

Before the International Code Council  
Appeals Board

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National Association of Home Builders  
Appeal of the ICC 2019 Group B Code Cycle  
Final Action Results

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**Written Submission of  
National Association of Home Builders  
In Support of Appeal  
(Online Voting)**

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## I. INTRODUCTION

This appeal is not about any particular outcome or variation of results during the International Code Council (“ICC” or “Council”) 2019 Group B Code Cycle. Instead, the deficiencies of process and procedure highlighted in this appeal cut much deeper and, if left uncorrected, will jeopardize not only the integrity of this and future ICC code development processes, but also the adoptability of resultant model codes.

The Online Vote for the 2019 Group B Code Cycle exposed just how easy it is for groups to exploit the code development process and undermine what is supposed to be a transparent, balanced, fair, and functional governmental consensus process. A single coalition’s recruitment effort resulted in a massive 60% increase in the number of eligible governmental member voting representatives.<sup>1</sup> Problematically, many of these new representatives applied last minute,<sup>2</sup> making it impossible for anyone—other than their recruiters and the International Code Council (“ICC” or “Council”)—to know who they were and have an opportunity to provide them with independent information. As a result, the sought-after balance tipped

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<sup>1</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at Appendices A and D (April 8, 2020).

<sup>2</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at Appendix D (April 8, 2020).

firmly to the recruiters' side, and other members' reasonable expectations of a fair process were left unmet.

These are serious problems that must be addressed prospectively as well as retroactively. Everyone involved in the 2019 Group B Code Cycle is aware of this and fully understands that the skewed results of the Online Governmental Consensus Vote (“OGCV”) were caused by the coordinated swarm of new, inexperienced, and largely last-minute governmental members and representatives.<sup>3</sup> This Online Vote is a textbook case of material voting irregularities under CP#28-05, Part 10.2. It also reflects the beginning of a detrimental transformation of what historically has been a merits-based process driven by persons experienced with building energy codes into a recruitment-based process centered on specific policy initiatives.

Extraordinary action is necessary to preserve the integrity of the ICC code development process and to ensure that the Council can continue to accomplish its mission. NAHB therefore respectfully requests that the ICC exercise its authority to (1) revise CP#28-05, Part 7.6 to clarify that proposed code changes disapproved at both the Committee Action and Public Comment Hearings are Finalized Actions that cannot be overturned by the

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<sup>3</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at Appendix D (April 8, 2020).

OGCV; and (2) retroactively apply this revision to the 2019 Group B Code Cycle by setting aside the results for the relevant 20 proposals.

## **II. ARGUMENT**

### **A. The OGCV Process Is Fundamentally Flawed.**

The fundamental flaws in the OGCV process undermined, and threaten to further undermine, the integrity of the code development process and the ICC’s ability to accomplish its mission of producing reliable and adoptable codes. These fundamental flaws include: (1) defining eligible voting governmental members too broadly by including as members entities that have no role in, knowledge of, or experience with building energy codes; and (2) allowing those entities to overrule code-change-proposal decisions by qualified voters.

#### **1. Defining governmental members overbroadly undermines the Council’s process and purpose.**

The ICC Bylaws define too broadly “governmental member” and “governmental member voting representatives”:

- **Governmental Member:** “A Governmental Member shall be a governmental unit, department or agency engaged in the administration, formulation, implementation or enforcement of

laws, ordinances, rules or regulations *relating to the public health, safety and welfare. . .*”<sup>4</sup>

- **Governmental Member Voting Representatives:** “Each Governmental Member shall exercise its right to vote through its designated Governmental Member Voting Representatives . . . . [E]ach of the designated voting representatives shall be an employee or a public official actively engaged either full or part time, in the administration, formulation, implementation or enforcement of laws, ordinances, rules or regulations *relating to the public health, safety and welfare.*”<sup>5</sup>

The problem with these definitions is that virtually every imaginable governmental unit and employee fits within one of them: governmental work by its nature implicates public health, safety, or welfare. As a result, governmental units and employees without any knowledge about or experience with building energy codes may register, vote on code change proposals, and ultimately influence if not dictate the results from the development process. Unquestionably, there are far more governmental

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<sup>4</sup> ICC Bylaws, Part 2.1.1 (emphasis added).

<sup>5</sup> ICC Bylaws, Part 2.1.1.1 (emphasis added).

units that deal with public health, safety, or welfare (and not building codes) than governmental units that deal with building codes.

Although the broad definition of Voting Representatives has existed for some time, the loophole created by the definition was “self-correcting” because it required a reasonable investment to send voters to the multi-day hearings and, for the most part, the voters were highly vested in the process as they were frequent users of the code and understood the relevance of the proposed requirements and were present for the hearing discussions.

These definitions invite exploitation of the code development process. Persons intent on obtaining results in the code development process easily can target a handful of jurisdictions and then “load the boat” with each and every governmental unit operating within that jurisdiction. For example, by obtaining support from an executive office, such a vote recruiter effectively garners support from all state or local governmental units under that executive’s purview. After all, it is not a particularly time-consuming endeavor for a governmental unit to register to participate and then to follow a third-party voter guide during the OGCV process.<sup>6</sup> While this kind of

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<sup>6</sup> Based on NAHB’s experience, one primary representative for a governmental member is allowed to provide validation for all of that member’s voting representatives. Under that approach, validation would take anywhere from approximately 15 minutes to one hour per proposal. Once validated and ready to vote, it likely would take approximately one hour to cast the 108 votes recommended in the relevant voter guide.

grassroots organizing would be normal in a purely political contest, it is counterproductive to developing a merits-based model code.

More fundamentally, however, these overly broad definitions already have and will continue to diminish the credibility of the code development process and of the ICC's model codes. Votes cast and decisions rendered by those lacking an understanding of building energy codes cannot produce reliable model codes that are broadly adoptable.

To reduce gamesmanship and preserve the integrity and purpose of the ICC's code development process, the Council must place common-sense limitations on these definitions so that only those governmental units and representatives that actually work with building energy codes may vote. Taking no action inevitably will exacerbate these problems as code change proponents will shift resources from developing merits-based codes to recruiting as many governmental units as possible to push their agenda through, whether it be driven by political, economic, or other motives.

## **2. Defining governmental members overbroadly conflicts with ANSI's U.S. Standards Strategy.**

The Council's overly broad definitions of "governmental member" and "governmental member voting representative" contradict the ICC's claim that its code development process is consistent with the principles set forth in the American National Standards Institute's ("ANSI's") U.S. Standards

Strategy,<sup>7</sup> which is nearly universally accepted as the gold standard for achieving a consensus-based document. Absent correction, this inconsistency will diminish the credibility of the code development process.

ANSI's U.S. Standards Strategy identifies fundamental principles that must be adhered with in order to develop fair and reliable standards used in model codes. These principles include "openness" and "consensus," which aim to ensure that persons directly affected by the standards may participate in the code development process.<sup>8</sup> However, these participatory principles are tempered by the principle of "effectiveness and relevance," which ensures that adopted "[s]tandards are relevant and effectively respond to regulatory and market needs, as well as scientific and technological developments."<sup>9</sup>

The definitions of "governmental member" and "governmental member voting representative" are inconsistent with U.S. Standards Strategy principles because they unreasonably prioritize principles of inclusion over the principle of effectiveness and relevance. By allowing governmental members and voting representatives who lack relevant knowledge and

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<sup>7</sup> "The International Code Council's code development process is consensus-based and founded on principles of due process and transparency," and "meets the principles defined by the National Standards Strategy of 2000." ICC Report on the Code Development Process 2019 Group B Cycle, at 4 (April 8, 2020). Importantly, complying with ANSI principles lends credibility to the code development process because they ensure inclusivity without compromising the merits of adopted standards.

<sup>8</sup> ANSI U.S Standards Strategy, at 7.

<sup>9</sup> ANSI U.S. Standards Strategy, at 7.

experience to vote on the adoption of building energy codes, these definitions invite the adoption of ineffective and irrelevant code provisions that do not reflect market needs, technical merits, or scientific developments.

### **3. Defining governmental members overbroadly leads to absurd outcomes.**

As the examples below and the results from the Group B 2019 Code Cycle demonstrate, using the currently overbroad definitions produces unreasonable and, in some instances, nonsensical results. These serious problems pose a fundamental threat to the ICC's code development process and require immediate attention.

The absurdity of the scope of the current definitions of “governmental member” and “governmental member voting representative” is evident in their application. Under these definitions, state agencies regulating forests, transportation projects, hazardous waste, and numerous other areas that do not involve or remotely implicate building energy codes are authorized to vote on, shape—and when organized in mass like the Group B 2019 Code Cycle—determine model codes exclusively involving building energy codes. Maintaining such a broad definition provides little if any value, while greatly undermining the purpose of the ICC and its model codes.

During the Group B 2019 Code Cycle, NAHB and others witnessed for the first time the seriousness of the problems arising from these overly broad

definitions and, more troublingly, how much worse these problems will become if left unaddressed. The OGCV led to the adoption of ***twenty proposals*** that were disapproved twice.<sup>10</sup> These instances of overruling knowledgeable, experienced, and committed member votes led to the adoption of at least one code change of questionable legality (RE126), at least two code changes that clearly exceed the scope and intent of CP#28-05 (CE 217 Part II; RE 147),<sup>11</sup> and others that present serious practical, economical, and other problems.

