

2024 Q3

Codes, Standards and New Construction Quarterly Newsletter

Q3 2024 TEAM UPDATES

What's New

While Q3 2024 was slow for federal standards, it was busy for codes. After two prolific quarters, the U.S. Department of Energy (U.S. DOE) slowed the number of dockets for standards, but this lull is not expected to last. More than 10 final rules are expected before the end of the year, and U.S. DOE staff are working hard to get those rules ready for publication.

On the other hand, code activities ramped up after the completion of energy codes for Oregon, Washington, and the International Energy Conservation Code (IECC). Both Washington and the International Code Council (ICC) started their next round of code updates. The process, which takes two to three years, often means a busy time for NEEA staff because it involves formation of Technical Advisory Groups (TAGs) and development of code proposals for consideration.

NEEA participated in three proposals for code funding through the Resilient and Efficient Codes Implementation (RECI) section of the Infrastructure Investment and Jobs Act. The U.S. DOE announced in September 2024 that all three proposals were accepted and has started the contracting process for these projects. Two of the projects are focused on code support for rural communities; the third project supports a broad range of code activities in the region.

NEEA's training and education activities remained steady for Q3 2024 with in-person and on-demand trainings available in each state. Details are provided later in this newsletter.

Finally, NMR Group was selected to develop the next Market Progress Evaluation Report for commercial and residential codes. The evaluation is expected to be completed in late 2025.

We hope you enjoy reading our quarterly newsletter. Please let us know if you have any questions or ideas on other information that would be helpful for you.

For additional information on state codes and links to training resources, visit NEEA's website:

<https://neea.org/our-work/codes-standards/codes>

Additional energy code training resources can be found on the BetterBuiltNW (BBNW) website:

<https://betterbuiltinw.com/training#energy-code>

TABLE OF CONTENTS

What's New	1
Codes At-A-Glance	2
Codes Update	3
Standards Update	17
New Construction Update	19
Contact Us	22

Interested in receiving notifications when NEEA's Codes, Standards and New Construction Newsletters are published?

[Subscribe to Newsletter](#)



Questions about this newsletter may be addressed to:

Mark Rehley
Director, Emerging Technology, Product Management, Codes, Standards, & New Construction
mrehley@neea.org

PUBLISH DATE: NOVEMBER 15, 2024

State	Sector	Code Version	Adopted Date	Effective Date
IDAHO	COMMERCIAL	2018 IECC	4/2/2020	1/1/2021
	RESIDENTIAL	2018 IECC with weakening amendments	4/2/2020	1/1/2021
MONTANA	COMMERCIAL	2021 IECC (with mid-cycle weakening amendments)	6/6/2022	9/8/2022 (amended 9/21/2024)
	RESIDENTIAL	2021 IECC with weakening amendments	6/6/2022	9/8/2022
OREGON	COMMERCIAL	2021 Oregon Energy Efficiency Specialty Code (OEESC) (ASHRAE 90.1-2019)	4/1/2021	10/1/2021
	RESIDENTIAL	2023 Oregon Residential Specialty Code (ORSC) (custom state-developed code)	10/1/2023	4/1/2024
WASHINGTON	COMMERCIAL	2021 Washington State Energy Code (WSEC) (2021 IECC with strengthening amendments)	11/28/2023	3/15/2024
	RESIDENTIAL	2021 WSEC (2021 IECC with strengthening amendments)	11/28/2023	3/15/2024



Market Progress Evaluation Report #6

NEEA is contracting with NMR Group, Inc., to conduct the sixth MPER for its commercial and residential codes efforts. This study is intended to build on and complement the learnings generated through the recently completed [Codes MPER #5](#) conducted by ADM Associates and will focus on the following research objectives:

1. Assess NEEA's progress on selected logic model outcomes, including those associated with (a) the Codes team's training and education activities, (b) voluntary certification and above code construction, and (c) jurisdictional goals and state-level code support.
2. Conduct a qualitative analysis of NEEA's progress on outcomes associated with its code influence activities conducted during code cycles from 2018 onward, with a particular focus on code influence activities from 2023 onward.
3. Conduct formative evaluation regarding market actor awareness, use, and valuing of key code compliance tools, including the Washington State Energy Code Commercial Technical Support website and webtool, COMcheck, and REScheck.

