



**Oregon**

Tina Kotek, Governor



Department of Consumer  
and Business Services

## Construction Industry Energy Board Meeting Agenda

**Meeting date:** March 10, 2026

**Time:** 9:30 a.m.

**Location:** This meeting will be open to the public **This is a hybrid meeting.**

**Virtual connection and online streaming:** View the live meeting or access the connection information for the Zoom meeting at: [Oregon.gov/bcd/Pages/bcd-video.aspx](https://Oregon.gov/bcd/Pages/bcd-video.aspx)

### **I. Board business**

- A. Call to order
- B. Roll call
- C. Approval of agenda and order of business
- D. Approval of the draft board meeting minutes of [April 8, 2025](#)
- E. Date of the next scheduled meeting: June 16, 2026
- F. Welcome new members Marshall McGrady, Ken Spencer, and Travis Argue
- G. Board vote for chair

### **II. Public comment**

The board will hear public testimony, including testimony from individuals who have signed up in advance. Public Comment will be heard by virtual attendance or written testimony only.

### **III. Reports and updates**

Energy program update

### **IV. Communications**

[Revitalizing Oregon's existing buildings through adaptive reuse](#)

### **V. Appeals**

There are no appeals for this meeting.

### **VI. Unfinished business**

There is no unfinished business at this time.



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## VII. **New business**

[Board review of the energy provisions of the 2026 Oregon Residential Specialty Code \(ORSC\)](#)

## VIII. **Announcements**

The Board Chair or board members can make announcements during this time.

## IX. **Adjournment**

Board meetings are generally adjourned by the Board Chair.

**Interpreter services or auxiliary aids for persons with disabilities are available upon advanced request. For assistance, please contact [Kaydi Milton](#) at 503-428-4169.**



## **Construction Industry Energy Board**

Meeting Minutes

April 8, 2025

### **Members present**

- Jay Hansen, Chair, Mechanical Board
- Thomas Kyle, Vice-chair, Electrical and Elevator Board
- Gary Heikkinen, Building Codes Structures Board
- Ryan Richards, Electrical and Elevator Board
- Blake Shelide, Oregon Department of Energy
- Matthew Lutter, Residential and Manufactured Structures Board
- Walter Caudle, Mechanical Board
- Rich Fry, Residential and Manufactured Structures Board
- Cutris Gillette, State Plumbing Board
- Tyrone Bergen, State Plumbing Board

### **Staff present**

- Alana Cox, administrator, Building Codes Division
- Todd Smith, manager, Policy and Technical Services (PTS)
- Richard Rogers, chief building official, PTS
- Mark Heizer, mechanical and energy code engineer, PTS
- Richard Donovan, senior policy advisor, PTS
- Anne Gire, sustainability policy analyst, PTS
- Andy Boulton, senior policy advisor, PTS
- Anthony Rocco, structural program chief, Housing and Building Safety Services
- Kelly Thomas, energy policy analyst, PTS
- Pierre Sabagh, policy analyst, PTS
- Kaydi Milton, policy development coordinator, PTS
- Debi Woods, boards coordinator, PTS

### **Public present**

- Elizabeth Morris, Green Up LLC
- Don MacOdrum, TRC
- Rita Haberman, OR DEQ
- Tyler Smith, PE, BEE Engineers
- Eric Lacey

## **I. Board business**

### **A. Call to order**

The hybrid Construction Industry Energy Board meeting of April 8, 2025, was called to order at 9:31 a.m. by Chair Jay Hansen.

### **B. Roll call**

All ten board members were connected virtually.

### **C. Approval of the agenda and order of business**

Chair Hansen ruled the agenda and order of business approved as posted.

### **D. Approval of the draft board meeting minutes**

Chair Hansen ruled the draft meeting minutes of February 18, 2025, final.

### **E. Date of the next regularly scheduled meeting June 17, 2025**

## **II. Public comment**

### Elizabeth Morris, Green Up LLC

Elizabeth Morris is the president of Green Up LLC and has joined the meeting today on behalf of IIBEC. She is the president of the Portland chapter of the International Institutes of Building Enclosure Consultants. She wanted to bring up one issue in particular about code enforcement for air tightness of building envelopes. Elizabeth read a statement explaining IIBEC supports the development and enforcement of codes and standards that protects and improves public health, safety, and economic vitality of the built environment. It's the policy of IIBEC that the principles of sustainability be considered when consulting on building enclosures. According to the Department of Energy, the building sector is responsible for 40 percent of total energy consumption, leaky buildings have a major impact on energy usage and emissions, especially buildings over 10,000 square feet. It's important these facilities have a tight building envelope to maintain energy efficiency per code. The Oregon Energy Code is based on ASHRAE standard 90.1, chapter five of the standard indicates that buildings must have a continuous air barrier in the new 2025 OEESC buildings less than 10,000 sq. ft. must perform a whole building blower door test. However, buildings larger than this can do a third party design review and a construction inspection program instead, so without doing a blower door test, it's really hard to say if buildings are actually ending up airtight. This can cost building owners and occupants a fortune and majorly impact energy usage and emissions. The State of Washington has to pass a blower test but in Oregon, they can hire a consultant to do inspections and it may or may not actually end up airtight in practice. Our point of view is that the air tightness of large buildings should be demonstrated by blower door tests, not just in the code, but in practice. The ASHRAE section will be submitted with this testimony officially and she would like to thank everyone for their time.