If the ICC intends on maintaining a government-based consensus process, it should be narrowed in a way so that resultant model codes will be based on an informed process with voters who have a technical and practical understanding of building energy codes. One way to do this would be to narrow the definitions of “governmental member” and “governmental member voting representative.” Doing so could be accomplished in a way that better reflects the balance envisioned by ANSI’s U.S. standards strategy and preserves a reasonable and fair degree of governmental member participation. Furthermore, doing so would not deprive newly unqualified but interested governmental units and representatives from having any

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<sup>10</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at 3 (April 8, 2020).

<sup>11</sup> See NAHB Written Submission in Support of Appeal (Scope and Intent) (Submitted August 19, 2020).

influence. Instead, it merely would take their uninformed influence out of the code development process and properly relegate it to their local jurisdictions. There, they can lobby for the adoption of whatever code change proposal they want, as their jurisdiction does not carry the serious responsibility of establishing model codes like the ICC does.

**B. The Group B 2019 Code Cycle OGCV Involved Material Voting Irregularities That Require ICC Correction.**

The ICC Board has an affirmative duty to protect the credibility of the code development process by taking appropriate corrective action.<sup>12</sup> Here, this means addressing the voting irregularities that resulted from the exploitation of overly broad definitions of “governmental member” and “governmental member voting representative,” which materially affected the Group B 2019 Code Cycle.

**1. Code Council staff found that a voting irregularity occurred during the Group B 2019 Code Cycle.**

In a document titled, “Report on the Code Development Process 2019 Group B Cycle,”<sup>13</sup> Code Council staff “confirmed that the pattern of voting”

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<sup>12</sup> The ICC Board “shall take whatever action necessary to ensure a fair and impartial Final Action vote on all code change proposals,” including setting aside results and either voting again or declaring Final Action result. CP#28-05, Part 10.2. Additionally, the ICC Board “may take any actions it deems necessary to maintain the integrity of the code development process,” where there has been a violation of the letter or spirit of its policies or procedures. See CP#28-05, Part 13.1.

<sup>13</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at 7 (April 8, 2020).

where a proposal was disapproved at the Committee Action and Public Comment Hearings and then passed during the OGCV was “***an irregularity***” because this pattern had never occurred even once in a previous cycle, let alone ***twenty times*** in a single cycle.<sup>14</sup> While conceding that this systematic pattern was an irregularity, Code Council staff dismissed the issue by concluding that, as a technical matter, “this pattern of voting is not prohibited in CP 28” and therefore “no voting irregularities occurred.”<sup>15</sup>

Besides being inconsistent—acknowledging a voting pattern as an irregularity that clearly was material to twenty outcomes but concluding that no voting irregularity occurred—this report incorrectly assumes that showing a voting irregularity to sustain an appeal requires showing that voting expressly prohibited by CP#28-05 must have occurred. But nothing in CP#28-05, Part 10.2 requires that. A voting irregularity that was material in and of itself allows for the ICC Board to take corrective action.

**2. Objective information confirms the presence of a material voting irregularity that violated the spirit and purpose of the code development process.**

When examining a totality of the circumstances that occurred during the Group B 2019 Code Cycle OGCV process, the evidence clearly shows the

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<sup>14</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at 7 (April 8, 2020).

<sup>15</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at 7 (April 8, 2020).

occurrence of material voting irregularities that justify and necessitate corrective action. The Code Council staff report addressing this issue focused too narrowly on technicalities, ignoring the spirit and purpose of the code development process.

To be sure, a coordinated recruitment effort exploiting an unreasonably broad definition of “governmental member” and the absentee, non-time-intensive OGCV process technically is allowed under CP#28-05.<sup>16</sup> But, as detailed above, it is not in harmony with the spirit of CP#28-05 and the ICC’s purpose of developing reliable and adoptable codes through a transparent process. Instead, it transforms what has always been an informational and experience-based process into a recruitment contest.

There can be no doubt that a voting irregularity occurred during the Group B 2019 Code Cycle based on the twenty instances where the OGCV overruled twice-disapproved proposals. Code Council staff acknowledged as much in its report.<sup>17</sup> Regardless, other evidence confirms the irregularity of the Group B 2019 Code Cycle including the following:

- The overly broad definitions of “governmental member” and “governmental member voting representative” that allow

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<sup>16</sup> Compare Exhibit B (Voter Guide) with Exhibit C (spreadsheet showing that the volume and preference of votes during the OGCV process directly correlates with the recommendations of a single voter guide).

<sup>17</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at 7 (April 8, 2020).

unknowledgeable and inexperienced voters to participate in the OGCV process;<sup>18</sup>

- A massive increase in the number of governmental member voting representative applications and participation;<sup>19</sup>
- A correspondingly large last-minute number of such applications;<sup>20</sup>
- The widespread use of a single voter guide;<sup>21</sup>
- Inflammatory and over-simplified descriptions in that voter guide (*e.g.*, “closing loopholes”);<sup>22</sup>
- The fact that OGCV participants were not required to have participated in the weeks-long technical code development process; and
- Unprecedented and extremely anomalous OGCV results.<sup>23</sup>

These factors objectively confirm the presence of voting irregularities that were material to the outcome of the Group B 2019 Code Cycle. That fact

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<sup>18</sup> See Part II.A above.

<sup>19</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at Appendix D (April 8, 2020); Exhibit A (NRDC Blog Post).

<sup>20</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at Appendix D (April 8, 2020).

<sup>21</sup> Exhibits B and C.

<sup>22</sup> Exhibit D at 2 (“This proposal closes a potential loophole in the current code and improves efficiency.”).

<sup>23</sup> ICC Report on the Code Development Process 2019 Group B Cycle, at 7 (April 8, 2020).

alone suffices for sustaining an appeal and making recommendations that the ICC Board consider taking action to preserve the integrity of the code development process.<sup>24</sup>

### **III. Conclusion**

For the reasons set forth above, the Appeals Board can and should sustain this appeal and recommend that the ICC Board (1) revise CP#28-05, Part 7.6 to clarify that proposed code changes disapproved at both the Committee Action and Public Comment Hearings are Finalized Actions that cannot be overturned by the OGCV; and (2) retroactively apply this revision to the 2019 Group B Code Cycle by setting aside the results for the relevant 20 proposals.

If immediate corrective action is not taken, what historically has been an informed process that produces technically and economically feasible model code provisions will become a political battleground. Instead of striving to develop balanced and adoptable proposals, proponents will present evermore extreme proposals that can be pushed through the OGCV process using unknowledgeable and inexperienced governmental members and their voting representatives. This outcome would be antithetical to the ICC's purpose and code development process. Accordingly, NAHB

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<sup>24</sup> CP#28-05, Part 10.2.

respectfully urges the Appeals Board to sustain this appeal and adopt NAHB's remedy recommendations.

Dated: August 26, 2020

Respectfully submitted,

By: /s/ S. Craig Drumheller

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# Exhibit A

EXPERT BLOG > LAUREN URBANEK

# The 2021 Energy Code Is Final—and More Efficient than Ever

April 09, 2020

Lauren Urbanek

The final results of the 2021 International Energy Conservation Code (IECC), the model code that establishes the minimum energy efficiency of America's new buildings, were released this week, and it's official: we have a new building energy code that is [the most efficient one yet](#). This could lead to significant energy savings for consumers and the environment.

The upcoming model code covers building components like insulation, lighting, and water heating efficiency, and will represent the biggest energy efficiency gains in at least a decade for constructing or renovating homes. New commercial buildings also will be required to be more efficient. This is great news for homeowners, businesses, and the planet because more efficient new buildings cost less to operate and have a lower carbon footprint.

The International Code Council (ICC) released the [final results](#) and a [comprehensive report](#) on the current code development cycle. The ICC board unanimously certified the results of the code development process, upholding the fantastic results [that were preliminarily announced in late December 2019](#)—and the voter turnout was at its highest level ever, with 4 to 5 times more votes cast than in previous code cycles.

The critical progress to make our buildings more efficient is thanks to the government officials who voted for the energy code: code officials, state and local government employees, sustainability offices, and others, who recognize the importance of new buildings that use less energy and emit less carbon.



DOE

## The Process

Every three years, the IECC code is reviewed and updated to account for improved building energy technologies and practices to enhance efficiency for both residential

and commercial projects. This includes requiring improvements in building components like windows or doors, adding greater levels of insulation, or flexible compliance paths that specify the efficiency of the home, but leave it up to builders to decide which improvements they want to make to get there. The new code is then available for adoption by states and local jurisdictions. Developing an updated code involves submissions for proposed changes, committee review and approval, public hearings, a comment process, and voting by members of the International Code Council.

The ICC made voting more accessible in 2015 with an online option for participation by [qualified voters](#), who are employees of local governments that are members of the ICC. That development allows more people to weigh in, rather than the traditional set of local and state fire and building code officials who comprised the majority of in-person votes in previous code development cycles.

The online voting system is increasing voter participation as intended. Take, for example, a proposal (CE217, part 2) to add a new requirement for electric vehicle charging in residential buildings, which NRDC strongly supports. At the public comment hearings in Las Vegas, it was one of the final proposals heard and received just 32 total votes (13 in favor, 19 opposed). However, thanks to online voting, the proposal ended up passing with 856 votes in favor and 351 opposed, a 71 percent margin. When more voices are heard, more good things can happen.

