Cost Effectiveness and Evaluation Advisory Committee Meeting

DATE: July 31, 2024
TIME: 10:00 AM – 12:00 PM
LOCATION: **Microsoft Teams** Need help?
Join the meeting now
Meeting ID: 244 402 092 589
Passcode: WaZ3Jd

Dial in by phone
+1 971-323-0535,,23399958# United States, Portland
Find a local number
Phone conference ID: 233 999 58#
For organizers: Meeting options | Reset dial-in PIN

AGENDA

TIME	TOPIC	PRESENTER(S)
10:00am	**Welcome/Agenda Review** 1. Agenda check 2. Announcements	Jonathan Belais, NEEA Staff
10:15	**Brief Refresher: NMR Initial Findings** NMR will provide a brief overview of initial findings outlined in their memo and answer questions from the committee. Objective: Level-set before feedback and discussion	NMR Staff
10:30	**Roundtable Question #1:** What are the key implications from your perspective on the alternative approaches? What are the things you are most positive about and most concerned about in the alternatives and NMR's initial recommendations?	Full Committee
10:55	**Roundtable Question #2:** What, if anything, strikes you as particularly surprising or interesting with regard to NMR's draft recommendations?	Full Committee
11:20	**Roundtable Question #3:** Does your organization believe that NEEA's current evaluation approach with the initial recommended changes from NMR is sufficient to assess influence? Why or why not?	Full Committee
11:45	**Additional Feedback and Wrap Up**	Jonathan Belais, NEEA Staff

Memorandum *– Agenda item*

July 8, 2024

TO: Cost-effectiveness and Evaluation Advisory Committee

FROM: Susan Hermenet, NEEA staff

SUBJECT: Evaluation of NEEAs influence on advancing state energy codes

On July 31st, the Cost Effective and Evaluation Advisory Committee (CEAC) will be meeting to learn more about and provide feedback on NMR's initial assessment of the evaluation methodology employed to assess NEEA's influence on advancing energy codes.

At the meeting, NMR will provide a very brief overview (the assumption is that Committee members have read NMR's memo) of their initial assessment with an opportunity for the Committee to seek clarification. After the overview, the remainder of the meeting will be focused on Committee discussion and providing feedback. NMR will consider this feedback in developing their final recommendation(s), which they will present in draft form at the August 28th 3rd quarter CEAC meeting.

As part of the discussion on July 31st, NMR and NEEA staff will ask each Committee member the following questions:

- What are the key implications from your perspective on the alternative approaches? What are the things you are most positive about and most concerned about in the alternatives and NMR's initial recommendations?
- What, if anything, strikes you as particularly surprising or interesting with regard to NMR's draft recommendations?
- Does your organization believe that NEEA's current evaluation approach with the initial recommended changes from NMR is sufficient to assess influence? Why or why not?

To help you prepare for the July 31 meeting, attached you will find NMR's initial memo. In addition, NEEA staff believes the following background information may be helpful.

Why are we doing this evaluation approach assessment and why now?

NEEA staff regularly reviews its evaluation approaches both directly and through engagement of independent firms. This assessment is driven at this time by a recommendation from the Evaluation of NEEA Impacts Allocated to Idaho Power Company and Avista Utilities Within the State of Idaho, dated April 6, 2023, and submitted by: ADM ASSOCIATES, INC. This evaluation was conducted on behalf of Idaho Power and Avista Utilities, and the resulting recommendations for NEEA included the following item:

"Complete influence evaluations for each code update to estimate NEEA's qualitative and quantitative influence towards the code update. Or, alternatively, incorporating a quantitative method for isolating incremental savings due to NEEA-specific efforts approved by a third-party evaluator."

While the majority of ADM's recommendations have been accepted and adopted, NEEA staff did not agree with this one recommendation due to ADM's rationale, which was to apply NEEA's approach used for its "other standards" work to state energy codes. Given that this was NEEA staff's perspective and recognizing that one of CEAC's responsibilities is to review and provide advice regarding new market research and evaluation methodologies, NEEA staff suggested contracting with a 3rd party to assess NEEA's approach to evaluating influence on state energy codes and run the process though CEAC.