## **III. Reports and updates**

Energy program Update

Mark Heizer, mechanical and energy code engineer, stated that training on the energy code for the 2025 OEESC is coming up as being mandatory on July 1 of this year. The division is presenting to the Oregon building officials for their training classes again next week with a focus on application when it comes to the air sealing portion. The division is focusing extra on the air sealing requirements, whether blower door tests or the alternate paths available to large buildings. You can do larger building third party review which would include the forms that the division has that would need to be turned into the division to show that work was done by the third party. The division is working with local building officials to make sure that they can do plan intake and review because with the new additional energy credits portion, it's going to be a little trickier with things like deferred submittals. The division is also working to make sure every jurisdiction can have forms and things available when needed.

#### **IV. Communications**

##### **Embodied Carbon**

Alana Cox, administrator of the Building Codes Division, wanted to do a brief introduction and context about the presentation that Anne Gire will be presenting to the board and also what was submitted to the legislature about embodied carbon. Back in the 2021 legislative session, there were discussions about allowing local government to adopt the reach code and make it mandatory within individual municipalities and folks raised concerns about how that would impact the statewide code. Ultimately, that bill was amended to create the resilient efficient buildings task force. In the 2023 session, House Bill 3409 was the bill that resulted from the work of the task force. It required the division to develop a report about the carbon impact of the way that building materials are manufactured, transported and disposed of, known as embodied carbon. To implement the requirements of the bill, the division was able to hire a new member of our energy team, Anne, and she developed the report in consultation with lots of folks. The embodied carbon report and Anne's presentation today are intended to bring attention to some new and emerging tools in the tool belt. The division is looking for the board's help on thinking of new ways to evaluate cost when there are no utility savings to weigh against or opportunities for co-benefits. The division is excited about harnessing the positive embodied carbon benefits of adaptive reuse of buildings and such other things so today is just the beginning of the conversation.

##### [Embodied carbon Presentation](#)

Anne introduced herself and stated she is a sustainability policy analyst and works on energy and climate related aspects for different specialty codes. The division is doing this work not only because of legislative mandates but because every building constructed has a profound environmental implication and making informed decisions on how they're built, maintained, and eventually altered is essential to reducing their environmental impact. The division aims to equip you with the insights needed to evaluate and approve new tools and approaches for greenhouse gas emissions reductions.

The presentation on embodied carbon to the Construction Industry Energy Board included an educational overview, involvement opportunities for the CIEB, and reporting of potential outcomes that could result from embodied carbon requirements in statewide building code.

House Bill 3409, Section 7 is what set this work into motion and included finding solutions for benefiting construction stakeholders while addressing climate change and promoting energy efficiency across the state. As directed in HB 3409, Sec 7., policy analysts at BCD completed a legislative report titled “Options To Reduce Greenhouse Gas Emissions Attributable To Building Materials”. The report was informed by codes experts and research specialists in a collaboration with RMI (Rocky Mountain Institute) and NBI (New Buildings Institute), which resulted in a companion document called “Findings and Recommendations on the Use of Lower Carbon Materials in the Statewide Building Code and Other Means for Reducing Greenhouse Gas Emissions Attributable to Building Materials”. BCD’s full legislative report is linked [here](#) and the RMI/NBI companion document is linked [here](#).

BCD’s legislative report is a wonderful way to look into the paths and feasibility of reducing embodied emissions in buildings and also reviews the relevant principles and applications of building codes in Oregon. Measuring carbon impacts of buildings and building products is done throughout the stages of construction. Starting with quantification of impacts from extraction of raw materials, followed by transport to factory, product manufacturing, transport to construction site, then activities in construction of the building, maintenance and usage of the building, and lastly, end of life of the building such as demolishing, hauling away waste materials, and reusing what is left of the building.

There are three recommended paths that the division has identified for Oregon to address embodied carbon and realize embodied emissions reductions in buildings: building reuse, environmental product declaration reporting, and whole building life cycle assessment reporting. In addition, Oregon could consider addressing inequity of embodied carbon in building code through understanding overlap with existing climate policies in the nation, adoption of an engagement model, and incorporation of the presented paths into housing construction and other policy actions.

We are seeing embodied carbon representing a greater and greater share of a building’s carbon footprint. Embodied carbon is pollution arising from the upstream activities of production, transport, and installation of building materials. The graph on the right side of the slide projects global new construction to the year 2050 and shows that the percent of carbon emissions coming from embodied emissions is roughly equivalent to the percent of carbon emissions coming from operational emissions. Embodied carbon is a critical factor to consider in the planning and construction of buildings. Given the scale of the building sector, it’s imperative that owners, designers, builders, manufactures, and policy makers lead the market by prioritizing this issue.

The division was able to coordinate with subject matter experts locally and beyond. The division engaged with DCBS’s Office of Equity and got their reactions as it relates to equitable construction. The division studied Oregon Department of Transportation (ODOT) infrastructure projects, assessed Oregon Department of Administrative Services sustainable procurement policy which requests embodied carbon data for concrete, steel, and asphalt in construction projects. The list goes on and BCD is continuing to consult with these and other dedicated leaders.

