Cost Effectiveness and Evaluation Advisory Committee Meeting

DATE: August 28, 2024

TIME: 9:00AM – 11:55PM

LOCATION: Microsoft Teams Need help?

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AGENDA

TIME	TOPIC	PRESENTER(S)	Electric/ Gas/Both	Link or Page
9:00 AM (15 min)	Welcome/Agenda Review 1. Agenda check 2. Announcements	Jonathan Belais, NEEA Staff		
9:15 (20 min)	Idaho Residential Code Compliance Report NEEA staff will present some of the highlights from the recently published Idaho Residential Code Compliance Study Objective: Update committee and provide additional context for state code conversations.	Meghan Bean, NEEA Staff	Both	Link
9:35 (45 min)	State Energy Codes Evaluation Approach (Continued) Following up on July 31st meeting, NMR and NEEA staff will review the 3rd party evaluator assessment. NEEA staff will also provide some initial recommendations. Committee members will be asked for final feedback on the 3rd party assessment and additional feedback regarding staff recommendations. Objective: Update committee members and solicit feedback on next steps.	NMR (3 rd Party Evaluator), NEEA Staff	Both	3
10:20 (10 min)	BREAK			

TIME	TOPIC	PRESENTER(S)	Electric/ Gas/Both	Link or Page
10:30 (20 min)	Key Inputs and Assumption Updates NEEA staff will provide a refresher on key assumptions and inputs followed by a discussion about how to best present these inputs and assumptions to the committee for review. Objective: Inform committee members, gather feedback, and questions regarding the input and assumptions review process with the committee.	Ryan Brown, NEEA Staff	Both	8
		Ryan Brown, NEEA Staff	Both	10
11:10 (30 min)	MRE Update 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	Amy Webb, NEEA Staff	Both	15
11:40 (15 min)	Charter Review Committee discussion of possible revisions to the CEAC charter in preparation for start of NEEA's Cycle 7 Business Plan. Objective: Feedback from committee on CEAC charter	Jonathan Belais, NEEA Staff	Both	11
11:55 PM (5 min)	Wrap up			

Memorandum – Agenda item



August 21, 2024

TO: Cost-effectiveness and Evaluation Advisory Committee

FROM: Meghan Bean, Principal MRE Scientist; Chris Cardiel, Sr. MRE Scientist

SUBJECT: NEEA staff draft recommendation of the influence evaluation approach for NEEA's state

energy codes work starting in 2025

On July 31, 2024, the Cost Effective and Evaluation Advisory Committee (CEAC) met to learn more about and provide feedback on NMR Group's initial assessment of the evaluation methodology employed to assess NEEA's influence on advancing energy codes. At the meeting, NMR provided a brief overview of their initial assessment with an opportunity for the Committee to seek clarification; NMR's interim memo was also distributed to Committee members for review and reference prior to the July 31 meeting. NEEA Staff have taken feedback and suggestions shared by Committee members during the July 31 meeting into account in determining a recommended organizational response to the recommendations made by NMR as a result of their assessment. This memo articulates NEEA Staff's proposed response to NMR's recommendations, with grateful acknowledgement of the input and insights offered by Committee members, both during the July 31 meeting and through other discussion forums.

Outcome at the August 28, 2024 CEAC meeting:

To review and provide feedback on NEEA staff's draft recommendation regarding the influence evaluation approach for NEEA's state energy codes work starting in 2025

NEEA Staff's draft recommendation:

NEEA staff proposes adopting NMR's recommendations as described in their NEEA Approaches to Estimating Influence Over State Energy Codes July 3rd interim memo. The following pages of the present memorandum outline each of NMR's four recommendations, including one overall recommendation and four supporting sub-recommendations, followed by NEEA staff's proposed approaches for incorporating the recommendations into organizational evaluation practice.

NMR Overall Recommendation: In Market Progress Evaluation Reports (MPERs), conduct deeper, statespecific qualitative research to describe NEEA's work and its collaborations with partners to improve code outcomes.

Energy code development, adoption, and enforcement are complex, multi-stakeholder processes.

Outcomes are determined by numerous factors and the evidentiary standard for assessing influence should

be high when reporting a high level of impact on outcomes. Accordingly, the NMR team sees opportunities for NEEA to increase the extent to which it documents its role in those outcomes. NEEA should adapt the current codes MPERs to fully document its unique and specific role in each state through qualitative data collection performed longitudinally, with a focus on measuring progress against NEEA's PTLM and confirming the impact of NEEA's and their partners' own contributions to state-level code improvements. The goal of this work is not to establish an attribution score to quantify NEEA's efforts relative to those of its partners or other advocacy groups, but to accurately characterize, what role NEEA served in the partnership—influencer, facilitator, mediator—and whether NEEA's partnership included all influential actors in the process. This will help gather and document evidence in support of NEEA's efforts to influence the code update process. Some of the key questions to answer in codes influence research include:

- What other stakeholders contribute to code changes? What role do they play relative to NEEA and its partners?
- Have key stakeholders entered or exited this space, changing the role or relative influence of NEEA?
- How comprehensive and impactful are NEEA's partnerships in each state and code cycle after characterizing the full array of stakeholders?
- How would other stakeholders describe and assess the involvement and contributions of NEEA to code improvements over time?
- What factors have changed in the policy or regulatory landscapes surrounding code changes, and how has NEEA responded to or helped influence those changes?

Current codes MPER data collection covers related topics and touches on these topics in some ways. Ensuring that future MPERs include an additional focus on documenting the extent and nature of NEEA's influence will help confirm the legitimacy of NEEA's approach to reporting savings (in collaboration with its partners) from code updates. In addition, documenting the presence and roles of other stakeholders who have engaged in code development processes with NEEA over time offers opportunities to trace impacts over time, including how NEEA's influence may have changed over time.

