

Cost-effectiveness and Evaluation Advisory Committee Meeting



DATE: February 18, 2025

TIME: 1:30pm-4:00pm

LOCATION: Microsoft Teams
[Join the meeting now](#)
 Meeting ID: 234 874 012 193 49
 Passcode: UY7eF3B4

AGENDA

TIME	TOPIC	PRESENTER(S)	Electric/ Gas/Both	Link or Page
1:30pm	Welcome/Agenda Review	Jonathan Belais, NEEA Staff		
	1. Agenda check			
	2. Introductions			
	3. Announcements			
1:40	Annual Reporting Process	Kathryn Bae	Both	
1:50	Key Inputs & Assumptions Updates	Kathryn Bae Will Gehrke	Both	3
	Updates on Commercial Codes baseline, and more			
2:25	Objective: Inform	Meghan Bean, NEEA Staff	Both	Q4 MRE Newsletter
	Market Research and Evaluation (MRE) Newsletter			
	NEEA staff will provide a brief overview and answer any questions regarding the upcoming market research and evaluation activities outlined in the quarterly newsletter.			
	Objective: Committee awareness of market research and evaluation activities			
2:35	Retail Product Portfolio (RPP) Market Progress Evaluation Report (MPER) #3	Zdanna King	Electric	Coming soon...
	Research objectives, methods, findings and recommendations on progress towards RPP outcomes from the MPER #3.			
	Objective: Inform committee of MPER results			
2:55	BREAK			
3:05	Luminaire Level Lighting Controls (LLLC) MPER #3	Zdanna King	Electric	Published Report
	Research objectives, methods, findings and recommendations on progress towards LLLC outcomes from the MPER #3			

Objective: Inform committee of
MPER results

**Idaho Commercial Code
Compliance Evaluation**

3:25 Research objectives, methods,
findings, and recommendations for
future code compliance studies

Chris Cardiel

Both

[Published
Report](#)

Objective: Inform and solicit feedback
from committee

3:50 WRAP UP

Memorandum



February 11, 2026

TO: Cost Effectiveness Advisory Committee

FROM: Nathan Martinez, Director, Market Analytics, Research and Evaluation, NEEA

SUBJECT: Key Inputs and Assumptions Quarterly Update

This is a standing agenda item that is brought to the Cost Effectiveness and Evaluation Advisory Committee (CEAC) quarterly. During this time, we bring forward new and updated assumptions and data source updates that inform the organization’s market transformation savings and cost effectiveness calculations.

Background on this standing agenda item:

The Cost Effectiveness and Evaluation Advisory Committee (CEAC) primary functions¹ include:

1. Review and advise regarding NEEA cost-effectiveness and savings information to inform annual reporting, and
2. Review and advise regarding market transformation cost and savings measurement and estimation methods.

NEEA staff provide various touchpoints for committee members throughout the year to support the committee in their execution of these charter objectives.

NEEA maintains a system of documentation on key inputs and assumptions on its [Funder Portal](#)² and meeting materials distributed at each quarterly CEAC meeting (Figure 1).

¹ In addition to the two responsibilities listed above there are three more in the charter:

3. Review evaluation findings that affect cost and savings information to inform annual reporting.
4. Work with your organization to provide NEEA staff with relevant incentive data for regional tracking and reporting purposes.
5. Review and advise regarding new market research and evaluation methodologies.

² To access NEEA’s Funder Portal, CEAC members will need to have an account. If you would like to set up an account or need any assistance, please contact Chris Clark (cclark@neea.org).

Figure 1: System of Documentation for Key Inputs and Assumptions

CEAC Meeting Materials <i>Provided in the meeting invite</i>	Key Assumptions Update <i>Updated Quarterly</i>
	Updates to key inputs and assumptions (baselines, savings rates, units estimate, etc.) along with contact information for follow-up questions
	Annual Summary <i>Updated in April</i>
	Memo summarizing portfolio savings & cost effectiveness results as well as program updates
Funder Portal <i>NEEA SharePoint</i>	Energy Savings Report <i>Updated Q1/Q2, upon request</i>
	Annual Savings Report Memo summarizing annual savings results and market updates
	Customized Workbook Workbook with annual savings values, variance summaries, methodology descriptions, measure-level units and other key assumptions specific to the individual funder requests.
	Guidelines and Data Sources <i>Updated in April</i>
	Estimation Approaches & Data Sources List of approaches and data sources NEEA uses to estimate savings & cost effectiveness
	NEEA Guidelines Overview on energy savings & cost effectiveness calculations
	Methodologies <i>Updated in April</i>
Methodology Documentation Report on energy consumption calculations, data sources and technical assumptions	