Let’s review what it means to measure and reduce carbon impacts of building construction. Buildings are associated with two types of greenhouse gas emissions. There are operational

emissions, which is generally from HVAC energy use and begins once the building is up and running and embodied emissions, which include greenhouse gas emissions associated with raw materials extraction, manufacturing, transporting and installation of building materials, as well as the emissions generated from maintenance, repair, replacement, refurbishment, and end of life activities. The Building Codes Division's buildings reuse path states that Oregon's Structural Specialty Code currently recognizes the reuse of existing buildings and provides site specific compliance flexibility for users of the code. Further empowerment of this could broaden the application of building reuse across Oregon and inform state policy makers to be able to track greenhouse gas emissions reduction targets. Building reuse is a current code recognized path and could further help on building reuse education and outreach to local jurisdictions. Another would be for further exploration of commercial construction projects in Oregon intended for building reuse by identifying site location and gross floor area of an existing structure. The third part of this path could comprise legislatively provided financial or regulatory incentives that encourage building reuse. What's needed to empower this work is a framework to demonstrate difference in impacts of building reuse versus new construction as well as necessary authority within planning and zoning or formation of local fees.

The next steps include involvement from Building Codes Division boards and continued engagement with administrators. Involvement from advisory boards does set the runway. The division could provide more regular updates on how this work is progressing in Oregon and in the region, and formulate an appropriate process to properly address feedback from the construction industry. It's only with expert board members, volunteers, government partners, and public participation that we will achieve the ambitious greenhouse gas emissions reduction goals for Oregon.

#### **V. Appeals**

None

#### **VI. Unfinished business**

None

#### **VII. New business**

None

#### **VIII. Announcements**

None

#### **IX. Adjournment**

Chair Hansen adjourned the meeting at 10:22 a.m.

Respectfully submitted and transcribed by Kaydi Milton, policy development coordinator.

# Revitalizing Oregon's existing buildings through adaptive reuse

Department of Consumer and Business Services

Oregon Building Codes Division (BCD) is providing this backgrounder to share regulatory information and describe technical services for the support of adaptive reuse of existing buildings across the state.

## Adaptive reuse

Adaptive reuse, the sustainable practice of repurposing existing buildings, is occurring in communities across Oregon. Rather than demolishing and rebuilding, adaptive reuse extends the life of existing structures, often transforming underutilized or vacant, non-residential buildings (e.g., retail, office, hotel) into vibrant housing or mixed use developments. This approach not only supports urban regeneration but also contributes to strengthened communities, particularly as Oregon explores building more multifamily housing projects across the state to meet housing demand and provide more affordable options to all Oregonians.

BCD provides flexible tools within the state building code to facilitate safe and efficient conversions through policy guidance, technical support, and collaboration with local jurisdictions. BCD is committed to enabling adaptive reuse projects that enhance livability, preserve community character, and expand Oregon's housing supply.

## Increasing housing through adaptive reuse of existing buildings

BCD's statutory authority, as well as established customer service programs, are in alignment with the implementation of adaptive reuse projects that support statewide housing goals.

### Key milestones include:

- May 2022: BCD issued an initial *Adaptive Reuse of Existing Buildings Memorandum* outlining tools in the building code that support adaptive reuse.
- July 2024: In addition to existing roles and responsibilities of the BCD Structural Program, the Housing and Building Safety (HABS) section was formed. HABS is part of the joint office between the Department of Land Conservation and Development (DLCD) and BCD called the Housing Accountability and Production Office (HAPO), which was created by Senate Bill 1537 (2024). HAPO became operational on July 1, 2025, with a primary focus of supporting increased housing development, the Governor's housing production initiatives, and to assist in the removal of related development process barriers.
- December 2024: A BCD report was submitted to the Legislature that recognized building reuse, including reuse of an existing building's primary structural frame and exterior wall envelope, as a code-supported strategy to reduce greenhouse gas emissions and increase housing production.
- October 2025: With the adoption of the 2025 OSSC, BCD reaffirmed flexible code compliance and application options for the adaptive reuse of existing buildings.
- November 2025: HAPO kicked off the Local Residential Development Process Improvement Study, which is one part of the HAPO directed analysis of state and local programs, policies, and process that impact housing development required by Senate Bill 1537 (2024). The study focuses on local government processes that impact housing development, with a particular emphasis on land use, public works, local infrastructure, and construction permitting.

## Regulatory provisions and options for the reuse of existing buildings

Statewide building code provisions include flexibility in regulating adaptive reuse. Moreover, BCD provides adaptive reuse support services that maintain robust safety standards while prioritizing plan reviews and permitting, especially in rural and underserved communities. For existing buildings, the Oregon Structural Specialty Code (OSSC) recognizes the International Existing Building Code (IEBC), and facilitates greater compliance, increased safety, and reasonable safeguards while encouraging adaptive reuse. Existing building projects can be complicated and most often require the expertise of a registered design professional familiar with existing building code provisions. While building officials' roles do not include providing any type of design advice or pre-project development summaries listing all existing nonconforming elements of a given existing building slated for adaptive reuse, the building officials across our state, including those at the division, are great sources of general project facilitation and should be contacted early on in the existing building project process.

**Regulatory applicability:** Projects involving the reuse of existing buildings are governed by Chapter 34 of the OSSC, which is a modified version of the IEBC. Existing building regulatory provisions are applicable to alteration, addition, and potential changes of use, character, or occupancy for all building types.

**Chapter 34 of the OSSC:** The Oregon-integrated IEBC noted above outlines three compliance methods in Sections 3403.1.3.1, 3403.1.3.2, and 3403.1.3.3 for customers to consider; prescriptive, work area, and performance.