NEEA Staff Response: Propose accepting this recommendation in full and incorporating evaluation methodologies that support deeper qualitative assessment of NEEA's collaborative influence on energy code outcomes at the federal and state level. Building on Codes MPER #5 (published in Q2 2024) and continuing with Codes MPER #6 (kicking off Q4 2024), NEEA's Codes MPERs will include qualitative data collection activities and analyses that will provide rich qualitative description of the influence demonstrated by NEEA and its partners during current codes cycles.

NMR Supporting Recommendation #1: Given the limited scope of this evaluation, the NMR team does not have evidence at this point to suggest that NEEA should develop and apply a downward adjustment factor to the co-created savings it claims from its work with partners to influence code update cycles, though future evaluation research could suggest such an adjustment.

As previously noted, this research effort focused on how NEEA assesses its influence on code outcomes, not specifically how it calculates savings from code cycle updates. Accordingly, this study did not dive into the savings calculation approach sufficiently to suggest any specific adjustment factors. It is not justifiable at this time to recommend that NEEA invest in evaluation to generate an adjustment factor for cocreated savings or pursue strategies to discount the amount of savings reported from a given code update cycle. It is possible that future MPERs, enhanced with some of the methodological recommendations provided in this memo, indicate that the influence of NEEA and partners on particular code cycle does not match historic assumptions. In that case, it would be incumbent on NEEA to consider this evidence and consider an adjustment factor for reported savings.

NEEA Staff Response: Propose accepting this recommendation in full, with no establishment of savings adjustment factor at present, but remaining open to emergent evidence that may indicate increased value and feasibility of developing such a factor. NEEA will continue to (a) incorporate estimated code compliance rates as a decrementing factor when calculating savings associated with energy code activities and (b) conducting regular third-party reviews of its market baseline assumptions for residential and commercial energy codes.

NMR Supporting Recommendation #2: Create strategy plans for each state and code cycle as recommended in Codes MPER #5 and integrate their development and execution into the Codes Program Theory and Logic Model (PTLM).

The recently published fifth Codes MPER reported the challenges of developing PIs for NEEA's work on codes, given its complexity and variability across states and code cycles. The MPER developed PIs for NEEA's code training efforts, where outcomes were straightforward to track over time. Developing state-specific plans, however, would make it more feasible to develop targeted PIs focused on state-level activities. These plans will also aid in longitudinal tracking of NEEA-supported code amendments that may not have been adopted during the code cycle in which they were proposed. As a part of developing state-level plans, NMR suggests the following:

- Edit the PTLM to include developing state-level plans as a NEEA activity, also adding relevant outcomes and, ideally, PIs.
- Track the portion of adopted NEEA code proposals as a PI to supplement data collected in
 interviews. This was a component of the alternate approaches that was not deemed robust enough
 to be a stand-alone metric of NEEA influence, but it would add to the body of evidence related to
 NEEA's codes contributions.
- Ensure all PIs from state plans are tracked longitudinally and are easily accessible in reports.

 Depending on the granularity of any new PIs for code development and adoption, there will be opportunities to track PIs longitudinally for each state. These PIs should be tracked and reported in future MPERs to highlight NEEA's impacts over time. Some potential outcomes or PIs may not be longitudinal in nature, representing specific interventions unique to a given state and code cycle.

 MPERs can serve as opportunities to document such one-off efforts.

NEEA Staff Response: Propose accepting this recommendation in full; the NEEA Codes team has already begun the development of state- and cycle-specific strategy plans to align market intervention activities and intended outcomes as articulated in the PTLM. The Codes team will continue to develop these strategy plans for future state and federal code cycles, and NEEA's Market Research and Evaluation team will treat these plans as key sources of programmatic information for future Codes MPERs, beginning with the upcoming Codes MPER #6.

NMR Supporting Recommendation #3: Use MPERs to document and highlight the story of NEEA's codes work, including historical context, collaborative approaches with co-created savings, and the rationales for NEEA's chosen codes activities, in public facing documents or reports.

The interviews NMR conducted with NEEA staff were critical to this evaluation. Interviewees provided rich historical context and insight into how and why NEEA influences and assesses its impact on code outcomes. In comparing the findings from these interviews to some of the available evaluation reporting on NEEA codes work, we noted opportunities to communicate insights we gained through interviews in NEEA public reporting such that outside evaluators and stakeholders can more easily understand NEEA's approach. Codes MPERs are a logical place to deploy these narratives to contextualize MPER findings and make each document a standalone resource for those seeking to understand NEEA's codes work. This step does not guarantee that all reviewers will agree with NEEA's approach, but it may limit opportunities for misunderstanding.

NMR would also add that many of these recommended evaluation steps would be useful to NEEA as it considers pathways to maintain or even increase its influence on code development and adoption outcomes. The data derived from these research activities can point to new opportunities in the code development space or highlight activities to de-emphasize moving forward if, for example, other stakeholders are filling data analysis roles for a certain measure type.

NEEA Staff Response: Propose accepting this recommendation in full, in alignment with NMR's Overall Recommendation. As specified in the response to that recommendation, NEEA intends to leverage future Codes MPERs as a platform for increasingly rich qualitative documentation of the alliance's collaborative efforts to support federal and state-level energy code processes. In particular, per NMR's Supporting Recommendation #3, NEEA Staff intend to include interviews or other qualitative data collection activities with alliance staff and regional and national partners as a necessary component of future Codes MPERs beginning with Codes MPER #6.