## **The Opposition to the New Code**

After the preliminary results of the new code were released in December, opponents raised three main issues (detailed [here](#)): (1) that voting members were not properly validated by the International Code Council, (2) votes on proposals strengthening efficiency in the model code, which were approved by two-thirds of the voting members to override the committee's initial rejection, should be invalid, and (3) two proposals related to building and vehicle electrification do not belong in the scope of the code.

But the release of this week's final results—cleared by a unanimous vote of the ICC Board of Directors - sends a clear and unambiguous message that the opponents' concerns are not valid. Indeed, the ICC's report explicitly states that voting members were properly validated by the ICC and there were no voting irregularities, the committee decisions that were overturned by the online voting members were done so in accordance with ICC bylaws, and the vehicle and building electrification does have an appropriate place in the efficiency code.

## Voting results

The final results also include the vote count, which shows there was unprecedented interest in developing a better building code. Many of the key efficiency proposals received over 1,000 votes in their favor, passing by wide margins even when they required a two-thirds majority to overturn the decisions of the technical committees. To underscore how remarkable this is, in previous code cycles most proposals received between 200 and 300 total votes.

This skyrocketed voter interest is the direct result of the energy efficiency community's education and outreach effort. For the past year, NRDC and our partners at the [Energy Efficient Codes Coalition](#) have worked hard to educate local government officials about the [importance of a strong building energy code](#), and [helped them get involved in this critical process](#). Given that buildings account for 40 percent of emissions, we simply can't achieve our climate goals without better buildings. Thousands of local government officials agree, and they've taken action for a better future.

## Next steps

Now that the ICC Board of Directors has approved the final voting results, a 30-day window to appeal them begins. We don't know yet if there will be appeals, but here's what we do know: the voting members have spoken overwhelmingly in favor of a better building code, and their votes have been validated and accepted by the ICC Board of Directors. And that's progress in the right direction.

The 2021 code will be published sometime this fall, after which it can be adopted by cities and states. And adoption is crucial: a good model code is a first step, but even the best code won't save energy unless it's adopted and enforced at the local level. We'll be working hand-in-hand with local governments to keep up the momentum for better buildings and a better future.

## ABOUT THE AUTHORS

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### LAUREN URBANEK

Senior Energy Policy Advocate, Climate & Clean Energy Program

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# Exhibit B

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

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

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

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

## 2019 RESULTS OF THE ONLINE GOVERNMENTAL CONSENSUS VOTE

Code Change	Final Action	CAH Results	PCH Results	OGCV Results/Final Action	PCH For	OGCV For	TOTAL For	% For	Column1	PCH Against	OGCV Against	TOTAL Against	% Against	Required Majority	Notes	OGCV Votes	EECC Voting Guide	Overturn	Appealed Proposals
CE96-19	AM	AM	AM	AM	37	1009	1045	81.39%	D	16	222	239	18.61%	Simple Majority		1231	X		
CE217-19 Part I	AM	AM	AM	AM	19	1011	1030	82.07%	D	16	209	225	17.93%	Simple Majority		1220	X		2
CE218-19	AM	AM	AM	AM	18	1006	1025	83.95%	D	16	181	196	16.05%	Simple Majority		1187	X		
RE209-19	AS	D	D	AS	36	883	919	73.58%	D	29	301	330	26.42%	2/3 Majority		1184	X	X	4, 3
RE112-19	AS	AS	AS	AS	38	1036	1074	86.89%	D	15	147	162	13.11%	Simple Majority		1183	X		
CE226-19	AM	AM	AM	AM	25	1015	1040	86.02%	D	5	164	169	13.98%	Simple Majority		1179	X		
CE217-19 Part II	AS	D	D	AS	13	840	856	70.92%	D	19	335	351	29.08%	2/3 Majority		1175	X	X	4, 3, 2
RE223-19	AMPC2	D	AMPC2	AMPC2	38	966	1003	81.88%	D	14	207	222	18.12%	2/3 Majority		1173	X		
CE63-19	AS	AS	AS	AS	39	1038	1078	88.51%	D	15	126	140	11.49%	Simple Majority		1164	X		
CE12-19 Part II	AS	D	D	AS	20	883	904	73.68%	D	44	280	323	26.32%	2/3 Majority		1163	X	X	4, 3
CE97-19	AM	AM	AM	AM	40	1064	1105	91.17%	D	13	95	107	8.83%	Simple Majority		1159	X		
CE61-19	AS	AS	AS	AS	42	1046	1088	89.92%	D	11	111	122	10.08%	Simple Majority		1157	X		
CE111-19	AM	AM	AM	AM	26	1097	1123	94.13%	D	15	55	70	5.87%	Simple Majority		1152	X		
CE66-19	AS	AS	AS	AS	48	1046	1094	91.09%	D	4	103	107	8.91%	Simple Majority		1149	X		
RE7-19	AMPC1	AS	AMPC1	AMPC1	58	1105	1165	96.36%	D	7	39	44	3.64%	2/3 Majority		1144	X		
CE35-19	AM	AM	AM	AM	54	1091	1145	95.50%	D	6	48	54	4.50%	Simple Majority		1139	X		
CE49-19	AS	D	D	AS	15	873	890	74.98%	D	33	266	297	25.02%	2/3 Majority		1139	X	X	4, 3
CE64-19	AS	AS	AS	AS	48	1037	1085	90.95%	D	6	102	108	9.05%	Simple Majority		1139	X		
CE68-19	AS	AS	AS	AS	42	1087	1129	95.35%	D	7	48	55	4.65%	Simple Majority		1135	X		
CE162-19	AM	AM	AM	AM	33	1104	1137	97.93%	D	1	23	24	2.07%	Simple Majority		1127	X		
CE99-19	AM	AM	AM	AM	33	1072	1106	94.77%	D	13	49	61	5.23%	Simple Majority		1121	X		
CE140-19	AMPC1	AM	AMPC1	AMPC1	35	1086	1121	97.14%	D	0	33	33	2.86%	2/3 Majority		1119	X		
CE216-19	AM	AM	AM	AM	17	972	989	86.07%	D	13	147	160	13.93%	Simple Majority		1119	X		
RE192-19	AS	D	D	AS	22	879	904	76.55%	D	41	239	277	23.45%	2/3 Majority		1118	X	X	4, 3
CE215-19	AM	AM	AM	AM	20	979	998	86.86%	D	14	136	151	13.14%	Simple Majority		1115	X		
RE36-19	AS	D	D	AS	21	833	856	72.91%	D	39	281	318	27.09%	2/3 Majority		1114	X	X	4, 3
RE32-19	AS	D	D	AS	23	863	886	75.92%	D	35	246	281	24.08%	2/3 Majority		1109	X	X	4, 3
RE147-19	AS	D	D	AS	25	849	874	74.32%	D	44	258	302	25.68%	2/3 Majority		1107	X	X	4, 3, 2
RE182-19	AS	D	D	AS	28	879	909	77.89%	D	32	228	258	22.11%	2/3 Majority		1107	X	X	4, 3
CE209-19	AM	AM	AM	AM	30	1043	1073	94.45%	D	5	58	63	5.55%	Simple Majority		1101	X		4, 3
RE29-19	AS	D	D	AS	24	836	860	74.20%	D	40	259	299	25.80%	2/3 Majority		1095	X	X	4, 3
RE208-19	D	D	D	D	56	1066	1125	96.65%	AS	13	29	39	3.35%	Simple Majority		1095	X		
CE69-19	AS	AS	AS	AS	44	998	1042	91.24%	D	7	93	100	8.76%	Simple Majority		1091	X		
RE33-19	AS	D	D	AS	21	833	856	74.63%	D	35	258	291	25.37%	2/3 Majority		1091	X	X	4, 3
RE34-19	AM	AM	AM	AM	35	985	1019	88.84%	D	22	105	128	11.16%	Simple Majority		1090	X		
CE240-19	AS	AS	AS	AS	25	930	955	85.57%	D	3	158	161	14.43%	Simple Majority		1088	X		
RE156-19	D	D	D	D	62	1020	1083	93.93%	AS	4	67	70	6.07%	Simple Majority		1087	X		
CE65-19	AS	AS	AS	AS	48	987	1035	90.95%	D	5	98	103	9.05%	Simple Majority		1085	X		
RE35-19	AMPC1	AS	AMPC1	AMPC1	46	1025	1071	94.44%	D	3	60	63	5.56%	2/3 Majority		1085	X		
RE119-19	D	AS	D	D	34	999	1033	91.01%	AS	18	84	102	8.99%	Simple Majority		1083	X		
RE37-19	AS	D	D	AS	16	853	872	75.69%	D	54	229	280	24.31%	2/3 Majority		1082	X	X	4, 3
CE199-19	AMPC1, 2, 3	AM	AMPC1, 2,	AMPC1, 2, 3	30	1029	1060	94.90%	D	6	52	57	5.10%	2/3 Majority		1081	X		
RE40-19	D	AS	D	D	44	992	1039	90.35%	AS	25	89	111	9.65%	Simple Majority		1081	X		
RE176-19	D	D	D	D	41	982	1023	91.50%	AS	8	87	95	8.50%	Simple Majority		1069	X		