Updates for committee review this quarter:

For the Q1 CEAC meeting, NEEA has updates for the committee’s consideration for the following programs:

- Commercial Codes
- Efficient Rooftop Units (RTU)
- Luminaire Level Lighting Controls (LLLC)
- Residential Codes
- Manufactured Homes

Please continue reading below for more details on these updates and come to the meeting prepared to ask clarifying questions and advise NEEA on any recommended improvements you would like to share.

Commercial New Construction: Building Energy Codes

NEEA aggregates and leverages the power of the region to identify and vet emerging technologies and create the market conditions necessary for the technologies to take hold. This work supports decisions and practices for commercial buildings to become more energy efficient, making commercial buildings more affordable to operate. The alliance helps the region instill these voluntary interventions by informing codes that represent Northwest business needs.

Key Assumptions Update

NEEA conducts energy use modeling to evaluate the regional impacts of new commercial construction. Most recently, 2021 Washington State Energy Code (WSEC) Commercial and 2025 Oregon Energy Efficiency Specialty Code (OEESC) went into effect on March 15, 2024 and July 1, 2025, respectively.

NEEA has engaged with the Pacific Northwest National Laboratory (PNNL) to evaluate the energy savings associated with both 2021 WSEC (Commercial) and 2025 OEESC. The analysis of 2025 OEESC has been completed, and 2021 WSEC savings rates evaluation is expected to finish in Q1. NEEA will incorporate the results into NEEA's 2025 Annual Report.

For more information contact Will Gehrke, Sr. Market Analyst, at wgehrke@neea.org.

Efficient Rooftop Units (Efficient RTU)

The program’s goal is to accelerate the adoption of efficient gas rooftop units in the like-for-like replacement market while working to influence the adoption of improved test procedures and more stringent federal standards.

Key Assumptions Update

In mid-2025, the [National Efficient Rooftop Unit Energy Modeling](#) study was completed to estimate savings rates for rooftop units with a variety of heating equipment and efficiency features across a broad range of U.S. climates. This study additionally provides updated energy savings rate estimates relevant to Efficient RTU program installations in Heating Zone 1 (HZ1) and HZ3, though it did not include results applicable to HZ2. Additional modeling to represent HZ2 is planned to be completed in 2026.

Savings rates for HZ1 and HZ3 will be updated for reporting of 2025 savings based on this study. Due to the partial results, the program cost-effectiveness estimate has not yet been updated. NEEA plans to update this once the additional modeling results are received. A summary of the original and updated savings rates by NEEA efficiency tier and heating zone is provided in Table 1.

Table 1: Comparison of Energy Savings for Efficiency Rooftop Units

NEEA Tier	Climate Zone	Original Modeling	Updated Modeling	Gas Funding Territory HZ Weights
		Gas Savings Rate (Therms/sqft)	Gas Savings Rate (Therms/sqft)	
Tier 1	Seattle / 4C / HZ1	0.015	0.014	0.924
Tier 2	Seattle / 4C / HZ1	0.107	0.137	0.924
Tier 1	HZ2	0.027		0.074
Tier 2	HZ2	0.148		0.074
Tier 1	Great Falls, MT / 6B / HZ3	0.035	0.047	0.002
Tier 2	Great Falls, MT / 6B / HZ3	0.174	0.127	0.002

For more information contact Aaron Ingle, Sr. Market Analyst, at aingle@neea.org.

Luminaire Level Lighting Controls

The Luminaire Level Lighting Controls (LLLC) program engages key manufacturers and their supply chain to enhance promotion and sales in the Northwest, builds market awareness and capabilities via regional and national industry organizations as well as key market influencers and early adopters. LLLC is a current voluntary option for meeting code requirements. The program works towards LLLC becoming a common practice to affordably and efficiently light new and existing commercial buildings.

Key Assumptions Update

In 2025, Cadmus reviewed NEEA's estimates of the share of LLLC sales tracked by a third-party data source relative to overall annual LLLC sales in the region. Their assessment showed that NEEA's market share assumptions to be supported by both qualitative and quantitative data and recommended maintaining the current estimate of 54%.