- The Prescriptive Compliance Method follows a more traditional code application hierarchy; consistent with historic compliance paths of Chapter 34 from earlier International Building Code iterations as well as the Uniform Building Code.
- The Work Area Compliance Method outlines varied levels of work scope based on the type of work proposed and the actual area of the existing building being impacted. This method focuses on compliance tiers proportionate to the designated levels of work and provides for more flexible design options, particularly where only a portion of the building is undergoing alterations or changes of use or occupancy.
- The Performance Compliance Method comprises elements from historic rehabilitation codes including the Uniform Code for Building Conservation. It uses a numerical scoring system and evaluation of existing building elements to determine necessary compliance. This method is popular for existing buildings constructed prior to Oregon's first statewide building code in 1974.

**Changes to existing Risk Category:** Regardless of the compliance method selected, any proposed increase to the existing Risk Category of the building may trigger additional seismic loading compliance considerations for a project.

A common misunderstanding of existing building regulation is regarding mandatory "seismic upgrades" for every change of use or adaptive reuse project. There are no such requirements under application of the state building code that automatically apply simply due to a building being existing. Local municipalities also have exclusive statutory authority to develop local seismic rehabilitation plans and programs entirely outside administration and enforcement of the state building code.

Under application of OSSC Chapter 34, demonstration of an existing building's ability to meet modern seismic design requirements is only relevant where a newly proposed use and occupancy of the existing building increases the assumed level of inherent risk to the occupants (i.e. increase in Risk Category such as changing a standard office building into a theater; transforming a commercial retail space into a school; and changing from a storage or utility occupancy to a residential or office space).

Major structural alterations also require structural design compliance as specified by OSSC Chapter 34. In these cases, current code requirements apply to all impacted areas of the existing building, as well as to the new work. Seismic design requirements and associated loading from current code are necessary performance considerations for these types of planned structural modifications and alterations.

**Existing building accessible design:** Conversions into covered multifamily dwellings.

OSSC Chapter 34 includes provisions in Section 3403 that apply to all three compliance methods. This includes accessibility compliance for all existing buildings in Section 3403.6. These requirements must be considered regardless of the compliance method selected for a given project.

There is common misapplication of accessibility compliance for projects where existing buildings or portions thereof are being converted to multifamily use. The accessible unit compliance paths of Chapter 34 align with the federal Fair Housing Act (FHA) and include the concept of “first occupancy.”

The FHA, and state building code, intentionally only apply accessible unit design requirements to covered multifamily dwellings currently built for “first occupancy,” meaning newly constructed. Conversions of any existing building, or portion thereof, into multifamily dwellings do not require any type of mandated accessible unit design compliance. “First occupancy” is defined as “a building that has never before been used for any purpose.”

Customers may always elect to voluntarily exceed minimum code requirements, and provide accessible unit design where an existing building is being converted to multifamily use. Any common use spaces or amenities and all areas of public accommodation (e.g. a leasing office) still require appropriate levels of accessible design compliance, dependent on the overall scope of work.

## Existing building regulatory provisions and options for energy efficiency

**Regulatory applicability:** For adaptive reuse of existing building projects, the energy code requirements are in the Oregon Energy Efficiency Specialty Code (OEESC) as well as the OSSC. They both have general applications.

Additions, alterations, renovations, or repairs shall conform to energy provisions in the building codes. Unaltered areas of existing buildings may remain as-is. Maintenance of existing energy-related systems to return them to working order shall not be considered an alteration.

The OEESC, which is based on ASHRAE 90.1, has provisions that apply to new energy-related installations and alterations. The applicable sections include:

*ASHRAE 90.1, Section 4.2.1.3. Alterations of existing building assemblies, systems, and equipment shall comply with the provisions of Section 4.2.2 through 4.2.5 and one of the following options:*

- a. Section 5, “Building Envelope”; Section 6, “Heating, Ventilating, and Air Conditioning”; Section 7, “Service Water Heating”; Section 8, “Power”; Section 9, “Lighting”; Section 10, “Other Equipment” and Section 11, “Additional Efficiency Requirements,” or*
- b. Section 12, “Energy Cost Budget Method,” or*
- c. Normative Appendix G, “Performance Rating Method”*

The OSSC has provisions that apply to new energy-related installations and alterations. The applicable sections include:

- OSSC Section 3409.7.1. Level 3 alterations to existing buildings or structures are permitted without requiring the entire building or structure to comply with the energy requirements of the energy code.
- OSSC Section 3403.2. Mechanical and electrical code compliance is addressed as additional codes in the reuse existing buildings.

Substantial alterations, defined as “where a major renovation of part or all of an existing building includes major replacement of at least two major building systems”, expand the energy code compliance scope beyond general application. The following sections are applicable to substantial alteration projects involving the reuse of existing buildings:

- All new lighting and all new HVAC systems shall comply with ASHRAE 90.1, Section 11.1.4.1.
- The total number of energy credits required for the project is determined in ASHRAE 11.5.1, part c. Projects that are not initial build-out construction shall achieve 50% of the total of credits required in Table 11.5.1-1 for the building use type in the substantial alteration portion of the building.