The study kickoff was held on October 31, 2024, with instrument development and data collection to follow in late 2024 and early 2025. A final report is anticipated to be publicly available by Q3 2025.



International Energy Conservation Code (IECC)

In Q3 2024, the International Code Council (ICC) published the final 2024 IECC and launched the 2027 IECC development process. The ICC proposed draft 2027 IECC [Scope and Intent sections](#) in July 2024, with changes largely seeking to avoid another round of major last-minute changes during the Appeals process this cycle. The ICC provided a month for public comment on these draft sections, and NEEA submitted comments requesting that the proposed revision directing the IECC to achieve a “reasonable amount of energy efficiency” be reverted to clearer, stronger language to achieve the maximum level of cost-effective energy savings. The 2027 IECC Scope and Intent sections were finalized [in September 2024](#), with minimal changes from the drafts. Also in Q3 2024, the ICC solicited energy code committee member applications for this cycle and announced the first 2027 IECC code change proposals period [would be October 7 to December 9, 2024](#).



Commercial Code

General Updates

In Q3 2024, the State Building Code Council (SBCC) began the process of developing the 2024 Washington State Energy Code—Commercial (WSEC-C) in earnest. Upon publication of the 2024 IECC, SBCC staff developed an [integrated draft](#) which seeks to combine the most stringent elements of the 2021 WSEC-C and the 2024 IECC. The SBCC's Commercial Energy Technical Advisory Group (TAG) met for the first time this cycle on September 27, 2024 to begin reviewing this draft. The TAG continued to meet early in Q4 2024 to refine and approve this preliminary draft, which will serve as the basis for the 2024 WSEC-C code change proposal period expected to open in November 2024. Meanwhile the 2021 WSEC-C has undergone several editorial revisions since it went into effect in March 2024, with other more substantive proposed changes in process.

Education and Training

NEEA provides training and technical assistance on the current WSEC-C provisions. Training attendees and recipients of technical support include design and construction professionals, building officials, plan examiners, home builders, contractors, field inspectors and fire marshals.

Educational resources and trainings on the 2021 WSEC-C are available for on-demand viewing on NEEA's commercial [WSEC website](#).

The WSEC-C trainings delivered and offered in Q3 2024 are listed in the table below.

Training Topic	Course Length	Attendees	Location	Date
Washington Commercial Energy Code Overview - Airefco	6 hours	30	Seattle, WA	7/24/2024
WSEC-Commercial Mechanical Webinar	1.5 hours	203	Webinar	7/31/2024



Commercial Code (Continued)

Code Compliance Webtool

The 2021 WSEC-C edition of the code compliance webtool was launched in Q1 2024; it continues to undergo improvements based on inquiries through the technical assistance hotline.

As of Q3 2024, [the WSEC-C code compliance webtool](#) had over 10,700 registered users and more than 18,500 non-test projects submitted through the tool.



Residential Code

General Updates

In Q3 2024, WA SBCC continued to approve several editorial revisions for the 2021 Washington State Energy Code—Residential (WSEC-R). As with the WSEC-C, more significant code changes or interpretations have been requested since the code went into effect in March 2024. Looking ahead to the 2024 WSEC-R, the SBCC is expected to solicit members to fill out this revised roster in the coming months and [accept code change proposals for 2024 WSEC-R](#) in early 2025.

Education and Training

NEEA provides training and technical assistance on the current WSEC-R provisions. Training attendees and recipients of technical support include design and construction professionals, building officials, plan examiners, home builders, contractors, field inspectors and fire marshals.

The WSEC-R on-demand trainings, training webinar schedule and additional resources can be found on the [Washington State University Energy Program](#) and [BetterBuiltNW](#) websites.