Summary of NEEA Staff's Recommended Response to NMR Group's Recommendations

In sum, NEEA Staff recommend accepting in full the one overall recommendation and three supporting recommendations provided by NMR Group. The resulting refinements to NEEA's programmatic and evaluative approach are intended to support a continued high degree of methodological rigor and defensibility of results, both as pertaining to the findings of evaluation research (for example, MPERs) and regarding energy code baseline development. The summary of specific planned adjustments to NEEA's programmatic and evaluative approach is as follows:

- Future Codes MPERs (beginning with Codes MPER #6, scheduled for kickoff in Q4 2024) will incorporate a study objective focused on generating rich qualitative data regarding NEEA and partners' influence on energy codes outcomes at the federal and state levels.
- Future Codes MPERs (beginning with Codes MPER #6) will incorporate sampling techniques and study methods that facilitate the collection of qualitative data from NEEA staff and regional and national partners, with a specific focus on documenting and highlighting the historical context, collaborative nature, and ongoing rationale underlying NEEA's codes market education and influence strategy and efforts.
- The NEEA Codes team will continue its ongoing development of state- and cycle-specific strategy
 plans for the purposes of ensuring alignment between targeted market intervention activities,
 intended outcomes, and the PTLM. These strategy plans will also serve as the foundation for a
 portion of the analyses conducted in each future Codes MPER (beginning no later than Codes MPER
 #7, with partial incorporation possible in Codes MPER #6 depending on document readiness).
- While the establishment of a default savings adjustment factor is not recommended by either NMR or NEEA Staff, NEEA intends to conduct a third-party assessment of market baseline assumptions and methodology associated with residential and commercial energy code. This Baseline Review is scheduled for kickoff in Q4 2024, with results available for CEAC review in Q1 2025; specific assumptions to be reviewed include but are not necessarily limited to the following:
 - The assumption that NEEA's intervention in the regional and national codes process accelerates adoption of more efficient energy code measures by 10 years (approximately two code cycles). After 10 years, the assumption is the energy code would have advanced to the same level on its own. This means that the baseline assumption goes from 0% to 100% over the 10-year period
 - The assumption that it takes approximately one year from the construction start date for a commercial building to be complete.
 - The schema NEEA has developed for mapping inconsistent commercial building categories across relevant datasets (e.g., Dodge Construction Network, DOE).

Budgetary and Staffing Implications of NEEA Staff Recommendations

These adjustments to programmatic and evaluative practice are strongly aligned with NEEA's existing market transformation approach and largely leverage preexisting structures and systems. As a result, NEEA does not anticipate significant incremental costs associated with their implementation. NEEA Staff are committed to continuing to field methodologically rigorous MPERs assessing market progress relative to the Codes PTLM (including but not limited to assessing outcomes related to market influence) on a kickoff-to-kickoff cadence of approximately 18 months. Likewise, NEEA Staff will continue the standard practice of monitoring key baseline assumptions and seeking third-party review of such assumptions when warranted, either on the basis of changing market conditions or due to significant adjustments in approach. NEEA Staff also acknowledge the potential that opportunities for further methodological refinement may be identified in the future and are committed to diligently assessing both the dynamics of the regional energy codes market and NEEA's internal organizational structures and processes for such opportunities for ongoing improvement.

Memorandum – Agenda item



August 21, 2024

TO: Cost-effectiveness and Evaluation Advisory Committee

FROM: Ryan Brown, Manager, Planning and Analysis

SUBJECT: Q3 2024 Electric and Natural Gas Key Inputs and Assumptions Update

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 these charter objectives.

NEEA maintains a system of documentation and communication that includes three primary means for committee members to access documentation: methodology documents posted to a funder portal via neea.org, data provided in funder reports, and meeting materials and presentation content at each quarterly CEAC meeting (Figure 1).

 $^{^{\}rm 1}$ In addition to the two responsibilities listed above there are 3 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.

Figure 1: System of Documentation for Key Inputs and Assumptions

Funder Portal neea.org

Updated in April

Data Sources

List of data sources NEEA uses to estimate savings & cost effectiveness and explanation of approach

Cost Effectiveness Table

ProCost Inputs for programs in Market Development

Methodology Documentation

Report on energy consumption calculations, data sources and technical assumptions

Operational Guidelines

Overview on energy savings & cost effectiveness calcs

Funder Reports Emailed Directly

Updated Q1/Q2, upon request

Annual 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.

CEAC Meeting Materials Emailed in Packet

Updated Quarterly

Annual Summary

Memo summarizing portfolio savings & cost effectiveness results as well as program updates.

Key Assumptions Update

Updates to key assumptions (baselines, savings rates, units estimates, etc.), along with contact information for follow-up questions.

Presentations

Slides describing results & updates to inputs used in NEEA's savings and cost effectiveness analyses.

For this quarter's meeting NEEA has no new or updated key inputs or assumptions to share with the committee. Instead NEEA will intend to use this time to overview the process and host a discussion with the committee about how we can best supply the information that will enable committee members to fulfill the responsibilities above. In preparation for the Q3 CEAC meeting please consider the following questions:

- What information about the inputs and assumptions NEEA uses in our analysis do you want access to?
- What format, layout and features of the presentation of these inputs and assumptions would allow you best engage in your role as a committee member?

Please don't hesitate to reach out to Ryan Brown (rbrown@neea.org) with any questions or comments.

Memorandum – Agenda item



August 28, 2024

TO: Cost-effectiveness and Evaluation Advisory Committee

FROM: Ryan Brown, Manager, Planning and Analysis

SUBJECT: Using Peak Value as a Portfolio Metric in Cycle 7 (2025-2029)

NEEA's 2025-2029 Strategic and Business Plan¹ established several focus areas for NEEA, one of which is, "Prioritizing energy savings at peak demand to ensure NEEA's energy efficiency Market Transformation activities are delivering the highest value to the region." (p. 5) In order to operationalize this, NEEA will be adding a metric assessing the regional peak value of market transformation programs to the portfolio metrics used when managing the portfolio. This will be considered alongside NEEA's existing suite of portfolio metrics – savings potential, cost effectiveness, regional distribution of potential, risk profile, and strategic market value.