Alongside this recommendation, Cadmus suggested revising these assumptions if new information becomes available or if significant events lead to an anticipated market shift.

The final report will be published on NEEA's website in March 2026.

For more information contact Kathryn Bae, Principal Market Analyst, at kbae@neea.org.

Residential New Construction: Building Energy Codes

NEEA aggregates and leverages the power of the region to identify and vet emerging technologies and create the market conditions necessary for the technologies to take hold. This work supports builder decisions and practices to become more energy efficient, making homes more affordable to operate. The alliance helps the region instill these voluntary interventions by informing codes that represent Northwest business needs.

Key Assumptions Update

NEEA conducts energy use modeling and code compliance studies to evaluate the regional impact of codes on residential new construction. To support this work, NEEA has engaged Ecotope to carry out a saving rate analysis for the 2023 Oregon Residential Specialty Code. The 2023 Oregon Residential Specialty Code came into effect in April 2024. NEEA anticipates incorporating the findings from this analysis into its 2025 Annual Report.

For more information contact Will Gehrke, Sr. Market Analyst, at wgehrke@neea.org.

Manufactured Homes

The Manufactured Homes market transformation program developed an enhanced, above code specification (NEEM 2.0), and demonstrated its market value by providing manufacturers/retailers with tools and resources to drive consumer demand. The program goal is to bring more efficient products and options to the market. This program moved into the market diffusion (formerly long-term monitoring and tracking) phase of NEEA's [Initiative Lifecycle](#) in 2024.

Key Assumptions Update

For 2025, two key assumptions are being updated for Manufactured Homes. First, savings rates are receiving minor updates based on changes to the RTF [New Manufactured Homes and HVAC](#) measure workbook, which moved from version 6.0 to 6.1 in June 2025. All savings rates, which NEEA differentiates by heating fuel type, number of sections of the home, and efficiency level, are shifting less than +/- 10% from the version 6.0 savings rates used for 2024 reporting.

Second, NEEA is expanding units reporting to include units that are NEEM-certified on the factory floor with a "Retailer inventory" status. This status indicates that the home had not yet been purchased by the ultimate homeowner at the time of production / certification. In past years NEEA has limited units reporting only to homes with a "Home owner" status, which are already purchased at the time of certification, because of the higher certainty around where and how soon they are to be sited. In 2025, 22% of NEEM-certified homes were listed with a "Retailer inventory" status.

Three considerations have been addressed to support including "Retailer inventory" units in savings reporting in 2025 and future years:

- 1. Maximizing coverage while avoiding reporting the same unit in multiple years.** NEEA units reporting is based on NEEM certification data, which is collected at the factory floor as homes are produced. Because NEEA relies only on NEEM certification data, NEEM homes with a "Retailer inventory" status will not be counted multiple times as they move through subsequent inventory, purchase, and siting.
- 2. Time lags between certification, siting and home occupation.** There are inherent time lags between certification at the factory, and a home being sited and occupied. Due to the additional step of a retailer needing to find a buyer, homes with a "Retailer inventory" status may have some additional time lag compared to "Home owner" status homes. However, homes certified in 2025 will eventually be sited and occupied, though possibly in a subsequent year. All else equal, lags are expected to average out with homes certified in previous years but sited and occupied in 2025.
- 3. Avoiding counting units sited out-of-region.** Because the final home site for "Retailer inventory" homes is often not yet determined at the point that NEEM certification data is collected, in past reporting years NEEA has excluded these homes from unit counts. To overcome this for 2025, we are adjusting "Retailer inventory" unit counts to exclude the portion of homes that we estimate to be ultimately sited out-of-region, using retailer location identifiers as a proxy for the final home site. Based on analysis of 2025 NEEM-certified homes with a "Home owner" status and a defined home site, 85% of these homes are sited in the same state as the retailer, and 97% of homes with an in-region retailer location are sited in-region. Therefore, NEEM homes with a "Retailer inventory" status and an out-of-region retailer location will be excluded from the savings analysis.

For more information contact Aaron Ingle, Sr. Market Analyst, at aingle@neea.org.