Education and Training *(Continued)*

The WSEC-R live trainings delivered in Q3 2024, and available on-demand trainings, are listed in the table below.

Training Topic	Course Length	Attendees	Location	Date
WSEC- Residential Energy Code Training	5 hours	77	Spokane, WA	7/17/2024
Energy Code 2021 Overview	1.5 hours	40	Webinar	7/10/2024
Energy Code 2021 Overview	1.5 hours	41	Webinar	8/14/2024
Energy Code 2021 Overview	1.5 hours	35	Webinar	9/11/2024
2018 WSEC-R: Summary of the 2018 WA State Residential Energy Code	10 mins	339*	On Demand	Various
2018 WSEC-R: Residential Energy Code Compliance	2 hours	15*	On Demand	Various
2018 WSEC-R: Build Tight & Ventilate Right Options (short version)	1 hour	56*	On Demand	Various
2018 WSEC-R: Balanced Ventilation with ERVs & HRVs (short version)	1 hour	38*	On Demand	Various
2018 WSEC-R: Efficient Building Envelope Options	1 hour	36*	On Demand	Various
2018 WSEC-R: Heating & Air Conditioning System Inside Options	14 mins	107*	On Demand	Various
Using the C3 Calculator to Calculate Ventilation Rates	10 mins	243*	On Demand	Various
Filling out the Compliance Certificate for Ventilation Systems	10 mins	181*	On Demand	Various
2021 WSEC-R: Cost Effective HVAC Strategies to Meet New WSEC-R (Mitsubishi)	1.5 hours	374*	On Demand	Various
2021 WSEC-R: Market Trends, Builder Choices, and Resources	1.5 hours	97*	On Demand	Various

*On-Demand training attendance numbers are cumulative starting from January 1, 2024.



Commercial Code

General Updates

Q3 2024 saw continued delays in the 2024 Oregon Energy Efficiency Specialty Code (OEESC) adoption process. A [first draft of the 2024 OEESC](#), which is based on the model standard ASHRAE 90.1 2022, was reviewed and approved in October 2023, but rulemaking steps were stalled until April 2024 because the COMcheck software version for ASHRAE 90.1-2022 was not yet available. However, software bugs in this new COMcheck version have further delayed the target adoption date to January 1, 2025 (one year later than originally planned). Thus, [the 2024 OEESC is now expected to go into effect six months later on July 1, 2025](#). While ASHRAE 90.1-2022 is expected to deliver an approximate [10% increase in energy efficiency](#) from the current code (2021 OEESC), the 2024 OEESC final draft includes weakening amendments.

Residential Code

General Updates

The Energy Efficiency chapter of the Oregon Residential Specialty Code (ORSC) had no significant updates in Q3 2024.



Residential Code (Continued)

Education and Training

NEEA partners with organizations across the state to provide technical assistance and training on the current and upcoming Oregon residential and commercial energy codes. Training attendees include design and construction professionals, building officials, plan examiners, home builders, contractors, field inspectors and fire marshals.

The Oregon energy code training delivered in Q3 2024 is listed in the table below.

Training Topic	Course Length	Attendees	Location	Date
2024 Oregon Building Officials Association Fall Educational Institute - Oregon Commercial Energy Code Overview and Best Practices	8 hours	20	Tigard, OR	9/26/2024



Residential Code (Continued)

Field Study and Evaluation

Oregon Residential Code Compliance Evaluation

NEEA kicked off the Oregon Residential Code Compliance Evaluation in February 2024. Through this study, NEEA will gather market data about homes built under the 2021 Oregon Residential Specialty Code (ORSC) to meet the following objectives:

- Calculate code compliance among single-family buildings constructed under the 2021 ORSC.
- Investigate whether and how new construction homes use natural gas for space and water heating as well as other end uses, including stoves and hearths, and the prevalence of gas hookups in homes with all-electric appliances.
- Document the proportion of new construction homes built with above-code elements.
- Provide an analysis of builders' choices and rationale regarding the efficiency level to which homes are built (base code, reach code, ENERGY STAR® Homes) and selection and implementation of the 2021 ORSC-required Additional Measure.