During this agenda item at the advisory committee meeting NEEA staff will share a brief preview of the peak value metric we have developed then facilitate a discussion to gather input and better understand the metrics that our stakeholders are using to assess and prioritize reducing peak demand in their programs and portfolios. Please come to the meeting prepared to respond to the following:

- How and when does your organization include peak demand reductions in investment decisions?
- What are the metrics you use and how are those calculated (at a high-level)?
- What recommendations do you have for NEEA's regional-level view of peak value?

Please don't hesitate to reach out to Ryan Brown (rbrown@neea.org) with any questions or comments.

¹ https://neea.org/about-neea/neea-business-strategic-plans?

Memorandum – Agenda item (Tier 1)

August 21, 2024

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

FROM: Jonathan Belais, Policy Manager, NEEA

SUBJECT: CEAC Charter Review

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Context

To ensure consistent and accurate charters for each of NEEA's advisory committees, NEEA staff periodically facilitates a charter review with each committee. The primary purpose of this review is to ensure the charter continues to accurately represent the activities and responsibilities of the advisory committee and provide an opportunity to make adjustments that might allow for more productive engagement. The current CEAC charter was last reviewed in 2019 in alignment with the NEEA business planning process. As such, it is now time to review and assess the charter for any necessary or desired updates.

Additionally, staff have reviewed this document and a redlined version including some staff recommendations is attached to this memo.

For the Q2 CEAC Meeting

NEEA staff will review the recommended changes and solicit feedback and guidance from CEAC members regarding the possible need for further revision of this document. A few questions to consider in advance of this meeting might be:

- 1. Does this document accurately reflect the purpose and activities of this committee?
- 2. What, if any, additional components of CEAC's work that should be included as part of the charter?
- 3. What, if any, roles for CEAC within the existing charter are not being fulfilled adequately?

This is a great opportunity to ensure that this committee is and will continue to provide value to you and your organizations. We are eager to hear your thoughts.



COST-EFFECTIVENESS AND EVALUATION ADVISORY COMMITTEE CHARTER Review process:

HISTORY							
Source	Date	Action/Notes	Next Review Date				
CEAC	Q1-Q2 2020	Proposed Draft	Q1 2021				
Governance Committee	July 8, 2020	Recommended for	Q2 2025				
		Board consideration					
Executive Committee	August 27, 2020	Recommended for	Q2 2025				
		Board consideration					
Roard Decision	September 15, 2020	Board Approval	O2 2025				

Committee Purpose

Advisory Committee

NEEA's Cost-Effectiveness and Evaluation Advisory Committee's ("Committee") The-purpose of this committee is to review and advise Northwest Energy Efficiency Alliance (NEEA) staff on methods, data sources, and inputs for use in NEEA's cost-effectiveness analysis and savings reporting. This work is done on behalf of both NEEA's electric and natural gas market transformation portfolios. The Committee, composed of NEEA's funders and additional regional stakeholders, will also-tracks and reviews components of planned and completed market research and evaluation ("MRE") work.

This committee is a management advisory committee, providing support to the work of NEEA managers and other staff in its program development and implementation responsibilities. As such, it ultimately reports to NEEA's Executive Director.

Committee Authority

The Committee is authorized to take actions and make recommendations necessary to fulfill the Responsibilities delegated to it pursuant to this Charter by NEEA's Board of Directors ("Board") as provided by NEEA's Bylaws. The Committee is a management-advisory committee, providing support to the work of NEEA's managers and other staff in its program development and implementation responsibilities. The Committee reports to NEEA's Executive Director, and NEEA's Executive Director is given related authority pursuant to this Charter.

Committee Responsibilities

The Committee is authorized by the Board under this Charter to carry out the following Responsibilities:

- 1. Review and advise <u>NEEA</u> regarding NEEA cost-effectiveness and savings information to inform <u>NEEA</u>'s annual reporting.
- 2. Review and advise regarding market transformation cost and savings measurement and estimation methods.
- 3. Review evaluation findings that affect cost and savings information to inform <u>NEEA's</u> annual reporting.
- 4. Work with Committee members' home your organizations to provide NEEA staff with

- relevant incentive data for <u>NEEA's</u> regional tracking and reporting purposes.
- 5. Review and advise <u>NEEA</u> regarding new <u>MRE</u> market research and evaluation methodologies.
- 6. Committee members and NEEA share a commitment to communicate and coordinate as part of this Committee with the intent of operating with transparency and clarity.

Committee Membership

NEEA's The Executive Director has the authority will delegate the option pursuant to this Charter to appoint a Committee a member to any Advisory Committee as designated by and from to each direct funder of both NEEA's electric and natural gas portfolios. In addition, NEEA's the Executive Director may appoint other Committee member(s), such as Northwest Power and Conservation Council staff, public utility commission staff, and state energy office staff.

Open **Committee** Meetings and Closed Sessions

All Advisory Committee meetings are shall be open to in-person participation by members of the public. With the exception of sensitive or confidential information not appropriate for public dissemination as determined by the Committee or NEEA's Executive Director, Committee meeting materials (including but not limited to Committee meeting packets, slide presentations, and summary notes) are will be posted for public access. A closed non-public session for part or all of any Ceommittee meeting may be called at any time by any Committee member or NEEA's Executive Director to discuss sensitive or confidential information not deemed appropriate by the same for public dissemination, including but not limited to such as competitive or proprietary information that should not be publicly shared. Any member of the Committee can request a closed session.

Committee Meeting Schedule

The <u>Cis advisory</u> committee <u>will-meets</u> on a quarterly basis and conducts additional meetings and/or webinars as needed in its <u>determination</u>, or as requested by <u>NEEA's Executive Director</u>, or <u>Board</u>. <u>Committee Mmeeting</u> agendas <u>are will be</u> clearly delineated between electric-only, dualfuel, and gas-only portions to allow <u>Ceommittee members</u> the ability to participate only in the items <u>that are</u> relevant to <u>a Committee members' their home</u> organization.