Memorandum – *Agenda item*



February 11, 2026

TO: Cost-effectiveness and Evaluation Advisory Committee (CEAC)

FROM: William Gehrke, Sr. Market Analyst, NEEA

SUBJECT: Commercial Code Natural Market Baseline Approach

This memo summarizes NEEA's implementation of the Natural Market Baseline for commercial energy codes from the 2025 Natural Market Baseline report by IEC. Separately, it outlines NEEA's approach to adjusting commercial code ramp rates within the Natural Market Baseline structure. This approach is applied to all future and past commercial codes that use the commercial ramp rate. Please come to the meeting with any questions you have about NEEA's approach.

Background

Since its inception, the Northwest Energy Efficiency Alliance (NEEA) has worked with regional partners to advance state-level commercial and residential energy codes throughout the Northwest. NEEA and its partners strategically focus on introducing energy code changes to elevate the efficiency of new commercial and residential buildings. In addition to supporting code development, NEEA invests in training and education to strengthen code compliance, provide above-code support, and disseminate research on emerging technologies and practices.

To estimate associated energy savings, NEEA develops a Natural Market Baseline¹ for state codes in the Northwest representing when codes would likely have been adopted absent NEEA and its partners' influence. Prior to 2025, NEEA assumed that both residential and commercial energy code updates occurred approximately ten years earlier than they would have without NEEA's market transformation activities.

In 2024, NEEA engaged with Industrial Economics (IEc) and Resource Refocus (together "the IEc team") to review NEEA's Natural Market Baseline assumptions for building codes.² The IEc team recommended transitioning from a single regional baseline to baselines that reflect state-specific conditions and the characteristics of each individual code cycle. In addition, the IEc team advised adjusted code baselines to reflect the number of code cycles (one, two or three) that NEEA and its partners helped accelerate through market transformation activities.

In the third quarter of 2025, NEEA presented its response to IEc's recommendations to CEAC, including how those recommendations would be incorporated into the Natural Market Baseline

¹ The Natural Market Baseline represents the counterfactual of what would have happened in the market without interventions occurring through: (1) Direct and indirect funding from NEEA partner utilities and organizations (2) Funding from the NEEA alliance that supports contractors and organizations that NEEA participates in as a member or sponsor.

² IEc. 2025. [NEEA Code Baseline and Assumption Review](#).

framework. NEEA will incorporate state and code specific baselines in its model for future code savings informed by independent qualitative assessments conducted through the Market Progress Evaluation Report (MPER) process.

NEEA has also separately assessed how its current method for applying a ramp rate to commercial codes could be implemented under these recommendations.

Commercial Code Ramp Rate

Commercial codes apply to a wide variety of building types which vary in scale and complexity. It takes time for the market to transition from one code to another. Code applicability is determined by the date the building permit is accepted, not by project completion. As a result, projects initiated under a previous code can remain in the construction pipeline for several years before a new code reaches full market penetration. To account for this lag, NEEA's commercial codes savings model applies a ramp rate that represents the percentage of new commercial construction expected to fall under a newly adopted code in each year of the transition period. This ramp rate is derived from an Energy Trust of Oregon data, which found that it takes approximately 34 months from the code effective date for 100% of new construction to be built under a new commercial energy code.³

Baseline Adjustment for Commercial Codes

NEEA is adjusting the Natural Market Baseline for commercial codes to reflect the transition period captured by the commercial code ramp rate. Commercial code adoption occurs gradually as projects transition to a new code, resulting in partial savings during the early years of a code influence. If savings were reported only for the number of years that influence is assigned, these partial savings years would cause total reported savings to fall short of the implied influence period. Ramping up without ramping down commercial codes savings, results in one full cycle of influence not equating to one full cycle of savings.

To maintain alignment between the intended influence period (one, two, or three accelerated code cycles) and the savings produced by the commercial savings model, NEEA will apply a symmetrical ramp rate adjustment on the baseline side. Specifically, the end of the Natural Market Baseline period will incorporate the same 34-month ramp rate applied on the savings side. This adjustment provides an accurate representation of construction market conditions and ensures consistency between influence assumptions and modeled savings.

³ Energy Trust of Oregon. 2012. PECE Permit Occupancy Dataset.