RE184-19	AS	D	D	AS	26	829	855	75.33%	D	40	240	280	24.67%	2/3 Majority		1069	X	X	4, 3
RE151-19	AS	D	D	AS	20	839	862	76.42%	D	47	222	266	23.58%	Simple Majority		1061	X	X	4, 3
CE263-19 Part I	D	D	D	D	19	832	852	79.63%	AS	9	210	218	20.37%	Simple Majority		1042	X		
CE21-19	AMPC1	D	AMPC1	AMPC1	49	950	998	90.81%	D	9	91	101	9.19%	2/3 Majority		1041	X		
RE217-19	D	AM	D	D	37	971	1009	92.23%	AM	16	70	85	7.77%	Simple Majority		1041	X		
CE263-19 Part II	D	AM	D	D	18	822	841	78.60%	AM	12	218	229	21.40%	Simple Majority		1040	X		
CE44-19	AMPC2	D	AMPC2	AMPC2	45	934	980	89.33%	D	13	105	117	10.67%	2/3 Majority		1039	X		
CE56-19	AS	D	D	AS	20	795	815	74.70%	D	34	242	276	25.30%	2/3 Majority		1037	X	X	4, 3
RE139-19	AS	AS	AS	AS	48	953	1000	92.00%	D	4	82	87	8.00%	Simple Majority		1035	X		
CE9-19 Part II	AS	D	AS	AS	55	924	979	89.82%	D	8	103	111	10.18%	2/3 Majority		1027	X		
CE263-19 Part III	D	AM	D	D	19	814	834	79.13%	AM	12	209	220	20.87%	Simple Majority		1023	X		
CE5-19 Part I	D	AM	AM	AM	30	337	366	34.08%	D	24	683	708	65.92%	Simple Majority		1020	X		
CE75-19	AS	AS	AS	AS	41	909	950	88.45%	D	15	109	124	11.55%	Simple Majority		1018	X		
CE1-19 Part I	D	AS	AS	D	11	695	709	66.20%	AS	45	320	362	33.80%	Simple Majority		1015	X		
CE57-19	D	D	D	D	47	956	1003	94.00%	AS	8	56	64	6.00%	Simple Majority		1012	X		
CE5-19 Part II	D	D	D	D	29	954	986	92.84%	AS	22	57	76	7.16%	Simple Majority		1011	X		
CE3-19 Part I	D	D	D	D	36	895	932	87.92%	AS	19	110	128	12.08%	Simple Majority		1005	X		
CE2-19	D	D	D	D	34	889	927	87.45%	AS	23	114	133	12.55%	Simple Majority		1003	X		
CE104-19	D	D	D	D	40	949	991	94.74%	AS	6	51	55	5.26%	Simple Majority		1000	X		
CE3-19 Part II	D	D	D	D	40	888	927	88.03%	AS	15	110	126	11.97%	Simple Majority		998	X		
CE7-19 Part I	D	AM	AM	AM	39	318	355	33.71%	D	16	680	698	66.29%	Simple Majority		998	X		
CE79-19	AM	AM	AM	AM	48	976	1024	97.25%	D	7	22	29	2.75%	Simple Majority		998	X		
CE1-19 Part II	D	D	D	D	25	856	883	84.02%	AS	30	140	168	15.98%	Simple Majority		996	X		
CE247-19	AS	AS	AS	AS	19	930	950	92.86%	D	10	64	73	7.14%	Simple Majority		994	X		
CE6-19 Part I	D	D	D	D	32	961	993	95.66%	AS	13	32	45	4.34%	Simple Majority		993	X		
CE43-19	D	D	D	D	26	964	994	96.13%	AS	15	29	40	3.87%	Simple Majority		993	X		
CE54-19 Part II	D	AS	D	D	41	912	956	90.27%	AS	27	79	103	9.73%	Simple Majority		991	X		
CE262-19	AS	D	D	AS	17	762	779	76.75%	D	9	227	236	23.25%	2/3 Majority		989	X	X	4, 3
CE55-19	AS	AS	AS	AS	43	937	980	94.50%	D	6	51	57	5.50%	Simple Majority		988	X		
CE7-19 Part II	D	D	D	D	31	874	907	87.13%	AS	28	108	134	12.87%	Simple Majority		982	X		
CE265-19	D	D	D	D	18	862	881	87.57%	AS	7	119	125	12.43%	Simple Majority		981	X		
CE150-19 Part I	D	AS	AS	D	15	763	780	76.92%	AS	19	217	234	23.08%	Simple Majority		980	X		
CE80-19	AS	AS	AS	AS	47	960	1007	97.86%	D	3	19	22	2.14%	Simple Majority		979	X		
RE126-19	AS	D	D	AS	17	676	695	67.67%	D	31	303	332	32.33%	2/3 Majority		979	X	X	4, 3, 1
CE181-19	AMPC1	AS	AMPC1	AMPC1	34	948	982	97.32%	D	0	27	27	2.68%	2/3 Majority		975	X		
CE73-19	AS	AS	AS	AS	46	897	943	92.00%	D	5	77	82	8.00%	Simple Majority		974	X		
RE148-19	AMPC1, 2	D	AMPC1, 2	AMPC1, 2	56	873	930	89.51%	D	9	101	109	10.49%	2/3 Majority		974	X		
CE219-19	D	D	D	D	19	329	343	34.37%	AS	11	639	655	65.63%	Simple Majority	See	968	X		
RE196-19	D	D	D	D	45	887	934	91.21%	AS	11	81	90	8.79%	Simple Majority		968	X		
CE93-19 Part I	D	D	D	D	32	928	962	94.78%	AS	18	37	53	5.22%	Simple Majority		965	X		
RE190-19	D	D	D	D	54	939	995	96.41%	AS	13	26	37	3.59%	Simple Majority		965	X		
CE256-19	D	D	D	D	25	933	959	96.38%	AS	7	30	36	3.62%	Simple Majority		963	X		
RE145-19	AS	D	D	AS	19	690	711	69.30%	D	46	271	315	30.70%	2/3 Majority		961	X	X	4, 3
RE20-19	AMPC1	D	AMPC1	AMPC1	64	905	969	94.08%	D	7	54	61	5.92%	2/3 Majority		959	X		
CE220-19	D	D	D	D	18	313	330	33.47%	AS	11	644	656	66.53%	Simple Majority	See	957	X		
RE117-19	D	D	D	D	28	855	883	87.86%	AS	20	102	122	12.14%	Simple Majority		957	X		
CE150-19 Part II	D	AS	AS	D	13	736	750	76.37%	AS	15	218	232	23.63%	Simple Majority		954	X		
RE10-19	D	AS	D	D	37	886	924	92.59%	AS	9	66	74	7.41%	Simple Majority		952	X		
RE171-19	D	D	D	D	40	882	924	91.39%	AS	20	69	87	8.61%	Simple Majority		951	X		
RE21-19	AS	D	D	AS	23	720	743	72.91%	D	47	229	276	27.09%	Simple Majority		949	X	X	4, 3
CE261-19	D	D	D	D	11	322	334	34.08%	AS	21	626	646	65.92%	Simple Majority	See	948	X		
RE95-19	D	D	D	D	52	881	934	93.12%	AS	4	66	69	6.88%	Simple Majority		947	X		
RE121-19	D	D	D	D	45	883	928	93.36%	AS	3	63	66	6.64%	Simple Majority		946	X		
RE102-19	D	AS	D	D	54	834	885	87.54%	AS	13	110	126	12.46%	Simple Majority		944	X		
RE116-19	D	D	D	D	28	908	937	94.17%	AS	23	36	58	5.83%	Simple Majority		944	X		
RE110-19	D	D	D	D	42	912	954	96.36%	AS	6	30	36	3.64%	Simple Majority		942	X		
RE43-19	D	D	D	D	37	900	938	94.84%	AS	12	40	51	5.16%	Simple Majority		940	X		
RE157-19	AS	D	AS	AS	38	831	869	88.31%	D	10	105	115	11.69%	2/3 Majority		936	X		