Shared Commitment

Advisory Committee members and NEEA Staff share a commitment to communicate and coordinate with the intent of operating with no surprises.

Review Schedule:

¹ Pursuant to NEEA's Bylaws, a "direct funder" refers to electric and gas, public or investor-owned utilities, Bonneville Power Administration, energy efficiency administrators, and the like that have committed to fully fund their share of NEEA's 5-year Business Plan's Cycle Core Funding activities, consistent with Board approved NEEA Funding Mechanism Policies, which determine the financial contribution required by each Direct Funder; not including funders paying such funds exclusively through other Direct Funders. See NEEA Bylaws, Art. II, Section (b)-(d).

The Board will review this charter during the first year of the funding cycle, or at other times as needed.

Reference Chart

NEEA Governance/ M	lanagement/ Advisory Roles and Responsibilities
NEEA Board	 All corporate governance and fiduciary duties, including ensuring the system of rules, practices and processes by which NEEA is directed to balance the interests of the alliance's stakeholders, to support the achievement of the organization's purpose Strategic and Business Plan development and approval Operations Plan and budget approval
NEEA Executive Director	 Manage the business of NEEA according to Strategic, Business and Operations Plans, set forth by Board Oversee business operations and staff
Regional Portfolio Advisory Committee ("RPAC")	 Advise NEEA's Executive Director on portfolio performance and program advancement; "challenge flag" process; RPAC+ downstream marketing elections Monitor developments from other advisory committees with regard to regional coordination, market progress, and emerging technology
Coordinating Committees ("CCs")	Collaborate with NEEA Staff and report to RPAC on coordination and optimization of NEEA programs and related activities, to identify and manage through potential implementation challenges between NEEA and local utility activities, and seize opportunities for amplified market influence
Cost_Effectiveness and Evaluation Advisory Committee ("CEAC")	 Advise NEEA's Executive Director on methods, data sources and inputs for use in NEEA's cost-benefit analysis and energy savings reporting Advise NEEA's Executive Director on market research and evaluation methodologies
Regional Emerging Technology Advisory Committee ("RETAC")	 Advise NEEA's Executive Director on NEEA's work toward achieving its strategic pipeline goals Track and coordinate the progression of energy efficiency technologies to improve technology readiness and market adoption in the Northwest
Natural Gas Advisory Committee ("NGAC")	 Advise NEEA's Executive Director on gas portfolio performance and program advancement; "challenge flag" process; RPAC+ downstream marketing elections Monitor developments from other advisory committees with regard to market progress and emerging technology
Work Groups	• Formed by RPAC on an as-needed basis and staffed with as-needed expertise, for a limited term and specific purpose that is distinct from that of RPAC, the CCs, and other Advisory Committees or Work Groups

Market Kestaron Quarterly Newsletter Market Research & Evaluation

WHAT'S NEW:



Hello there!

The slightly slower pace and sunny days of summer are almost here. While NEEA's Market Research and Evaluation (MRE) team has a lot of work to carry out through the warm months, things are slowing just a bit. This is evidenced by the slightly shorter than typical list of projects highlighted in this quarter's newsletter. The team has several ongoing evaluations in the field, including three market progress evaluations (for High-Performance HVAC, Efficient Rooftop Units and Extended Motor Products programs) as well as four state energy code compliance evaluations that are designed to estimate the rate of compliance with updated state building codes.

It is also worth mentioning several interesting market research efforts that are underway. Two studies have just launched to support gas water heating program opportunities. Another study will explore consumers' use and attitudes associated with connected consumer products. Additionally, there will be a slight change to the way that Market Progress Evaluation Reports are numbered for NEEA's Codes program, see page 11 for more details.

Lots on the horizon. Enjoy this newsletter and please reach out with any questions or suggestions.

~ Amy Webb, Sr. Manager, Market Research & Evaluation ~

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Contact



Questions about this report may be addressed to:

Sr. Manager, Market Research & Evaluation awebb@neea.org

At a Glance

MARKET RESEARCH & EVALUATION PROJECTS



DUAL FUEL (Electric & Natural Gas) PROJECTS:



NATURAL GAS PROJECTS:



*PLANNING: MRE projects from inception through proposal selection *FIELDING: MRE projects from kick-off through the completion of field work *REPORTING: MRE projects in the analysis/synthesis stage through report posting

	PLANNING*	FIELDING*	REPORTING*
Codes: Assessment of Alternative Approaches to Estimating NEEA's State Enery Codes Influence		√	
Codes: Market Progress Evaluation Report #5			√
Codes: Market Progress Evaluation Report #6		√	
Codes: Home Energy Raters Market Research		√	
Residential Codes: Idaho Residential Code Compliance Evaluation			√
Residential Codes: Montana Residential Code Compliance Evaluation		√	
Residential Codes: Oregon Residential Code Compliance Evaluation		√	
Commercial Codes: Idaho Commercial New Construction Code Compliance Evaluation		√	
Commercial Codes: Montana Commercial New Construction Code Compliance Evaluation		√	
Standards: Battery Chargers Standard Evaluation		√	
Standards: Non-Weatherized Gas Furnaces and Mobile Home Furnaces Standard Evaluation			√

DUAL FUEL (Electric & Natural Gas) PROJECTS:



*PLANNING: MRE projects from inception through proposal selection *FIELDING: MRE projects from kick-off through the completion of field work

*REPORTING: MRE projects in the analysis/synthesis stage through report posting

NATURAL GAS PROJECTS:



Market Progress Evaluation Report #1

Efficient Rooftop Units (RTU)

FIELDING

As of late 2022, NEEA's Efficient RTU program is actively promoting efficient RTUs for gas heated commercial buildings across the region. This study will be the first evaluation of the program's Market Transformation efforts. The program's overarching objectives for the study are to:

- 1. Provide timely and actionable formative evaluation findings and recommendations to enable continuous improvement of the program.
- 2. Assess Market Transformation progress as measured by program Market Progress Indicators.
- 3. Qualitatively assess program influence on observed market transformation.