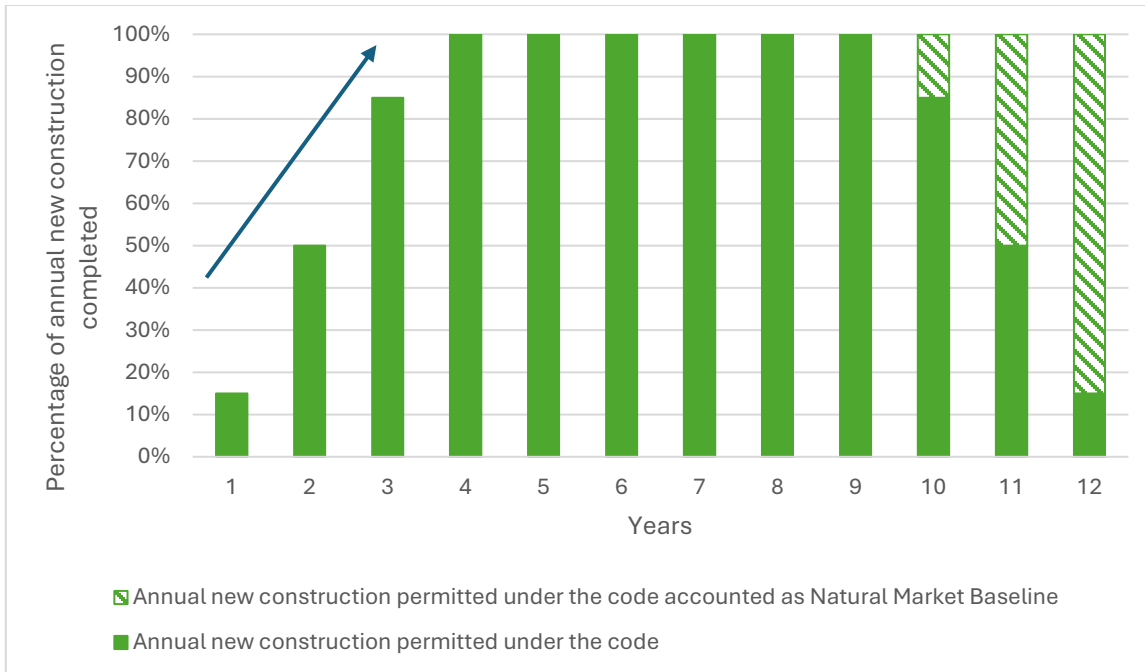


Figure 1. Three 3-Year Code Cycles Example (Total 9 Years of Savings)

Figure 1 shows how savings are calculated for a commercial code with three cycles of influence, each lasting three years (nine years total). During the first three years, savings are slowly ramped up to reflect the transition period in which projects are still permitted under the previous code. To maintain alignment between the influence period and modeled savings, the final three years apply a symmetrical 34-month adjustment to the Natural Market Baseline.