The report is expected to be publicly available in Q2 2025.



General Updates

After the Idaho Building Code Board expressed desire in Q2 2024 to update all codes to the most recent versions available, the Board focused in Q3 2024 on fire code updates related to battery charging. Consideration of 2024 IECC is expected to occur in 2025.

Education and Training

NEEA provides training and technical assistance on the current Idaho energy code. Training attendees and recipients of technical support include design and construction professionals, building officials, plan examiners, home builders, contractors, field inspectors and fire marshals.

More information about the Idaho building energy code, trainings and resources can be found at the [Idaho Energy Code website](#).

The Idaho energy code trainings delivered in Q3 2024 are listed in the table below.

Training Topic	Course Length	Attendees	Location	Date
Effective Air Sealing	8 hours	5	Driggs, ID	7/31/2024
Air Balance Certification Training	8 hours	13	Webinar	8/6/2024
Manual J, S and D BPSI Training	1 hour	33	Boise, ID	8/13/2024
Manual J, S and D Online Training	1 hour	10	Webinar	9/10/2024
Air Balance Certification Training	8 hours	15	Webinar	9/11/2024
Energy Code and Air Sealing Training	4 hours	8	Rexburg, ID	9/12/2024
Residential Energy Code AIA	1 hour	7	Idaho Falls, ID	9/13/2024



Field Study and Evaluation

Idaho Commercial Code Evaluation

The Idaho Commercial New Construction Code evaluation study will assess the path(s) by which, and the degree to which, code compliance is achieved with the amended 2018 IECC in newly constructed buildings, while also measuring building energy performance compared with the average energy performance of buildings constructed under previous code. The results of the study will provide direction to the development and implementation efforts of the NEEA Codes team and will provide other regional code stakeholders guidance in targeting their energy efficiency work in the commercial new construction sector.

NEEA has selected Opinion Dynamics to conduct this study; a kickoff meeting was held in August 2023 and a sampling plan was prepared in December 2023, with sample development currently underway. Data collection, including desk review of permit data and in person/virtual site visits, began in Q2 2024 and is scheduled to conclude in Q1 2025. This study includes analysis of billing data; collection of this data is planned to continue through Q1 2025, with analysis and report preparation to follow in Q2 2025.



General Updates

In Q3 2024, Montana enacted mid-cycle amendments to its energy code. After the Montana Building Code Council voted to approve [proposed amendments](#) to the state's current energy code in Q2 2024, nearly all of these amendments were promulgated and [went into effect September 21, 2024](#). These significant weakening amendments to the 2021 IECC commercial code include, among other changes, removal of the requirements for secondary side lit zones, automatic receptacle control, and energy monitoring. Notably absent from the updated Administrative Rules of Montana is the proposed reduction in stringency in one of the prescriptive wall insulation options in the residential energy code. NEEA will continue to work with stakeholders and market partners across Montana to identify opportunities to enhance energy efficiency in the state's codes.

Education and Training

Montana energy code training providers developed and posted a virtual course for building and duct tightness training and are continuing outreach efforts to encourage participation. The training can be found on the National Center for Appropriate Technology's [\(NCAT's\) website under the Residential Energy Services section](#). Additional energy code resources can be found on the [MT DEQ's Energy Program website](#).

NCAT published its [Fall 2024 newsletter on heating, ventilation and air conditioning](#).

NCAT hosted a Montana Homes Collaborative meeting on September 10, 2024, which included the commercial energy code amendments and a presentation by the Helena Habitat for Humanity builders on their approach to wall assemblies. Information on the Montana Homes Collaborative can be found [on NCAT's website](#).

No Montana energy code trainings were delivered in Q3 2024.