NEEA contracted with Apex Analytics and NMR Group to conduct the evaluation. NEEA kicked off the Efficient RTU evaluation in June 2023. In Q1 2024, the evaluation team plans to hold focus groups with two small groups of commercial building decision makers (e.g., building owners, operators, and facilities managers); survey commercial building decision makers across the region; and interview individuals who have or have considered having an efficient RTU on their building.

The study is being conducted in close coordination with the Market Progress Evaluation for the High-Performance HVAC program, which is also being completed by Apex Analytics and NMR Group.

The evaluation will be ongoing through fall 2024, with a final report anticipated in Q4 2024.

Market Progress Evaluation Report #1

High-Performance HVAC

FIELDING

As of late 2022, NEEA's High-Performance HVAC program is intervening to transform the market for very high efficiency Dedicated Outside Air Systems (DOAS) for electrically heated commercial buildings across the region. This study will be the first evaluation of the program's Market Transformation efforts. The program's overarching objectives for the study are to:

- 1. Provide timely and actionable formative evaluation findings and recommendations to enable continuous improvement of the program.
- 2. Assess Market Transformation progress as measured by program Market Progress Indicators.
- 3. Qualitatively assess program influence on observed market transformation.

NEEA contracted with Apex Analytics and NMR Group to conduct the evaluation. NEEA kicked off the High-Performance HVAC evaluation in July 2023. In Q2 2024, the evaluation team will complete the analysis of HVAC system designer and manufacturer representative survey data, plan and facilitate the fourth of five Synthesis Sessions with NEEA High-Performance HVAC program staff regarding preliminary findings from these data collection activities and prepare for final activities supporting the assessment of the program's Market Progress Indicators. This includes the second administration of the HVAC system designer and manufacturer representative survey as well as market actor interviews to address gaps in Market Progress Indicator knowledge.

This study is being conducted in close coordination with the Market Progress Evaluation for the Efficient RTU program, which is also being completed by Apex Analytics and NMR Group.

The evaluation will be ongoing through fall 2024, with a final report anticipated in Q4 2024.



Market Progress Evaluation Report #1

Extended Motor Products (XMP)

FIELDING

NEEA contracted with ADM Associates, Inc., to field the inaugural XMP Market Progress Evaluation Report (MPER), which serves as the first evaluation of the program's Market Transformation efforts. The program's overarching objectives for the study are to:

- 1. Review the XMP Market Transformation Theory, Program Logic Model, and Market Progress Indicators (MPIs) to assess their clarity and alignment in conveying (1) the program's strategy and planned activities to overcome market barriers and drive market changes that will increase efficient clean-water pump and circulator adoption, and (2) NEEA's proposed approach for evaluating XMP market progress.
- 2. Conduct the first year of tracking MPIs to lay the groundwork for year-over-year evaluation, and report progress on several near-term outcomes.

A project kick-off was held in January 2024, followed by sample development and instrument preparation. Data collection began in late Q1 2024 with interviews with NEEA XMP program staff, implementation contractors, and industry partners. These efforts are expected to continue through Q2 and Q3 2024 with the administration of surveys or interviews across multiple market actor groups (including pump and circulator manufacturers' representatives, distributors, specifiers, contractors and project owners). Data analysis is expected to begin in Q3 2024 and will continue through Q4 2024. A final report is anticipated in late Q4 2024.



Extended Motor Products (XMP)

PLANNING

In order to support ongoing program planning and opportunity assessment, NEEA intends to field a research study exploring the dynamics of the agricultural pump market across NEEA's four-state region. Study methods are likely to include secondary research accompanied by primary data collection (e.g., in-depth interviews, electronically administered surveys) to seek input and insight from professionals active in this market. The project kickoff is anticipated in Q3 2024.

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Commercial Building Market Research

BetterBricks

REPORTING

NEEA contracted with ETHNO Insights, LLC to conduct market research to refine and expand on NEEA's understanding of the building renovation process for commercial building decision makers, in order to generate recommendations on how NEEA could support decision makers and their networks. ETHNO conducted secondary research and 16 interviews with commercial building decision makers from Q4 2023 to Q2 2024. The report captures numerous insights and nuances on the complexity of this process and relevant audiences. Two top takeaways include the necessity of getting involved during early planning stages and focusing early efforts on tenant companies with public sustainability statements. NEEA's BetterBricks website, as well as other commercial building programs at NEEA, plan to leverage these findings to refine messaging and intervention strategies to support better uptake of energy-efficient technologies in commercial buildings.

A final report is available on neea.org.

MRE Scientist: Zdanna King zking@neea.org 503.688.5439



Condensing Gas Water Heater Qualitative Market Research

Efficient Gas Water Heaters

FIELDING

NEEA contracted with ILLUME Advising, LLC to conduct research to better understand the purchase motivators among owners of the most efficient currently available gas storage water heaters (condensing gas water heaters) across North America. This research will inform the Efficient Gas Water Heater program's future efforts and development of the value proposition for commercialization of residential gas heat pump water heaters.

The key objectives of the qualitative research effort are to:

- Understand purchaser behaviors and attitudes that result in the actual purchase and installation of highly efficient condensing gas storage units in their homes
- Understand purchasers' overall satisfaction of the unit and interaction with the unit
- Determine purchaser willingness to replace current units with newer condensing units and, if willing, under what scenarios (planned replacement, failure, etc.)

Data collection began in Q2 2024 and a final report is anticipated in early Q4 2024.