RE204-19	AS	D	D	AS	14	684	699	70.53%	D	51	242	292	29.47%	2/3 Majority	926	X	X	4, 3
RE165-19	D	AM	AM	D	26	733	761	77.34%	AM	35	190	223	22.66%	Simple Majority	923	X		
RE186-19	D	AS	AS	D	11	617	631	64.19%	AS	53	302	352	35.81%	Simple Majority	919	X		
RE224-19 Part I	D	D	D	D	42	897	939	97.00%	AS	10	19	29	3.00%	Simple Majority	916	X		
RE166-19	D	AS	AS	D	23	732	756	78.67%	AS	35	171	205	21.33%	Simple Majority	903	X		
RE224-19 Part II	D	D	D	D	43	862	906	97.42%	AS	7	18	24	2.58%	Simple Majority	880	X		
CE53-19	D	D	D	D	26	383	409	59.71%	AS	23	253	276	40.29%	Simple Majority	636			
CE264-19	AS	AS	D	AS	13	378	391	59.15%	D	16	254	270	40.85%	Simple Majority	632			
RE206-19	D	D	D	D	36	380	421	61.73%	AS	35	231	261	38.27%	Simple Majority	611			
RE207-19	D	D	D	D	39	364	405	60.18%	AS	29	241	268	39.82%	Simple Majority	605			
RE47-19	AM	AM	AM	AM	51	255	305	51.78%	D	16	267	284	48.22%	Simple Majority	522			
RE130-19	AS	AS	AS	AS	36	385	421	75.45%	D	18	119	137	24.55%	Simple Majority	504			
RE60-19	AMPC2	D	AMPC2	AMPC2	36	415	453	81.47%	D	18	87	103	18.53%	2/3 Majority	502			
RE50-19	AMPC1	D	AMPC1	AMPC1	45	418	463	81.95%	D	22	80	102	18.05%	2/3 Majority	498			
RE107-19	AMPC1	D	AMPC1	AMPC1	46	409	456	83.06%	D	5	89	93	16.94%	2/3 Majority	498			
RE210-19	D	D	D	D	36	471	508	92.20%	AS	18	26	43	7.80%	Simple Majority	497			
RE59-19	AM	AM	AM	AM	52	459	515	92.46%	D	10	36	42	7.54%	Simple Majority	495			
RE61-19	D	D	D	D	29	450	484	90.13%	AS	27	31	53	9.87%	Simple Majority	481			
RB152-19	AMPC3, 5	D	AMPC3, 5	AMPC3, 5	119	346	464	76.44%	D	7	135	143	23.56%	2/3 Majority	481			
ADM3-19 Part I	AMPC1	AM	AMPC1	AMPC1	228	336	559	78.62%	D	13	134	152	21.38%	2/3 Majority	470			
RE202-19	AMPC1	D	AMPC1	AMPC1	52	402	454	85.82%	D	7	68	75	14.18%	2/3 Majority	470			
CE133-19	AM	AM	AM	AM	35	313	348	68.77%	D	4	154	158	31.23%	Simple Majority	467			
CE15-19 Part I	D	D	D	D	34	327	361	70.23%	AS	22	131	153	29.77%	Simple Majority	458			
RE18-19	AMPC1	AS	AMPC1	AMPC1	53	352	407	77.67%	D	14	105	117	22.33%	2/3 Majority	457			
ADM5-19 Part II	AMPC1	D	AMPC1	AMPC1	227	323	545	77.09%	D	42	115	162	22.91%	2/3 Majority	438			
CE229-19	D	D	D	D	25	414	439	94.82%	AS	3	21	24	5.18%	Simple Majority	435			
CE106-19	AMPC1	D	AMPC1	AMPC1	36	339	374	78.90%	D	6	93	100	21.10%	2/3 Majority	432			
CE16-19 Part I	D	D	D	D	36	312	347	72.14%	AS	18	115	134	27.86%	Simple Majority	427			
CE16-19 Part II	D	D	D	D	40	315	355	74.27%	AS	18	105	123	25.73%	Simple Majority	420			
RE26-19	D	D	AMPC1	D	3	217	223	47.15%	AMPC	56	197	250	52.85%	2/3 Majority	See			
CE15-19 Part II	D	D	D	D	34	299	332	71.24%	AS	22	111	134	28.76%	Simple Majority	410			
RE39-19	D	D	AS	D	15	167	185	38.62%	AS	55	242	294	61.38%	2/3 Majority	See			
CE19-19 Part II	AMPC1	AS	AMPC1	AMPC1	57	356	413	88.44%	D	6	48	54	11.56%	2/3 Majority	404			
RE106-19	AMPC1	D	AMPC1	AMPC1	50	273	323	69.31%	D	12	131	143	30.69%	2/3 Majority	404			
CE134-19	D	D	D	D	21	294	315	72.92%	AS	13	104	117	27.08%	Simple Majority	398			
CE116-19 Part I	AS	AS	AS	AS	33	348	381	87.99%	D	3	49	52	12.01%	Simple Majority	397			
RE27-19	AS	AS	AS	AS	39	346	385	84.62%	D	20	50	70	15.38%	Simple Majority	396			
CE115-19 Part II	D	AM	D	D	32	237	269	60.04%	AM	29	150	179	39.96%	Simple Majority	387			
ADM47: NMX-J- 52	D	AS	D	D	129	311	443	71.68%	AS	103	75	175	28.32%	Simple Majority	386			
CE129-19	AMPC1	AS	AMPC1	AMPC1	31	349	380	90.05%	D	7	35	42	9.95%	2/3 Majority	384			
RB22-19	D	D	D	D	118	296	418	73.59%	AS	67	87	150	26.41%	Simple Majority	383			
CE237-19	AM	AM	AM	AM	29	335	364	88.35%	D	1	47	48	11.65%	Simple Majority	382			
RE94-19	D	D	D	D	34	277	311	70.68%	AS	27	102	129	29.32%	Simple Majority	379			
RE195-19	D	D	D	D	44	356	401	91.34%	AS	16	23	38	8.66%	Simple Majority	379			
CE224-19	AMPC1	D	AMPC1	AMPC1	24	284	308	76.05%	D	3	94	97	23.95%	2/3 Majority	378			
RE194-19	D	D	D	D	33	359	395	89.57%	AS	30	19	46	10.43%	Simple Majority	378			
CE124-19	AS	AS	AS	AS	21	358	379	91.33%	D	18	18	36	8.67%	Simple Majority	376			
CE198-19	AS	AS	AS	AS	23	335	358	86.89%	D	13	41	54	13.11%	Simple Majority	376			
CE246-19	D	D	D	D	29	342	371	91.15%	AS	2	34	36	8.85%	Simple Majority	376			
RE49-19	AMPC1	AS	AMPC1	AMPC1	63	320	383	86.65%	D	4	55	59	13.35%	2/3 Majority	375			
RE57-19	D	D	D	D	59	350	408	92.94%	AS	5	25	31	7.06%	Simple Majority	375			
CE108-19	AM	AM	AM	AM	33	325	357	85.82%	D	9	49	59	14.18%	Simple Majority	374			
CE127-19	AMPC1	D	AMPC1	AMPC1	37	279	316	77.07%	D	1	93	94	22.93%	2/3 Majority	372			
CE213-19	AMPC1, 3	D	AMPC1, 3	AMPC1, 3	30	300	330	81.68%	D	2	72	74	18.32%	2/3 Majority	372			
CE158-19	AMPC1	D	AMPC1	AMPC1	32	302	334	82.67%	D	1	69	70	17.33%	2/3 Majority	371			
CE239-19	AM	AM	AM	AM	26	310	336	84.21%	D	2	61	63	15.79%	Simple Majority	371			