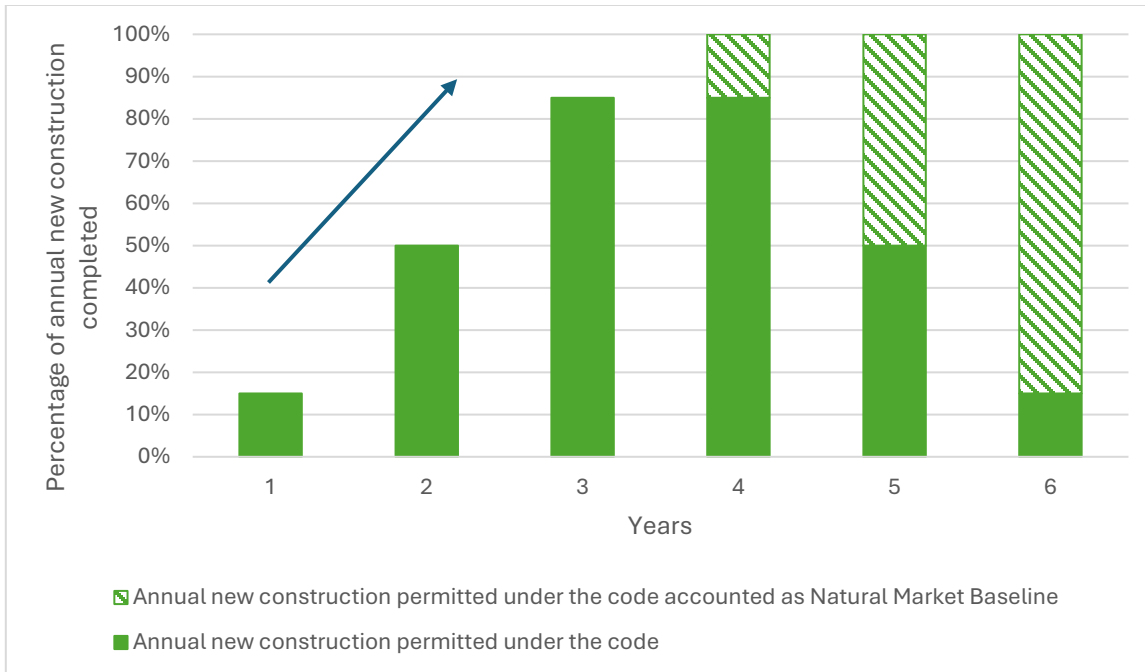


Figure 2. One 3-year Code Cycle Example (Total 3 Years of Savings)

Figure 2 shows how savings are calculated for a commercial code with one cycle of influence, lasting three years (three years total). During the first three years, savings are ramped up to reflect the transition period in which projects are still permitted under the previous code. To maintain alignment between the influence period and modeled savings, the final three years apply a symmetrical 34-month adjustment to the Natural Market Baseline.

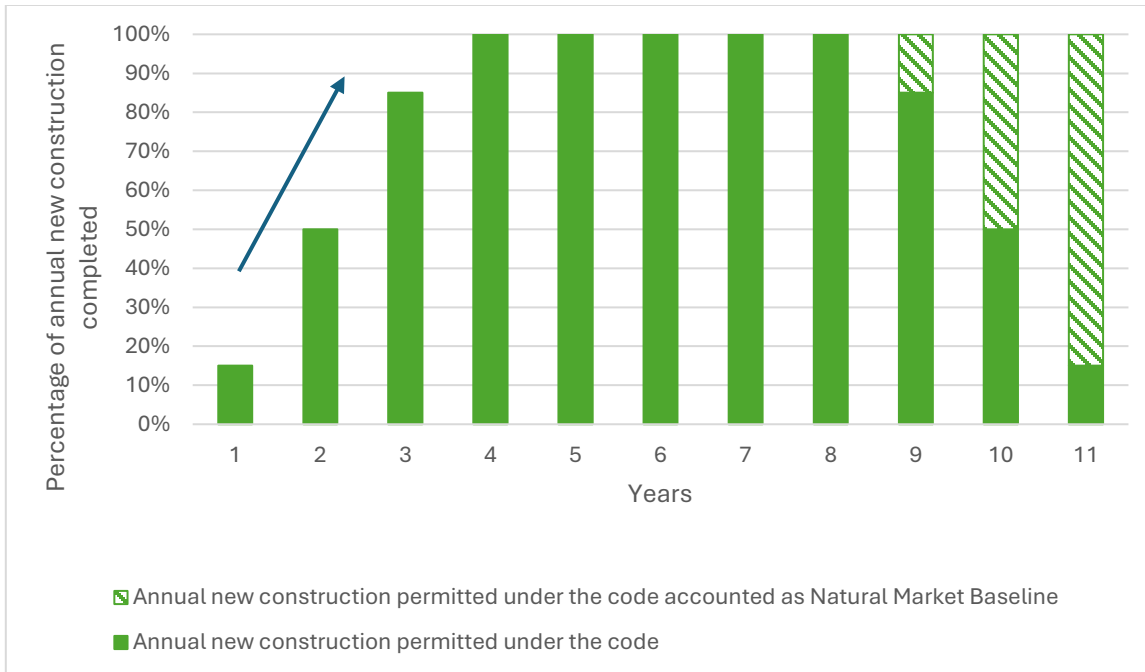


Figure 3. Two 4-Year Code Cycles Example (Total 8 Years of Savings)

Figure 3 shows how savings are calculated for a commercial code with two cycles of influence, each lasting four years (eight years total). Code cycles are typically every three years but can vary. This example is meant to show how different code cycle lengths would be calculated.

This approach will be applied consistently to all commercial codes that have employed the code ramp rate method, including future and past codes.⁴

If you have any questions, please contact William Gehrke, Senior Market Analyst (WGehrke@neea.org).

⁴ Future Commercial Codes include: 2024 IECC Idaho, 2024 IECC Montana and 2024 WSEC-C.