Field Study and Evaluation

Montana Commercial Code Evaluation

The Montana Commercial New Construction evaluation field study focuses on assessing how and the extent to which code compliance is achieved with the 2018 IECC in newly constructed buildings in Montana. The study will include measurements of energy performance of these buildings as compared with the average energy performance of buildings constructed under previous code. The sampling frame encompasses all commercial buildings constructed in Montana under its version of the 2018 IECC, which was in effect from February 13, 2021, through June 5, 2022. NEEA's ultimate objective is to obtain results that will inform the development and implementation efforts of its Codes team, as well as to provide guidance for other regional stakeholders so that they can better target their energy efficiency work in the commercial new construction sector.

The contractor conducted a kickoff meeting in Q2 2024. Data collection is underway, focusing on review of permit data paired with visits to a subset of sites for data validation. Permit and on-site data collection and analysis continued through Q2 2024. Billing data collection was attempted for this study but has been excluded from ongoing project activities due to a prohibitively low response rate from eligible building contacts. A final report outlining the result of compliance analysis and comparative site visits is anticipated to be publicly available in Q4 2024.



Field Study and Evaluation (*Continued*)

Montana Residential Code Compliance Evaluation

NEEA is reviewing its assumptions underlying its estimation of energy savings resulting from NEEA's and its partners' involvement in the Montana state code processes. Using data collected through site visits to residential new construction building sites and interviews with market actors, this research will address the following objectives:

- Assess statewide compliance with selected code requirements among single-family homes built under IECC 2018 with Montana amendments and IECC 2021 with Montana amendments.
- Develop estimates of statewide energy code compliance and compliance within urban and rural jurisdictions separately using data collected on individual code requirements.
- Provide statewide findings regarding primary space and water heating fuel and above-code elements using data collected on individual code requirements.

This work kicked off in Q1 2023 and paused in Q3 2023 due to permit data collection challenges. The project re-launched in early 2024 with a focus on on-site data collection, and the final report is expected in Q1 2025.



General Updates

In Q3 2024, the U.S. DOE issued Direct Final Rules and Notices of Data Availability for six appliance and equipment standards.

NEEA staff collected data and conducted analysis for one appliance product for comment to the U.S. DOE in Q3 2024. Comments included regional sales data, lab testing results, field validation data and other technical data to support recommendations for enhanced test procedures and improved efficiency levels.

Below is a list of products for which NEEA submitted comment letters in Q3 2024:

Residential Products

- Water Heaters

Commercial/Industrial Products



Evaluation

Battery Chargers Standard Evaluation

NEEA contracted with Michaels Energy to conduct a qualitative assessment of NEEA's influence on the standards process for battery chargers and to provide a quantitative estimate of the share of savings resulting from NEEA's and other efficiency organizations' efforts. The project kicked off in October 2023; Michaels Energy will review NEEA records and publicly available documents and conduct interviews with key stakeholders from NEEA, U.S. DOE and other organizations. A final report is anticipated in Q4 2024.

Portable Air Conditioners Standard Evaluation

NEEA contracted with Michaels Energy to conduct a qualitative assessment of NEEA's influence on the standards process for portable air conditioners and to provide a quantitative estimate of the share of savings resulting from NEEA's and other efficiency organizations' efforts. The project will kick off in November 2024; Michaels Energy will review NEEA records and publicly available documents and conduct interviews with key stakeholders from NEEA, U.S. DOE and other organizations. A final report is anticipated in Q2 2025.

Air Compressors Standard Evaluation

NEEA contracted with Michaels Energy to conduct a qualitative assessment of NEEA's influence on the standards process for air compressors and to provide a quantitative estimate of the share of savings resulting from NEEA's and other efficiency organizations' efforts. The project will kick off in November 2024; Michaels Energy will review NEEA records and publicly available documents and conduct interviews with key stakeholders from NEEA, U.S. DOE and other organizations. A final report is anticipated in Q2 2025.

General Updates

The CSA Group continued its projects in Q3 2024 in preparation for a project review in Q4 2024. NEEA staff are coordinating on several of these projects that are relevant to the Northwest.



General Updates

Residential New Construction market activities focus on removing barriers to the adoption of above-code efficiency measures in new construction and collecting market evidence that supports future code advancement. To accelerate market adoption, these market activities influence builders and key trades to adopt above-code technologies and best practices. The interventions focus on both gas and electric technologies and residential building measures.