RB46-19	AMPC1	D	AMPC1	AMPC1	119	254	375	69.57%	D	49	117	164	30.43%	2/3 Majority		371			
CE242-19	D	D	D	D	16	252	269	67.76%	AS	12	117	128	32.24%	Simple Majority		369			
RB67-19	AMPC1	D	AMPC1	AMPC1	123	307	433	80.19%	D	48	62	107	19.81%	2/3 Majority		369			
RE81-19	D	D	AMPC1	D	6	148	155	36.47%	AMPC1	51	220	270	63.53%	2/3 Majority	See Note 3	368			
RE75-19	D	D	AMPC1	D	4	141	146	34.03%	AMPC1	58	226	283	65.97%	2/3 Majority	See	367			
RE84-19	D	D	AMPC1	D	6	153	160	37.47%	AMPC1	54	214	267	62.53%	2/3 Majority	See	367			
RE85-19	D	D	AS	D	10	154	165	38.55%	AS	51	213	263	61.45%	2/3 Majority	See	367			
CE185-19	AS	AS	AS	AS	30	343	373	93.48%	D	3	23	26	6.52%	Simple Majority		366			
CE159-19 Part I	AMPC1	D	AMPC1	AMPC1	33	301	334	83.50%	D	2	64	66	16.50%	2/3 Majority		365			
CE160-19 Part II	AMPC1	AM	AMPC1	AMPC1	38	335	373	92.56%	D	0	30	30	7.44%	2/3 Majority		365			
RE132-19 Part I	AM	AM	AM	AM	44	251	294	70.33%	D	9	114	124	29.67%	Simple Majority		365			
RE79-19	D	D	AS	D	17	149	165	38.55%	AS	47	215	263	61.45%	2/3 Majority	See	364			
RE132-19 Part II	AM	AM	AM	AM	42	252	293	70.77%	D	8	112	121	29.23%	Simple Majority		364			
RE153-19	D	D	D	D	55	327	382	89.25%	AS	9	37	46	10.75%	Simple Majority		364			
CE159-19 Part II	AMPC1	AS	AMPC1	AMPC1	37	334	371	92.75%	D	0	29	29	7.25%	2/3 Majority		363			
RE54-19	D	D	D	D	37	250	288	68.74%	AS	19	113	131	31.26%	Simple Majority		363			
RE80-19	D	D	AMPC1	D	4	143	148	35.41%	AMPC1	51	220	270	64.59%	2/3 Majority	See Note 3	363			
CE188-19	D	D	D	D	33	255	287	72.66%	AS	2	105	108	27.34%	Simple Majority		360			
CE233-19	D	D	D	D	21	257	277	71.95%	AS	5	102	108	28.05%	Simple Majority		359			
CE160-19 Part I	AMPC1	D	AMPC1	AMPC1	35	290	325	82.70%	D	0	68	68	17.30%	2/3 Majority		358			
RE51-19	AMPC1	AS	AMPC1	AMPC1	57	324	381	91.59%	D	2	33	35	8.41%	2/3 Majority		357			
RE109-19	AMPC1	D	AMPC1	AMPC1	39	268	307	75.99%	D	8	89	97	24.01%	2/3 Majority		357			
RE73-19	AMPC1	D	AMPC1	AMPC1	51	280	331	80.15%	D	6	76	82	19.85%	2/3 Majority		356			
RB60-19	AS	AS	AS	AS	139	314	451	86.07%	D	29	42	73	13.93%	Simple Majority		356			
RB125-19	D	D	D	D	30	283	320	74.94%	AS	43	71	107	25.06%	Simple Majority		354			
RE71-19	AS	AS	AS	AS	49	304	353	85.27%	D	12	49	61	14.73%	Simple Majority		353			
RE136-19	AMPC1	D	AMPC1	AMPC1	46	294	341	83.78%	D	8	59	66	16.22%	2/3 Majority		353			
RE154-19	D	D	D	D	33	248	283	68.03%	AS	30	105	133	31.97%	Simple Majority		353			
RE155-19	D	D	D	D	47	263	310	74.88%	AS	14	90	104	25.12%	Simple Majority		353			
CE238-19	D	D	D	D	20	264	284	75.33%	AS	6	87	93	24.67%	Simple Majority		351			
RE68-19	AS	D	AS	AS	45	276	321	79.85%	D	7	74	81	20.15%	2/3 Majority		350			
RB161-19	D	D	D	D	87	337	430	93.68%	AS	23	12	29	6.32%	Simple Majority		349			
RE178-19	AS	D	AS	AS	44	258	302	75.12%	D	10	90	100	24.88%	2/3 Majority		348			
RE66-19	D	D	D	D	32	216	247	60.99%	AS	27	130	158	39.01%	Simple Majority		346			
S100-19	AS	AS	AS	AS	167	333	501	95.79%	D	12	11	22	4.21%	Simple Majority		344			
RE67-19	D	D	D	D	40	228	268	66.17%	AS	21	116	137	33.83%	Simple Majority		344			
RE74-19	AMPC1	D	AMPC1	AMPC1	49	255	304	75.43%	D	11	88	99	24.57%	2/3 Majority		343			
RB112-19	D	D	D	D	105	326	435	87.88%	AS	50	14	60	12.12%	Simple Majority		340			
RB292-19	AMPC2	AM	AMPC2	AMPC2	81	280	362	83.80%	D	12	59	70	16.20%	2/3 Majority		339			
RE63-19	D	D	D	D	36	319	355	89.65%	AS	22	19	41	10.35%	Simple Majority		338			
RE212-19	D	D	D	D	28	213	343	89.32%	AS	18	25	41	10.68%	Simple Majority		338			
RB286-19	D	AS	D	D	84	293	378	85.52%	AS	21	44	64	14.48%	Simple Majority		337			
RB56-19	AS	AS	AS	AS	164	319	483	95.08%	D	11	14	25	4.92%	Simple Majority		333			
RB163-19	AMPC2	D	AMPC2	AMPC2	81	261	345	80.05%	D	17	72	86	19.95%	2/3 Majority		333			
RB90-19	AS	AS	AS	AS	80	231	314	64.74%	D	73	101	171	35.26%	Simple Majority		332			
RB119-19	D	D	D	D	143	309	452	94.96%	AS	1	23	24	5.04%	Simple Majority		332			
G12-19 Part II	AS	AS	AS	AS	149	247	396	78.11%	D	31	80	111	21.89%	Simple Majority		327			
S44-19	AMPC1	AM	AMPC1	AMPC1	171	294	465	91.54%	D	10	33	43	8.46%	2/3 Majority		327			
RB164-19	AM	AM	AM	AM	75	298	372	92.31%	D	3	27	31	7.69%	Simple Majority		325			
ADM4-19	D	D	D	D	183	212	394	69.49%	AS	62	110	173	30.51%	Simple Majority		322			
G12-19 Part I	AS	AS	AS	AS	142	243	385	75.94%	D	43	79	122	24.06%	Simple Majority		322			
RB2-19	D	AS	D	D	117	213	328	66.80%	AS	53	108	163	33.20%	Simple Majority		321			
RB166-19	AMPC1	D	AMPC1	AMPC1	73	219	322	81.31%	D	2	72	74	18.69%	2/3 Majority		321			
RB299-19	AMPC1	D	AMPC1	AMPC1	93	246	339	80.71%	D	6	75	81	19.29%	2/3 Majority		321			
RB43-19	AMPC1	D	AMPC1	AMPC1	162	262	424	87.42%	D	3	58	61	12.58%	2/3 Majority		320			
S86-19	D	D	D	D	193	296	489	93.32%	AS	12	23	35	6.68%	Simple Majority		319			

RB289-19	AMPC1	D	AMPC1	AMPC1	100	250	349	82.12%	D	7	68	76	17.88%	2/3 Majority	318
ADM19-19	AM	AM	AM	AM	218	282	500	86.96%	D	40	35	75	13.04%	Simple Majority	317
RB59-19	D	D	D	D	70	287	365	72.42%	AS	119	28	139	27.58%	Simple Majority	315
RB154-19	AMPC1	D	AMPC1	AMPC1	115	253	368	85.38%	D	2	61	63	14.62%	2/3 Majority	314
EB133-19	D	D	D	D	75	234	309	69.75%	AS	55	79	134	30.25%	Simple Majority	313
RB185-19	AMPC1	AM	AMPC1	AMPC1	80	292	373	94.67%	D	2	20	21	5.33%	2/3 Majority	312
RB129-19	AS	AS	AS	AS	130	295	425	95.08%	D	6	16	22	4.92%	Simple Majority	311
EB103-19	D	AM	D	D	115	260	377	83.78%	AM	28	47	73	16.22%	Simple Majority	307
RB141-19	AMPC1	AS	AMPC1	AMPC1	117	289	407	96.22%	D	3	14	16	3.78%	2/3 Majority	303
RB212-19 Part I	D	D	D	D	45	286	337	86.19%	AS	43	17	54	13.81%	Simple Majority	303
ADM7-19	D	D	D	D	197	263	463	81.66%	AS	68	39	104	18.34%	Simple Majority	302
RB156-19	D	D	D	D	114	291	405	96.20%	AS	6	10	16	3.80%	Simple Majority	301
ADM21-19	D	D	D	D	244	261	504	90.16%	AS	15	39	55	9.84%	Simple Majority	300
EB40-19	AMPC2	AM	AMPC2	AMPC2	131	272	404	89.18%	D	22	28	49	10.82%	2/3 Majority	300
ADM43-19 Part II	AS	D	AS	AS	199	196	396	69.96%	D	68	103	170	30.04%	2/3 Majority	299
RB1-19	D	D	D	D	129	284	414	96.06%	AS	3	15	17	3.94%	Simple Majority	299
RB131-19	D	D	D	D	99	242	342	78.98%	AS	35	57	91	21.02%	Simple Majority	299
ADM47: ANS/	AMPC20	AS	AMPC20	AMPC20	166	266	433	91.35%	D	10	32	41	8.65%	2/3 Majority	298
S146-19	D	D	D	D	136	290	427	92.83%	AS	27	7	33	7.17%	Simple Majority	297
ADM40-19 Part II	D	D	D	D	154	205	359	65.75%	AS	97	90	187	34.25%	Simple Majority	295
EB82-19	D	D	D	D	150	266	418	85.48%	AS	44	29	71	14.52%	Simple Majority	295
RB66-19	AS	D	AS	AS	152	215	359	77.37%	D	17	80	105	22.63%	2/3 Majority	295
ADM23-19 Part I	D	D	D	D	236	267	504	93.51%	AS	10	26	35	6.49%	Simple Majority	293
S166-19	AM	AM	AM	AM	178	265	443	92.48%	D	8	28	36	7.52%	Simple Majority	293
RB107-19	AMPC1, 2	AM	AMPC1, 2	AMPC1, 2	144	255	399	88.67%	D	14	37	51	11.33%	2/3 Majority	292
RB213-19	AMPC1	AS	AMPC1	AMPC1	88	276	364	95.29%	D	2	16	18	4.71%	2/3 Majority	292
EB39-19	D	AS	D	D	88	216	307	67.62%	AS	76	74	147	32.38%	Simple Majority	290
S187-19	AMPC1	AS	AMPC1	AMPC1	169	275	444	96.94%	D	0	14	14	3.06%	2/3 Majority	289
EB61-19	D	AM	D	D	104	205	310	66.10%	AM	76	84	159	33.90%	Simple Majority	289
RB231-19	D	AS	D	D	63	187	251	65.03%	AS	36	100	135	34.97%	Simple Majority	287
ADM10-19 Part II	D	D	D	D	222	225	445	84.28%	AS	20	61	83	15.72%	Simple Majority	286
ADM12-19	D	D	D	D	234	249	482	89.09%	AS	22	36	59	10.91%	Simple Majority	285
EB56-19	D	D	D	D	134	210	348	75.00%	AS	45	75	116	25.00%	Simple Majority	285
RB30-19	AMPC1	D	AMPC1	AMPC1	178	238	416	86.31%	D	19	47	66	13.69%	2/3 Majority	285
RB300-19	D	D	D	D	59	261	322	84.51%	AS	37	24	59	15.49%	Simple Majority	285
RB116-19	D	D	D	D	130	275	406	95.08%	AS	13	9	21	4.92%	Simple Majority	284
ADM44-19	AMPC1	AS	AMPC1	AMPC1	260	253	511	92.24%	D	11	30	43	7.76%	2/3 Majority	283
EB3-19	D	AS	D	D	96	220	317	76.76%	AS	34	63	96	23.24%	Simple Majority	283
RB114-19	D	D	D	D	108	225	335	78.45%	AS	37	57	92	21.55%	Simple Majority	282
RB14-19	AMPC1	D	AMPC1	AMPC1	179	237	417	88.35%	D	12	44	55	11.65%	2/3 Majority	281
RB88-19	D	D	D	D	107	258	365	87.32%	AS	30	23	53	12.68%	Simple Majority	281
S90-19	AMPC1	AS	AMPC1	AMPC1	176	259	435	92.55%	D	14	21	35	7.45%	2/3 Majority	280
EB163-19	AMPC1	AM	AMPC1	AMPC1	154	262	415	91.61%	D	19	18	38	8.39%	2/3 Majority	280
RB58-19	D	D	D	D	108	246	357	77.27%	AS	74	34	105	22.73%	Simple Majority	280
RB302-19	AMPC1	D	AMPC1	AMPC1	72	227	300	83.10%	D	9	53	61	16.90%	2/3 Majority	280
EB145-19	AMPC1, 2	AS	AMPC1, 2	AMPC1, 2	168	248	416	91.03%	D	10	31	41	8.97%	2/3 Majority	279
EB38-19	D	D	D	D	94	209	309	63.45%	AS	115	69	178	36.55%	Simple Majority	278
RB20-19	D	D	D	D	132	270	403	86.48%	AS	56	8	63	13.52%	Simple Majority	278
ADM40-19 Part III	D	D	D	D	157	199	356	66.92%	AS	98	78	176	33.08%	Simple Majority	277
RB93-19	AMPC1	AS	AMPC1	AMPC1	152	261	414	95.17%	D	6	16	21	4.83%	2/3 Majority	277
ADM20-19	D	D	D	D	220	237	460	85.03%	AS	45	39	81	14.97%	Simple Majority	276
ADM22-19	D	D	D	D	232	249	483	90.96%	AS	23	27	48	9.04%	Simple Majority	276
S98-19	D	D	D	D	178	249	427	93.23%	AS	4	27	31	6.77%	Simple Majority	276
RB5-19	D	D	D	D	160	268	429	95.97%	AS	11	8	18	4.03%	Simple Majority	276