## **BCD technical services for adaptive reuse of existing buildings and related projects**

BCD is available to address questions and provide informal interpretations to support local municipalities relative to the applicability of the building codes for adaptive reuse of existing buildings. Project teams are encouraged to consult with BCD staff for assistance with:

- On-site walkthroughs and consultations where appropriate
- Site-specific code solutions and related pathways
- Guidance on reasonable safeguards for site-specific challenges
- Consultations on optional compliance pathways
- Damage repair allowances without triggering unrelated upgrades
- Ensuring alterations do not reduce existing levels of code compliance
- Coordination with local building officials and local fire service representatives

## **Questions?**

Visit the division website to [contact a building code specialist](#).

**Agenda  
Item  
VII.**

**State of Oregon**

**Board memo**

**Building Codes Division**

**March 10, 2026**

**To:** The Construction Industry Energy Board

**From:** Ian Paik, policy analyst, Policy and Technical Services

**Subject:** 2026 Oregon Residential Specialty Code – Energy Provisions Review

**Action requested:**

The division requests board review of the energy provisions of the 2026 Oregon Residential Specialty Code (ORSC).

**Background:**

The division in consultation with the Residential and Manufactured Structures Board (RMSB), adopts the ORSC. The ORSC contains residential energy provisions, which are provided to the Construction Industry Energy Board for additional review.

The Residential and Manufactured Structures Board (RMSB) appointed a code review committee at its August 5, 2025, meeting. The committee met four times between October 22, 2025 and December 15, 2025, to review the proposed 2026 ORSC and finalize its recommendations. The RMSB reviewed and approved the committee recommendations on February 18, 2026.

The board packet includes a document that summarizes the approved energy provisions of the 2026 ORSC.

**Discussion:**

The division requests that the board review the energy provisions of the proposed 2026 ORSC. This agenda item is informational and no vote is required.

# 2026 Oregon Residential Specialty Code (ORSC)

## Code review matrix

### Energy Efficiency, Chapter 11

This matrix is intended to capture the code review committee's recommendations and discussions.

**OR A** = Existing Oregon amendment

**BCD** = Building Codes Division proposal

**Pink language** = Committee comments

**PP** = Public code amendment proposal

**\* Green language** = Fiscal impact has been assessed

**Voting:** Where votes are noted they will appear in the following order: (Yes - No - Abstain)

	Section	Topic and change description	Outcomes
1	<b>N1101.1</b>	<b>General, Scope.</b> <b>BCD:</b> Add clarifying language requiring <i>Residential buildings</i> to comply with Section N1101.1.1 for the Prescriptive compliance option, Section N1109 for the Energy Rating Index (ERI) compliance options, or Section N1110 for the Simulated building performance compliance option.	<b>Approve</b>
2	<b>N1102.2</b> <b>(N1101.1.1)</b>	<b>Prescriptive compliance option.</b> <b>BCD:</b> Increase the required additional measures from one to two. <b>*Cost increase based on measure selected.</b>	<b>Approve</b> <b>*Cost increase</b>
3		<b>BCD:</b> Increase the required additional measures for new buildings using Section N1105.3, Exception 3, from two to three; and require compliance with the sealing requirements in accordance Sections N1104.8.2 and N1105.3.1.	<b>Approve</b> <b>*Cost increase</b>
4		<b>BCD:</b> Adopt an exception for a dwelling w/less than 1,350 ft <sup>2</sup> of conditioned living area permitting compliance with one additional measure instead of the required two; and where using the Section N1105.3, Exc. 3, permitting compliance with two additional measures instead of the required three for larger homes, but continue to require sealing in accordance with Sections N1104.8.2 and N1105.3.1. BCD originally proposed a definition of "small home," but after consideration has changed it to just specify the square footage rather than using a defined term.	<b>Approve as modified</b>
5		<b>PP-24:</b> Proposal to increase the area of conditioned living area to be considered a <i>small home</i> from the BCD proposed 1,350 ft <sup>2</sup> to 1,800 ft <sup>2</sup> . ( <a href="#">PP-24, OHBA</a> )	
6		<b>PP-01:</b> Proposal to require large homes that are complying with the prescriptive path to achieve one more additional measure that the medium sized homes. ( <a href="#">PP-01, NEEA</a> )	<b>Not approve</b> <i>(Vote: 0-7-0)</i>
7		<b>BCD:</b> Remove "that are not habitable" Revise the following: walls: R-21/ <del>U-0.064</del> <a href="#">U-0.063</a> , heated slab interior: R-10 under entire slab <a href="#">and R-15 slab edge</a> , roofs: <del>R-38</del> <a href="#">R-49</a> / <del>U-0.027</del> <a href="#">U-0.021</a> ( <i>attic</i> ), windows <a href="#">and glazed doors</a> : <del>U-0.35</del> <a href="#">U-0.30</a> , opaque doors: <del>U-0.70</del> <a href="#">U-0.20</a>	<b>Approve</b> <b>*Minimal increase</b>
8	<b>T. N1102.3(1)</b> <b>(T. N1101.1(1))</b>	<b>Prescriptive envelope requirements.</b> <b>BCD:</b> Add "unvented roof assembly" and values. <b>BCD:</b> Add footnote m, requiring compliance with Section R806.5 for Unvented attic and unvented enclosed rafter assemblies, and that insulation must be in contact with roof sheathing. <b>BCD:</b> Add "and glazed doors" for consistency. <b>BCD:</b> Remove "R-49 insulation installed to minimum 6-inch depth at top plate at exterior of structure to achieve U-factor" from footnote f.	<b>Approve</b>
9		<b>PP-02:</b> Proposal to apply the current prescriptive U-factor requirement for opaque doors in framed residential buildings to log structures. ( <a href="#">PP-02, RECA</a> )	<b>Approve</b> <b>*Cost increase</b>