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Existing Water Heaters in Select Commercial Buildings Market Research

Efficient Gas Water Heaters

FIELDING

NEEA staff developed a Market Transformation program concept for Advanced Commercial Gas Water Heating that was added to the portfolio in Q4 2023. As the program enters the program development phase of NEEA's Initiative Life Cycle, NEEA staff are focusing on stimulating market conditions to accelerate technological advancements and generating demand for GHPWH systems by identifying which gas heat pump technology and design configuration is ideal for different building types in the Northwest. NEEA determined that a subset of commercial buildings including restaurants and lodging facilities (hotels and motels) and multifamily buildings (i.e., low rise and non-mixed use), offer the greatest savings and opportunity to launch its program efforts given their high usage of hot water.

NEEA seeks to gather insights on current water heating systems for these building types, including the purchase process, value propositions and barriers to adoption.

Work is expected to begin in Q2 2024 with a final report anticipated in Q4 2024

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Residential Window Market Share Study

High-Performance Windows

REPORTING

NEEA contracted with Ducker Carlisle to complete a high-performance residential window market share study on behalf of the Northwest Energy Efficiency Alliance (NEEA) and the Center for Energy and Environment (CEE) in Q3 of 2023. This project is complimentary to the <u>windows market characterization report</u> already completed, providing a grounded estimate of window sales in the Northwest based on a national sales dataset and interviews with manufacturers and distributors (completed in Q4 2023). The contractor estimated that close to 2.9 million windows were sold in the Northwest in 2022, with a little over half (54%) being installed in new construction residential buildings. About 3% of these sales may have been high-performance windows as defined by NEEA (with a U-Factor of 0.22 or less).

A final report is now available on neea.org.

MRE Scientist: Zdanna King zking@neea.org 503.688.5439



Connected Consumer Products Market Research

Retail Product Portfolio (RPP)

FIELDING

NEEA contracted with Level 7 to conduct market research that will assess consumers' use of and attitudes toward purchasing connected consumer products in the Northwest. Fielding for primary and secondary research is expected in Q2 and Q3 of 2024 and will consist of a literature review and data collection from end-use customers (including online surveys, discussion boards, and focus groups). A final reporting is expected in Q1 2025.

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Retailer and Manufacturer Sustainability Goal Literature Review

Retail Product Portfolio (RPP)

REPORTING

NEEA contracted with Apex Analytics to conduct a literature review of television and major appliance retailer and manufacturer sustainability goals. Between November 2023 and March 2024, Apex Analytics reviewed companies' sustainability reporting, third-party environmental, social, and governmental (ESG) ratings and assessments, industry whitepapers and other guidance, and popular media sources. The report provides an overview of:

- · Market-wide emissions reduction activity
- Factors motivating manufacturers and retailers to develop sustainability goals, including investor influence and regulation
- Organizations' strategies for achieving sustainability goals
- Strategy recommendations to achieve RPP program goals while supporting manufacturers and retailers in setting and meeting sustainability goals.

A final report is available on neea.org.



Innovation * Action

Assessment of Alternative Approaches to Estimating NEEA's State Energy Codes Influence

FIELDING Codes

NEEA contracted with NMR Group to conduct a review of several alternative approaches to evaluating NEEA's influence on the outcomes of state energy code processes. The review will consider NEEA's efforts in both commercial and residential codes, and in each of the four states in the region (Idaho, Montana, Oregon, and Washington). The objective of this assessment is to support NEEA in identifying ways to assess its codes influence that more accurately documents and describes the multiple workstreams of NEEA's Market Transformation approaches. The study includes two major activities:

- A review of current codes evaluation methods.
- An assessment of the feasibility and merit of several alternatives to the current approach.

In Q1 2024, NMR completed interviews with NEEA staff familiar with NEEA's role in influencing state energy codes. In June 2024, NMR finalized its assessment of four alternative approaches put forth by NEEA research and evaluation staff.

A final report summarizing study findings is expected in early Q4 2024.

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Changes to Market Progress Evaluation Report Numbering

Codes

Between 2005 and 2009, NEEA fielded three MPERs evaluating the alliance's market transformation efforts related to energy codes, with the subsequent code-related MPER completed in 2017. Due to the period of time elapsed between this and earlier studies, the 2017 MPER was labeled as "MPER #1" at the time of its publication, with this numbering continuing with the recently completed MPER #2. NEEA has recently elected to consolidate all code-related MPERs completed to date under a consistent numbering scheme; code-related MPERs available on neea.org will be renumbered accordingly, and the next MPER (scheduled for completion in 2025) will be labeled as MPER #6.



Innovation * Action

	M	larke	t Pros	gress	Eval	uati	on R	eport	#5
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Codes

REPORTING

NEEA contracted with ADM Associates to conduct a Market Progress Evaluation Report (MPER) for its commercial and residential codes efforts. Using information gleaned through document review, interviews with NEEA staff, market actors, and implementers/trainers for NEEA-supported trainings, and a survey with recent trainees ADM concluded that:

- NEEA is successfully influencing more robust energy codes in the Northwest and nationally.
- NEEA's training and education efforts are effectively supporting market actors, but NEEA should improve its efforts to track the use and outcomes of these activities.
- The recently revised NEEA's Codes program logic model accurately captures the team's training and education work, but the logic model should be updated to better reflect the nuances of the team's work to influence the development and adoption of energy codes in the Northwest.

A final report is available on neea.org.

MRE Scientist: Meghan Bean mbean@neea.org 503.688.5413

Market Progress Evaluation Report #6

Codes

FIELDING

NEEA is currently preparing to release a Request for Proposals in support of the third 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 #2 conducted by ADM Associates and will include ongoing assessment of NEEA's progress in the Northwest codes market relative to recently established Progress Indicators (PIs). Additional study objectives will be determined and a Request for Proposals released in Q2 2024. The study kickoff is currently targeted for early Q3 2024.



Innovation * Action

Home Energy Raters Market Research

Codes

FIELDING

NEEA contracted with TRC to conduct market research with home energy raters in the Northwest to meet the following objectives: 1) Develop an estimate of the number of home energy raters currently working in the new construction market in each state in the Northwest, and 2) Provide an assessment of:

- Current raters' business practices
- Raters' perceptions of the current market for home energy ratings
- How raters' practices and perceptions differ across urban and rural areas

This project kicked off in February 2024, and a final report is anticipated in Q3 2024.