RB102-19	D	D	D	D	95	192	286	68.26%	AS	48	84	133	31.74%	Simple Majority	276			
RB109-19	D	D	D	D	102	193	293	69.76%	AS	43	82	127	30.24%	Simple Majority	275			
ADM37-19 Part I	D	D	D	D	137	227	369	68.33%	AS	129	47	171	31.67%	Simple Majority	274			
RB257-19	AS	D	AS	AS	74	188	257	70.41%	D	18	85	108	29.59%	2/3 Majority	273			
ADM16-19 Part II	D	D	D	D	182	208	390	74.14%	AS	72	64	136	25.86%	Simple Majority	272			
ADM47: NSF 14-	AS	AS	AS	AS	204	259	464	95.87%	D	8	13	20	4.13%	Simple Majority	272			
S200-19	D	D	D	D	96	210	309	69.13%	AS	79	62	138	30.87%	Simple Majority	272			
S174-19	AMPC2	AM	AMPC2	AMPC2	178	263	441	97.78%	D	2	8	10	2.22%	2/3 Majority	271			
EB50-19	D	D	D	D	159	259	419	91.89%	AS	26	12	37	8.11%	Simple Majority	271			
ADM24-19 Part I	D	D	D	D	118	213	335	67.00%	AS	112	57	165	33.00%	Simple Majority	270			
ADM37-19 Part II	D	D	D	D	191	229	421	82.23%	AS	52	40	91	17.77%	Simple Majority	269			
ADM43-19 Part	AS	D	AS	AS	239	147	385	71.96%	D	27	122	150	28.04%	2/3 Majority	269			
EB7-19	D	D	D	D	165	254	421	92.32%	AS	22	15	35	7.68%	Simple Majority	269			
EB6-19	D	D	D	D	149	251	401	88.72%	AS	35	17	51	11.28%	Simple Majority	268			
RB139-19	D	D	D	D	96	253	352	91.43%	AS	21	15	33	8.57%	Simple Majority	268			
ADM32-19 Part I	D	D	D	D	129	205	335	66.47%	AS	108	62	169	33.53%	Simple Majority	267			
S167-19	AMPC2	AM	AMPC2	AMPC2	169	231	401	89.91%	D	10	36	45	10.09%	2/3 Majority	267			
ADM33-19 Part II	D	D	D	D	162	216	377	74.80%	AS	76	50	127	25.20%	Simple Majority	266			
RB81-19	D	D	D	D	113	256	373	90.10%	AS	35	10	41	9.90%	Simple Majority	266			
RB115-19	AMPC2	AM	AMPC2	AMPC2	124	245	369	92.02%	D	11	21	32	7.98%	2/3 Majority	266			
ADM47: NFPA 285-	AS	AS	AS	AS	142	228	373	75.05%	D	90	37	124	24.95%	Simple Majority	265			
RB174-19	D	D	D	D	64	254	319	96.96%	AS	2	9	10	3.04%	Simple Majority	263			
RB219-19	D	D	D	D	54	221	277	77.81%	AS	39	42	79	22.19%	Simple Majority	263			
ADM45-19	D	D	D	D	172	226	400	76.63%	AS	88	36	122	23.37%	Simple Majority	262			
RB184-19	AMPC4	D	AMPC4	AMPC4	77	196	272	80.00%	D	1	66	68	20.00%	2/3 Majority	262			
RB242-19	AM	AM	AM	AM	92	238	330	92.44%	D	3	24	27	7.56%	Simple Majority	262			
ADM23-19 Part II	D	D	D	D	238	228	466	92.46%	AS	5	33	38	7.54%	Simple Majority	261			
ADM32-19 Part II	D	D	D	D	155	202	356	70.63%	AS	89	58	148	29.37%	Simple Majority	260			
ADM47: NSF 42-	AS	AS	AS	AS	205	248	454	96.39%	D	6	12	17	3.61%	Simple Majority	260			
EB94-19	AMPC1	AS	AMPC1	AMPC1	187	234	421	92.53%	D	8	26	34	7.47%	2/3 Majority	260			
RB78-19	D	D	D	D	66	240	307	79.53%	AS	60	20	79	20.47%	Simple Majority	260			
S72-19	AS	D	AS	AS	169	209	372	83.78%	D	16	50	72	16.22%	2/3 Majority	259			
RB7-19	D	D	D	D	150	241	391	93.76%	AS	8	18	26	6.24%	Simple Majority	259			
RB10-19	D	D	D	D	111	246	366	85.71%	AS	57	13	61	14.29%	Simple Majority	259			
RB221-19	D	D	D	D	54	250	307	88.22%	AS	35	9	41	11.78%	Simple Majority	259			
RB25-19	D	D	D	D	129	244	374	87.59%	AS	40	14	53	12.41%	Simple Majority	258			
ADM33-19 Part III	D	D	D	D	184	214	396	77.95%	AS	67	43	112	22.05%	Simple Majority	257			
ADM47: ASTM E84-	AS	AS	AS	AS	201	245	447	94.90%	D	13	12	24	5.10%	Simple Majority	257			
GG1-19	AM	AM	AM	AM	45	233	278	90.55%	D	5	24	29	9.45%	Simple Majority	257			
ADM47: NSF 44-	AS	AS	AS	AS	206	245	452	97.20%	D	3	11	13	2.80%	Simple Majority	256			
S196-19	AM	AM	AM	AM	173	244	417	95.21%	D	9	12	21	4.79%	Simple Majority	256			
RB182-19	D	D	D	D	47	240	289	89.47%	AS	20	16	34	10.53%	Simple Majority	256			
RB258-19	AS	D	AS	AS	91	167	257	72.39%	D	8	89	98	27.61%	2/3 Majority	256			
ADM39-19 Part II	D	D	D	D	161	209	372	72.51%	AS	97	46	141	27.49%	Simple Majority	255			
G10-19	AMPC2	D	AMPC2	AMPC2	166	213	379	85.94%	D	20	42	62	14.06%	2/3 Majority	255			
EB2-19	D	D	D	D	112	236	350	83.93%	AS	50	19	67	16.07%	Simple Majority	255			
EB25-19	AS	AS	AS	AS	126	164	293	64.97%	D	70	91	158	35.03%	Simple Majority	255			
S138-19	AMPC1	AS	AMPC1	AMPC1	147	241	388	97.00%	D	1	11	12	3.00%	2/3 Majority	252			
EB41-19	D	D	D	D	131	222	356	78.07%	AS	73	30	100	21.93%	Simple Majority	252			
RB277-19	AMPC1	D	AMPC1	AMPC1	99	219	318	88.83%	D	7	33	40	11.17%	2/3 Majority	252			
EB80-19	D	D	D	D	184	239	424	94.85%	AS	12	12	23	5.15%	Simple Majority	251			
GG3-19	AMPC1	AM	AMPC1	AMPC1	52	222	275	89.29%	D	5	29	33	10.71%	2/3 Majority	251			
RB193-19	AMPC2	AM	AMPC2	AMPC2	80	225	305	91.87%	D	1	26	27	8.13%	2/3 Majority	251			
RB301-19	D	D	D	D	46	174	224	67.07%	AS	37	77	110	32.93%	Simple Majority	251			
ADM47: NSF 61-	AMPC8	AS	AMPC8	AMPC8	206	230	436	93.56%	D	10	20	30	6.44%	2/3 Majority	250			
ADM47: NSF 359-19	AS	AS	AS	AS	202	240	445	96.32%	D	10	10	17	3.68%	Simple Majority	250			
RB11-19	D	D	D	D	118	235	358	83.45%	AS	61	15	71	16.55%	Simple Majority	250			
RB53-19	D	D	D	D	100	209	313	79.04%	AS	46	41	83	20.96%	Simple Majority	250			

