due to thickness limitations presented by existing rooftop conditions; requires maximum insulation thickness compatible with available space and existing uses.	Roof replacements are one of the few opportunities to improve the efficiency of existing buildings. This exception creates unnecessary and overly broad loopholes in the roof insulation requirements. The language is drafted in a manner that potentially usurps the role of the code official to enforce the code in an effective and fair manner. The exception introduces a term "rooftop condition" that is undefined and adds the unenforceable term "including" followed by a laundry list of existing rooftop conditions. It also introduces a new requirement within an exception – "shall be installed," which is not acceptable code structure.
CE261	D	D	AS	Revises change of occupancy or use requirements; uses Energy Use Intensity as basis for applying requirements.	
CE262	D	D	AS	Adds requirement for energy storage system space in Appendix CA, Solar-Ready Zone.	
CE263 Part I	D	D	D	Adds new appendix CB, which requires solar photovoltaics in certain commercial buildings.	This proposal does not improve efficiency and includes provisions that are problematic and confusing. It establishes a solar requirement, but it permits that requirement to be met by non-permanent (leased) systems. The proposal also does not justify the amount of solar required and establishes vague unenforceable exceptions where the code official determines that the requirements are "infeasible." Moreover, the proposal is unclear about whether solar energy may be permitted as a trade-off against energy efficiency in the performance path. In our view, renewable energy requirements should only be considered for the code after the implementation of cost-effective energy efficiency. See CE263 Part 2, PC3 for further discussion of reasons for disapproval.
CE263 Part II	AM	D	D	Adds new appendix CB, which requires solar photovoltaics in certain residential buildings.	
CE263 Part III	AM	D	D	Adds new appendix U to the IRC, which requires solar photovoltaics in certain residential buildings.	
CE265	D	D	D	Adds on-site energy storage system option to C406.	Energy storage systems can provide benefits related to the effective use of energy, particularly in conjunction with on-site renewables. However, there is no showing that this specific option will save an equivalent amount of energy cost as compared with other packages under C406.



All of Alaska in Zone 7 except for the following Boroughs in Zone 8: Bethel, Dellingham, Fairbanks, N. Star, Nome North Slope, Northwest Arctic, Southeast Fairbanks, Wade Hampton, and Yukon-Koyukuk

Zone 1 includes: Hawaii, Guam, Puerto Rico, and the Virgin Islands