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Idaho Residential Code Compliance Evaluation

Residential Codes

REPORTING

NEEA contracted with Industrial Economics, Inc. (IEc) to review assumptions underlying its estimation of energy savings resulting from NEEA's and its partners' involvement in the Idaho state code processes. Using data collected through permit review, 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 Idaho amendments.
- Develop estimates of statewide energy code compliance and compliance within urban and rural jurisdictions separately.
- Provide statewide findings regarding primary space and water heating fuel and above-code elements.

This work kicked off in Q1 2023, and the final evaluation of Idaho's residential energy code is expected in Q2 2024.



Innovation * Action

Montana Residential Code Compliance Evaluation

Residential Codes

FIELDING

NEEA contracted with IEc to review 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 permit review, 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.
- Develop estimates of statewide energy code compliance and compliance within urban and rural jurisdictions separately.
- 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 but paused in mid-2023 due to challenges with collecting permit data. The project re-launched in January 2024 with a new data collection plan that relies on on-site data collection. A final report is expected in Q4 2024.



Innovation * Action

Oregon Residential Code Compliance Evaluation

Residential Codes

FIELDING

NEEA contracted with IEc to review assumptions underlying its estimation of energy savings resulting from NEEA's and its partners' involvement in the Oregon state code processes. This evaluation will:

- Assess statewide compliance among single-family homes built under the 2021 Oregon Residential Specialty Code (ORSC).
- Provide statewide findings regarding primary space and water heating fuel and above-code elements using data collected on individual code requirements.
- Provide an analysis of builders' choices regarding compliance pathways and efficiency level to which the home is built.

IEc will collect data from permits, site visits to residential new construction building sites, and interviews with market actors. In addition, NEEA contracted with NMR Group to collect data on inhabited homes using homeowner self-audits. These data will be provided to IEc for analysis.

This project kicked off in February 2024, and a final report is expected in Q4 2024.



Innovation * Action

Idaho Commercial New Construction **Code Compliance Evaluation**

Commercial Codes

FIELDING

The Idaho Commercial New Construction Code Evaluation study focuses on (a) assessing the path(s) by which and degree to which code compliance is achieved with the amended 2018 International Energy Conservation Code (IECC) in newly constructed buildings, and (b) measuring the energy performance of a subset of these buildings as 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 contracted with Opinion Dynamics to undertake this study. The study design and methodology selected for this project focuses on permit data and building plans as the primary sources of construction and compliance information, with virtual or in-person site visits planned for a subsample of participating buildings in order to validate the accuracy of permit data. The project kicked off in mid-Q3 2023, with planning and sample development continuing through Q1 2024. Data collection, including interviews with site contacts, desk review of permit data, and in-person/virtual site visits, are scheduled to commence in Q2 2024 and conclude in Q4 2024. This study includes analysis of billing data; collection of this data is planned to continue through early Q4 2024, with analysis and report preparation to follow.

A final report is anticipated in Q4 2024.



Innovation * Action

Montana Commercial New Construction **Code Compliance Evaluation**

Commercial Codes

FIELDING

The Montana Commercial New Construction Code Evaluation study focuses on (a) assessing the path(s) by which and degree to which code compliance is achieved with the 2018 IECC in newly constructed buildings, and (b) measuring the energy performance of a subset of these buildings as 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 contracted with Michaels Energy to undertake this study. The study design and methodology selected for this project focuses on permit data and building plans as the primary sources of construction and compliance information, supplemented by telephone or virtual interviews with building owners and operators to contextualize and enrich the results of permit and plan analysis. The study also includes virtual or in-person site visits planned for a subsample of participating buildings in order to validate the accuracy of permit data. The project kicked off in mid-Q2 2022, with planning and sample development continuing through Q1 2023. Data collection, including interviews with site contacts and desk review of permit data, commenced in Q2 2023 and is scheduled to conclude in Q2 2024, while in-person/virtual site visits commenced in Q4 2023 and are scheduled to conclude in Q2 2024. This study includes analysis of billing data; collection of this data began in mid-Q1 2024 and is planned to continue through Q2 2024, with analysis and report preparation to follow.

A final report is anticipated in late Q3 2024.



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Battery	Charger	s Stand	lard Eva	luation
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Standards

FIELDING

NEEA's Codes and Standards team engaged in efforts to increase the stringency of the battery chargers standard. NEEA contracted with Michaels Energy to conduct a qualitative assessment of NEEA's influence on the standards processes and provide a quantitative estimate of the share of savings resulting from the standards that are the result of NEEA and other efficiency organizations' efforts. The project kicked off in September 2023 but paused in late 2023 due to a change in the U.S. Department of Energy's (U.S. DOE) timeline for publishing the final rule. Michaels Energy will re-launch the project in August 2024, at which point they will review NEEA records and publicly available documents and will conduct interviews with key stakeholders from NEEA, U.S. DOE and other organizations. A final report is anticipated in Q4 2024.

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Non-Weatherized Gas Furnaces and Mobile Home Furnaces Standard Evaluation

Standards

REPORTING

NEEA's Codes and Standards team engaged in efforts to increase the stringency of the standard for non-weatherized gas furnaces and mobile home furnaces. NEEA contracted with Michaels Energy to conduct a qualitative assessment of NEEA's influence on the standards processes and provide a quantitative estimate of the share of savings resulting from the standards that are the result of NEEA and other efficiency organizations' efforts. The project kicked off in September 2023, and Michaels Energy is reviewing NEEA records and publicly available documents and conducting interviews with key stakeholders from NEEA, U.S. DOE and other organizations.

A final report is available on neea.org.

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TOGETHER We Are Transforming the Northwest





