RB89-19	D	D	D	D	73	219	296	74.94%	AS	72	31	99	25.06%	Simple Majority	250
ADM47: ASTM E136-	AMPC3	AS	AMPC3	AMPC3	199	228	427	92.22%	D	15	21	36	7.78%	2/3 Majority	249
RB255-19	AMPC1	D	AMPC1	AMPC1	90	191	281	81.92%	D	4	58	62	18.08%	2/3 Majority	249
RB212-19 Part II	D	AS	D	D	60	219	283	84.98%	AS	25	29	50	15.02%	Simple Majority	248
S153-19	D	D	D	D	129	234	367	89.29%	AS	37	11	44	10.71%	Simple Majority	245
EB5-19	D	D	D	D	178	227	406	92.48%	AS	16	18	33	7.52%	Simple Majority	245
EB104-19	D	D	D	D	95	229	325	88.08%	AS	29	16	44	11.92%	Simple Majority	245
RB162-19	D	D	D	D	77	217	295	83.57%	AS	31	28	58	16.43%	Simple Majority	245
RB183-19	AM	AM	AM	AM	40	190	232	73.19%	D	32	55	85	26.81%	Simple Majority	245
RB261-19	AMPC1	D	AMPC1	AMPC1	91	190	281	82.65%	D	4	55	59	17.35%	2/3 Majority	245
S107-19	AM	AM	AM	AM	157	217	374	90.56%	D	12	27	39	9.44%	Simple Majority	244
EB111-19	D	D	D	D	70	233	304	82.61%	AS	54	11	64	17.39%	Simple Majority	244
RB33-19	AMPC1	D	AMPC1	AMPC1	152	175	325	79.66%	D	12	69	83	20.34%	2/3 Majority	244
RB241-19	AMPC1	AM	AMPC1	AMPC1	94	220	314	92.35%	D	2	24	26	7.65%	2/3 Majority	244
EB20-19	AS	AS	AS	AS	175	224	399	91.30%	D	19	19	38	8.70%	Simple Majority	243
RB72-19	D	D	D	D	69	220	290	83.82%	AS	34	23	56	16.18%	Simple Majority	243
EB164-19	AMPC1	AS	AMPC1	AMPC1	176	227	402	95.71%	D	3	14	18	4.29%	2/3 Majority	241
RB262-19	AMPC1	AS	AMPC1	AMPC1	89	218	307	92.75%	D	1	23	24	7.25%	2/3 Majority	241
RB40-19	AMPC1	AM	AMPC1	AMPC1	151	219	370	92.96%	D	7	21	28	7.04%	2/3 Majority	240
RB203-19	AMPC1	AS	AMPC1	AMPC1	86	228	313	96.01%	D	0	12	13	3.99%	2/3 Majority	240
S52-19	D	D	D	D	99	212	315	76.83%	AS	72	27	95	23.17%	Simple Majority	239
EB95-19	D	AS	D	D	104	181	286	73.90%	AS	44	58	101	26.10%	Simple Majority	239
EB47-19	AMPC1	AM	AMPC1	AMPC1	172	214	386	90.61%	D	16	24	40	9.39%	2/3 Majority	238
G14-19	AMPC1	D	AMPC1	AMPC1	176	188	363	85.82%	D	10	49	60	14.18%	2/3 Majority	237
S193-19	D	AM	D	D	123	203	331	80.15%	AM	53	34	82	19.85%	Simple Majority	237
S154-19	D	D	D	D	87	203	293	75.32%	AS	66	33	96	24.68%	Simple Majority	236
S1-19	D	D	D	D	172	203	372	88.15%	AS	16	31	50	11.85%	Simple Majority	234
S2-19	D	D	D	D	129	203	332	80.58%	AS	51	29	80	19.42%	Simple Majority	232
S123-19	D	D	D	D	151	221	375	94.22%	AS	15	11	23	5.78%	Simple Majority	232
EB16-19	D	D	D	D	95	184	277	68.06%	AS	80	48	130	31.94%	Simple Majority	232
EB35-19	D	D	D	D	130	215	346	80.65%	AS	67	17	83	19.35%	Simple Majority	232
RB248-19	AMPC1	D	AMPC1	AMPC1	88	173	261	80.56%	D	4	59	63	19.44%	2/3 Majority	232
S156-19	AMPC1	D	AMPC1	AMPC1	173	169	340	82.32%	D	9	62	73	17.68%	2/3 Majority	231
EB29-19	D	D	D	D	183	217	400	95.47%	AS	6	13	19	4.53%	Simple Majority	230
S87-19	D	D	D	D	178	216	394	92.71%	AS	20	11	31	7.29%	Simple Majority	227
S194-19	D	D	D	D	127	185	316	78.02%	AS	51	42	89	21.98%	Simple Majority	227
EB149-19	AMPC1	AS	AMPC1	AMPC1	167	208	374	93.97%	D	5	18	24	6.03%	2/3 Majority	226
RB238-19	AM	AM	AM	AM	59	194	256	79.01%	D	39	32	68	20.99%	Simple Majority	226
S83-19	D	D	D	D	171	219	390	91.12%	AS	32	6	38	8.88%	Simple Majority	225
S162-19	D	D	D	D	92	209	309	77.44%	AS	82	16	90	22.56%	Simple Majority	225
S9-19	D	D	D	D	105	205	311	77.17%	AS	79	14	92	22.83%	Simple Majority	219
S17-19	AMPC2	D	AMPC2	AMPC2	162	172	334	81.46%	D	29	47	76	18.54%	2/3 Majority	219
RB274-19	AMPC1	AS	AMPC1	AMPC1	102	199	301	93.77%	D	1	19	20	6.23%	2/3 Majority	218
EB161-19	AMPC1	AM	AMPC1	AMPC1	174	198	371	94.88%	D	2	17	20	5.12%	2/3 Majority	215
S120-19	D	D	D	D	132	202	338	87.34%	AS	41	12	49	12.66%	Simple Majority	214
S191-19	D	D	D	D	113	174	290	73.05%	AS	70	40	107	26.95%	Simple Majority	214
S119-19	D	D	D	D	126	193	318	81.96%	AS	49	20	70	18.04%	Simple Majority	213
RB291-19	AMPC1	D	AMPC1	AMPC1	90	153	243	79.41%	D	7	56	63	20.59%	2/3 Majority	209
RB272-19	D	D	D	D	81	199	280	94.28%	AS	8	9	17	5.72%	Simple Majority	208
S133-19	AMPC1	AM	AMPC1	AMPC1	123	177	300	90.91%	D	2	28	30	9.09%	2/3 Majority	205
S27-19	D	D	D	D	98	185	285	76.82%	AS	69	19	86	23.18%	Simple Majority	204
S60-19	D	D	D	D	158	192	351	90.00%	AS	30	10	39	10.00%	Simple Majority	202
S113-19	D	D	D	D	159	196	355	94.16%	AS	16	6	22	5.84%	Simple Majority	202
S132-19	AM	AM	AM	AM	158	190	349	96.14%	D	5	10	14	3.86%	Simple Majority	200
S96-19	D	D	D	D	154	180	335	87.24%	AS	33	17	49	12.76%	Simple Majority	197
S190-19	AMPC1	D	AMPC1	AMPC1	172	145	317	84.08%	D	10	50	60	15.92%	2/3 Majority	195
S144-19	D	D	D	D	133	186	319	89.86%	AS	28	8	36	10.14%	Simple Majority	194

S75-19	D	D	D	D	181	184	365	95.30%	AS	9	9	18	4.70%	Simple Majority	193			
S114-19	D	D	D	D	144	177	322	87.74%	AS	31	15	45	12.26%	Simple Majority	192			
S140-19	AS	AS	AS	AS	147	183	330	96.21%	D	4	9	13	3.79%	Simple Majority	191			
S165-19	D	D	D	D	137	174	314	84.86%	AS	42	17	56	15.14%	Simple Majority	191			
S118-19	D	D	D	D	101	168	270	75.00%	AS	70	21	90	25.00%	Simple Majority	189			
																108	20	

# Exhibit D



## 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](http://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](http://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 $\leq 0.40$ SHGC or $\leq 0.30$ 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 $\geq 180$ 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 $\leq 0.30$ 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 $\leq 0.40$ cfm/sq.ft.; permits area-weighted averaging; provides remedial measures for buildings that test $>0.40$ cfm/sq.ft, but $\leq 0.60$ 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 $\geq 65$ lm/W or luminaires with efficacy of $\geq 45$ 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.