	Section	Topic and change description	Outcomes
10	T. N1102.3(2) (T. N1101.1(2))	<b>Additional measures.</b> <b>BCD:</b> In No. 1 (High-Efficiency HVAC System), change the AFUE from 94 percent to 95 percent. Clean-up: <ul style="list-style-type: none"> <li>• Removing “HSPF 10.0/16.0 SEER cooling or” from No. 1 (High-Efficiency HVAC System).</li> <li>• Removing “HSPF 10.0 or” from No. 5 (Ductless Heat Pump).</li> </ul>	Approve
11		<b>PP-03:</b> Proposal to add an additional measure for Very High-Efficiency HVAC System. ( <a href="#">PP-03, NEEA</a> ) <ul style="list-style-type: none"> <li>• Adding No. 9 (Very High-Efficiency HVAC System) and a new footnote e.</li> </ul>	(Vote: 1-5-1) Not approve
12		<b>BCD:</b> Revise No. 6 (High-Efficiency Thermal Envelope UA) by increasing the minimum percent of the total Proposed UA of the Proposed Design less than the total standard reference design UA of the standard reference design from 8 percent to 10 percent. Removed footnote c. <b>BCD:</b> Add new footnote c clarifying that No. 6 (High-Efficiency Thermal Envelope UA) is not permitted to be combined with No. 3 (Wall Insulation Upgrade) or 4 (Advanced Envelope).	Approve
13		<b>BCD:</b> Add Additional Measure No. 8 (Renewable Energy) and a new footnote d.	Approve
14		<b>PP-04:</b> Proposal to be defined in terms of units of energy produced annually and not in terms of a measure of hardware. Add a definition for kWh. ( <a href="#">PP-04, OSSIA</a> )	Not approve
15	T. N1102.5 (T. N1101.2)	<b>BCD:</b> Add “Heated Slab” and values. <b>BCD:</b> Revise the following: <ul style="list-style-type: none"> <li>• Flat ceiling <span style="color: red;"><del>U-0.025</del></span> <span style="color: blue;"><u>U-0.021</u></span> R-49</li> <li>• Vaulted ceiling &gt;10 inches nominal rafter depth <span style="color: red;"><del>U-0.040</del></span> <span style="color: blue;"><u>U-0.033</u></span> <span style="color: red;"><del>R-25</del></span> <span style="color: blue;"><u>R-30</u></span></li> <li>• Vaulted ceiling ≤10 inches nominal rafter depth <span style="color: red;"><del>U-0.047</del></span> <span style="color: blue;"><u>U-0.040</u></span> <span style="color: red;"><del>R-24</del></span> <span style="color: blue;"><u>R-24</u></span></li> <li>• Underfloor &gt; 10 inches nominal joist depth <span style="color: red;"><del>U-0.028</del></span> <span style="color: blue;"><u>U-0.027</u></span> <span style="color: red;"><del>R-30</del></span> <span style="color: blue;"><u>R-38</u></span></li> <li>• Underfloor ≤10 inches nominal joist depth <span style="color: red;"><del>U-0.039</del></span> <span style="color: blue;"><u>U-0.033</u></span> <span style="color: red;"><del>R-25</del></span> <span style="color: blue;"><u>R-30</u></span></li> </ul>	Approve *Cost increase
16	N1102.5.1 (N1101.2.1)	<b>Alterations and repairs.</b> <b>BCD:</b> Add an exception not requiring compliance with Section N1105.8. <b>PP-10:</b> Proposal to add an exception not requiring compliance with Section N1105.8 for alterations and repairs. ( <a href="#">PP-10, NWGA</a> )	Approve
17	T. N1102.6 (T. N1101.3.2)	<b>Small Addition Additional Measures.</b> <b>BCD:</b> Revise No. 3 to include defined term, “High-efficacy light sources.” <b>BCD:</b> Revise No. 5 clarify “seal and performance test the entire supply and return duct system(s) serving the dwelling to not greater than 4.5 cubic feet per minute per 100 square feet of conditioned floor area.” <b>BCD:</b> Revise No. 6 AFUE from 94 percent to 95 percent. <b>BCD:</b> Cleanup – Remove HSPF in 7 and 8	Approve
18	N1101.4	<b>Information on plans and specifications.</b> <b>BCD:</b> Move provisions to Chapter 1 of the ORSC. <b>PP-25:</b> Move provisions to Chapter 1 (R106.1.1). ( <a href="#">PP-25, OHBA</a> )	NA
19	N1101.5	<b>Certificate.</b> <b>BCD:</b> Add requirements for a permanent certificate to be completed by the builder or other approved party and posted on a wall in the space where the furnace is located or an approved location inside the building. BCD will move the requirements to Chapter 1. <b>PP-26:</b> Move provisions to Chapter 1 (R110.3). ( <a href="#">PP-26, OHBA</a> )	NA