Highlights of Q2 2024 include:

- Published monthly newsletters for July, August and September covering topics including energy-efficient windows, a case study on a local high-performance builder, and information on the upcoming Sustainable Homes Professional training. Current and past newsletters can be found on [BetterBuiltNW's website](#).
- The BetterBuiltNW team met with other above-code program implementers in the region to discuss recent updates to residential energy codes and the implications for the Performance Path measure offerings.

Education and Training

The BBNW website offers many on-demand trainings and resources for builders on above-code building practices, including *Top 10 Best Practices for Today's Homebuilder* and topic-specific trainings about envelope, HVAC measures, and many others. These on-demand trainings can be found on the [BBNW Training website](#).



Education and Training *(Continued)*

Residential new construction above-code trainings delivered in Q3 2024 are listed in the table below.

Training Topic	Course Length	Attendees	Location	Date
Top 10 Best Practices for Today's Homebuilder	3 hours	233*	On-demand	Various
Building with Ducts Inside Conditioned Spaces	3 hours	211*	On-demand	Various
Sustainable Homes Professional (SHP)	15–20 hours	53*	On-demand	Various
How to Cost Effectively Build Zero Energy Homes	3 hours	62*	On-demand	Various
On The Level: Exterior Air Barrier Details in the NW	1 hour	26*	On-demand	Various
On The Level: Balanced Ventilation Approaches for Healthy Indoor Air	1 hour	152*	On-demand	Various
On The Level: Installation Elements for ERVs & HRVs	1 hour	135*	On-demand	Various
On The Level: Using Building Science to Inform Envelope Design	1 hour	144*	On-demand	Various
On The Level: Practical Solutions for Selecting & Installing Exterior Insulation	1 hour	31*	On-demand	Various
On The Level: Design and Quality Control Best Practices for ERVs/HRVs	1 hour	184*	On-demand	Various
Zero Energy Homes: Updates & Cost-Effective Approaches	1 hour	206*	On-demand	Various
Simple Steps to Improve Ductwork Installations	1 hour	52*	On-demand	Various
45L: What You Need to Know	1 hour	201*	On-demand	Various
Heat Pumps: Mastering Design Principles	1 hour	16*	On-demand	Various
Heat Pumps: The Ultimate Installation Guide	1 hour	10*	On-demand	Various
Heat Pumps: The Art of Commissioning	1 hour	10*	On-demand	Various
Phius Certified Passive House Builder certification	32 hours	14	Portland, OR	8/26-28/2024
On-Demand Hot Water Recirculation Systems	1 hour	25	Webinar	9/19/2024

*On-Demand training attendance numbers are cumulative starting from January 1, 2024.



Program Updates

In Q3 2024 NEEA approved moving the Manufactured Homes program into long-term monitoring and tracking (LTMT). The final [Market Progress Evaluation Report](#) was completed in Q1 2024 and is available on [neea.org](https://www.neea.org). NEEA staff will continue to stay engaged in the standards activities through the effective date of the standard, and the alliance's Emerging Technology team is continuing to test heat pumps in manufactured homes as a possible extension to the program.

CONTACT US:



Mark Rehley

Director, Emerging Technology,
Product Management, Codes,
Standards, & New Construction

mrehley@neea.org
503.688.5499



Nicky Dunbar

Sr. Codes and
Standards Engineer

ndunbar@neea.org
503.688.5457



Kevin Rose

Sr. Engineer, Energy Codes
and Standards

kröse@neea.org
503.688.5437



Lynne Mosley

Sr. Program Coordinator,
Codes, Standards and
New Construction

lmosley@neea.org
503.688.5405



Tess Studley

Program Manager, Energy
Codes and Standards

tstudley@neea.org
503.688.5451



Blake Ringeisen

Sr. Engineer, Energy Codes
and Standards

bringeisen@neea.org
503.688.5467

TOGETHER *We Are Transforming the Northwest*