	Section	Topic and change description	Outcomes
20	<b>N1103</b> <b>(N1102)</b>	<b>Definitions.</b> Definitions will be discussed with the subject matter. <b>Note:</b> Where a word has a definition in Chapter 2 and Chapter 11, and they are different, Chapter 2 points here for the definition as it pertains to Chapter 11.	<b>NA</b>
21	<b>N1103</b>	<b>Alternative systems.</b> <b>BCD:</b> Remove sections as it is no longer necessary.	<b>Approve</b>
22	<b>T. N1104.1(1)</b>	<b>Residential thermal performance calculations.</b> <b>BCD:</b> Revise Footnote d: above-grade walls R-15/ <del>U-0.089</del> <u>U-0.083</u> .	<b>Approve</b>
23	<b>N1104.2</b>	<b>Insulation materials.</b> <b>PP-05:</b> Proposal to require insulation to be installed at Grade I in accordance with ANSI/ICC/RESNET 301. ( <a href="#">PP-05, NEEA</a> ) <i>(Vote: 2-3-2)</i>	<b>Not approve</b>
24	<b>N1104.2.1</b>	<b>Insulation clearance restriction.</b> <b>BCD:</b> Specify “clear” headroom, move definition of “clear headroom” to the definitions.	<b>Approve</b>
25	<b>N1104.2.2</b>	<b>Depth markers.</b> <b>BCD:</b> Adopt requirements for depth markers for blown-in or sprayed fiberglass and cellulose roof and ceiling insulation. <i>(Vote: 4-2-1)</i>	<b>Approve</b>
26		<b>PP-27:</b> Proposal to not adopt provisions requiring depth markers for blown-in or sprayed fiberglass and cellulose roof and ceiling insulation. ( <a href="#">PP-27, OHBA</a> ) <i>(Vote: 2-4-1)</i>	<b>Not approve</b>
26	<b>N1104.2.9</b>	<b>Attic hatches, vertical doors and pull-down stairs to unconditioned spaces.</b> <b>BCD:</b> Adopt provisions for access hatches from conditioned to unconditioned spaces such as attics and crawl spaces to be insulated to the same R-value required by Table N1101.1(1) for the ceiling in which they are installed, to be weather-stripped, etc.	<b>Approve</b>
27	<b>N1104.3</b>	<b>Exterior doors.</b> <b>BCD:</b> Remove “When calculating the energy performance of the exterior envelope, the area of doors shall be the actual unit size.”	<b>Approve</b>
28	<b>N1104.8.2</b>	<b>Sealing required.</b> <b>BCD:</b> Add that new buildings using Section N1105.3, Exception 3, be tested to demonstrate a blower door result not greater than 3.25 ACH50. <i>(Vote: 4-3-0)</i>	<b>Approve</b>
29		<b>PP-06:</b> Proposal to require envelope leakage testing for all new homes with a result not greater than 3.0 ACH50. ( <a href="#">PP-06, RECA</a> ) <i>(Vote: 1-6-0)</i>	<b>Not approve</b>
30		<b>PP-07:</b> Proposal to require blower door and duct leakage testing for all new residential buildings that use gas or electric resistance systems for primary space. ( <a href="#">PP-07, ZERO</a> ) <i>(Vote: 1-6-0)</i>	<b>Not approve</b>
31		<b>PP-23:</b> Proposal to exempt the smaller home from the requirements of Sections N1104.8.2. ( <a href="#">PP-23, OHBA</a> ) <i>(Vote: 2-5-0)</i>	<b>Not approve</b>
32		<b>PP-28:</b> Proposal to exempt the smaller home from the requirements of Sections N1104.8.2. ( <a href="#">PP-28, OHBA</a> )	
33	<b>T. N1104.8</b>	<b>Air barrier installation and air sealing requirements.</b> <b>BCD:</b> Removes “between wall cavities and windows or door frames” from “walls.”	<b>Approve</b>
34	<b>N1105.2</b>	<b>Insulation of ducts.</b> <b>BCD:</b> Revise language for clarification.	<b>Approve</b>

	Section	Topic and change description	Outcomes
35	N1105.3	<p><b>Installation of ducts and air handling equipment.</b></p> <p><b>BCD:</b> Revise to require duct testing and establish duct leakage limitations. And Increase the required additional measures where using exception 3 from two to three. Require compliance with Section N1105.3.1 regarding leakage testing and one of three options in Section N1105.3.2, N1105.3.3 or N1105.3.4.</p>	<p>(Vote: 6-0-1)</p> <p><b>Approve</b> *Cost increase</p>
36		<p><b>PP-30:</b> Proposal to add an exception for small homes. (<a href="#">PP-30, OHBA</a>)</p>	<p>(Vote: 3-4-0)</p> <p><b>Not approve</b></p>
37	N1105.4.1.2	<p><b>Smart thermostat.</b></p> <p><b>BCD:</b> Revise exception to include qualifier of approval by building official and replaces “capacity of less than 5.3 kilowatts” with “that uses variable speed compressors where the manufacturer’s thermostat is required.”</p>	<p><b>Approve</b></p>
38	N1105.4.1.3	<p><b>Heat pump controls.</b></p> <p><b>BCD:</b> Revise to require that heat pumps having supplementary electric-resistance heat, fuel gas or liquid fuel heating systems have controls that are configured to prevent supplemental heat operation when the capacity of the heat pump compressor can meet the heating load, etc.</p>	<p><b>Approve</b></p>
39	N1105.6	<p><b>Ventilation fan efficiency.</b></p> <p><b>BCD:</b> Revise to require bathroom exhaust fans and whole-house ventilation fans to comply with Table N1105.6 rather than specifying EnergyStar certified. Deletes previous Section N1105.7 regarding furnace fan efficiency.</p> <p><b>BCD:</b> Add New Table N1105.6 with the fan efficacy values for each type of system.</p>	<p><b>Approve</b></p>
40		<p><b>PP-08:</b> Proposal to add prescriptive path requirements for heat or energy recovery ventilators. (<a href="#">PP-08, HVI</a>)</p> <p>Proposal revises Section N1105.6 to specify “at one or more listed rating points” for the fan requirements and sets the minimum efficacy of HRVs and ERVs to 1.7 cfm/watt. The proposal includes alignment changes in Table N1101.1(2) additional measure no. 7.</p>	<p><b>Approve</b></p>
		<p><b>PP-08:</b> Proposal to add prescriptive path requirements for heat or energy recovery ventilators. Proposal adds two options for a new section requiring heat recovery or energy recovery with a sensible recovery efficiency (SRE), determined from a listed value or from interpolation of listed values, of not less than 67 percent at 32°F (0°C) at an airflow greater than or equal to the design airflow for whole-house mechanical ventilation systems. Option 1 includes the base requirement alone, and Option 2 includes the base requirement with an exception for “smaller homes.” The proposal also includes alignment revisions in Table N1110.5.2(1).</p>	<p>(Vote: Option one: 2-5-0 Option two: 3-3-1)</p> <p><b>Not approve</b></p>
		<p><b>PP-08:</b> Proposal changes the minimum sensible heat recovery efficiency for additional measure no. 7 in Table N1101.1(2) from not less than 66 percent to not less than 75 percent.</p>	<p><b>Withdrawn</b></p>
41	N1105.7	<p><b>Central fan integrated supply (CFIS) systems.</b></p> <p><b>BCD:</b> Add section prohibiting the use of an HVAC system to provide whole-house ventilation.</p>	<p><b>Approve</b></p>
42	N1105.8	<p><b>Heat pump for split-system air-conditioning.</b></p> <p><b>BCD:</b> Add new section stating that in new <i>dwelling</i>s where split-system air-conditioning is installed, the outdoor condensing unit and indoor evaporator coil shall have heat pump operation that provides both heating and cooling. *900 - \$1300 cost increase</p>	<p>(Vote: 5-2-0)</p> <p><b>Approve</b> *Cost increase</p>
43		<p><b>PP-09:</b> Proposal to not adopt the new Section N1105.8. (<a href="#">PP-09, NWGA</a>)</p>	<p>(Vote: 2-5-0)</p> <p><b>Not approve</b></p>
44		<p><b>PP-11:</b> Add an exception to the new section N1105.8. (<a href="#">PP-11, NWGA</a>)</p>	<p>(Vote: 3-4-0)</p> <p><b>Not approve</b></p>
*		<p><b>BCD:</b> Add an exception to the first-stage heat pump provision where four measures are selected for compliance.</p>	<p>(Vote: 5-1-0)</p> <p><b>Approve</b></p>

	Section	Topic and change description		Outcomes
45	N1107.2	<b>High-efficiency interior lighting.</b> <b>BCD:</b> Remove the exception.		<b>Approve</b>
46	N1107.3	<b>High-efficiency exterior lighting.</b> <b>BCD:</b> Remove the exception. No longer necessary,		<b>Approve</b>
47	N1107.4	<b>Lighting controls. (Occupancy sensors.)</b> <b>BCD:</b> Add provisions requiring occupancy sensors and requirements depending on location. (*\$100)	<i>The committee recommends approving the BCD proposed language as modified by removing unnecessary language.</i> <i>(Vote: 4-3-0)</i>	<b>Approve as modified</b> *Cost increase
48		<b>PP-29:</b> Adopt an exception for small homes. ( <a href="#">PP-29, OHBA</a> )	<i>(Vote: 4-3-0)</i>	<b>Not approve</b>
49	N1109	<b>Energy Rating Index (ERI) Compliance.</b> <b>BCD:</b> Add definitions for “Energy Rating Index (ERI),” “ERI Reference Design,” and “Rated Design.” <b>BCD:</b> Revise with clarifying edits and some alignment with the IECC. <b>BCD:</b> Increase the Energy Rating Index to 53 for Climate 4C and to 54 for Climate 5B.		<b>Approve</b>
50		<b>PP-12:</b> Proposal to assess the ERI Compliance path’s alignment with the prescriptive path. ( <a href="#">PP-12, NEEA</a> )		<b>Withdrawn</b>
51	N1110	<b>Simulated building performance compliance.</b> <b>BCD:</b> Adopt section allowing for simulated building performance compliance as an alternative systems analysis. <b>BCD:</b> Add definitions for “Proposed Design,” “Simulated Building Performance,” & “Standard Reference design (SRD).”		<b>Approve</b>
		<b>PP-13:</b> Proposal to reference the unamended IECC performance path as an acceptable compliance alternative. ( <a href="#">PP-13, RECA</a> )		<b>Not approve</b>
52	N1110.2	<b>Simulated building performance compliance.</b> <b>PP-14:</b> Proposal to add an exception to use source energy in addition to the exception to use site energy rather than energy cost in this section. ( <a href="#">PP-14, NWGA</a> )	<i>The committee recommends approving the proposal as modified by replacing the electricity multiplier with 2.51.</i> <i>(Vote: 5-0-0)</i>	<b>Approve as modified</b>