At the November 4th, 2024 CEAC meeting, NEEA staff will present their final recommendation regarding an evaluation approach, including any implications of the recommended approach. At that time, staff will ask CEAC Committee members if they support the recommendation and documenting reasons for support or dissent.

How are energy savings calculated and reported?

Energy savings are enabled by NEEA's Market Transformation programs, including codes and standards work that occurs both as a part of and independently from NEEA MT programs", and investment in tools, training, resources, data and research to support greater efficiency. The programs seek to create sustained changes in markets, which then result in energy savings.

Energy savings estimates are one output resulting from changes in markets that the alliance is working to transform or has transformed through collaborative local and regional efforts. NEEA does not attempt to establish attribution of reported energy savings for any energy savings categories, which is why there is no category called "NEEA savings." This method was established by CEAC and the Board early in NEEA's life (a) to ensure energy savings were not double-counted by individual organizations, (b) in recognition that to attempt establish attribution for energy savings categories would be not only difficult but cost-prohibitive, and (c) to minimize the potential for conflict between regional and local interventions. NEEA estimates and reports energy savings in the following categories using the calculation[1]:

Net Market Effects are savings reflecting market change that are not already accounted for in either baseline or local programs estimates.

[1] This calculation is using the market transformation baseline. A second calculation using the Power Plan baseline is used for reporting to some funders.

Total Regional Savings represent savings associated with all market changes since NEEA began intervening in the market and is above the pre-intervention baseline.

NEEA's naturally occurring baseline estimate is energy savings from market growth and change that would naturally occur without any market intervention on behalf of efficiency, including programs funded by any utility, NEEA, Bonneville Power Administration, and/or Energy Trust of Oregon. The primary purpose of the baseline approach is to recognize that, in some markets, the market would eventually adopt the efficient product without any 3rd-party intervention.

NEEA collects local energy efficiency program data annually from each utility, Bonneville Power Administration and Energy Trust of Oregon. The purpose is to recognize the energy efficiency units tracked and reported at the local utility level and ensure NEEA is not double counting the units in its reporting. As such, NEEA aggregates the local utility data and removes the above-baseline savings prior to reporting out to individual funders.

NEEA combines the energy savings estimates of both Local Programs and Net Market Effects to estimate Co-created savings occurring in the market. Co-created savings represent the total energy savings achieved above the forecasted Naturally Occurring Baseline and serves to measure the joint efforts of NEEA and alliance partners, as entities work together to advance the adoption of energy-efficient products and practices in the market.

NEEA models and reports two metrics that assess energy savings from codes. The first is Total Regional Savings. The second is Co-Created Savings.

Total Regional Savings represents the difference in energy consumption from the prior code to the current code.[2] For example, savings rate for the 2017 Oregon Residential Specialty Code (ORSC) uses the prior code— 2014 ORSC—as the baseline. The energy savings is the change in energy consumption between the two codes.

NEEA reports 100% of the savings from code-to-code changes as Co-created Savings for 10 years after construction starts under the new code.[3] Counting 100% of the savings from code changes as Co-created Savings recognizes the level of influence NEEA and its partners have on code development and adoption within the region and nationally for approximately two code cycles. NEEA reviews its assumptions with its Cost Effectiveness Advisory Committee.[4]

Accounting for Compliance

NEEA only applies the code-to-code savings rate to code compliant homes.

- Residential: To estimate the share of homes that comply with codes, NEEA commissions evaluation studies that assess the market's response to updated energy codes in the Northwest (Idaho,

[2] Note NEEA removes savings from appliance and equipment standards advancement prior to reporting Total Regional Savings and also accounts for Code Compliance.

[3] NEEA adopted this approach in 2014.

[4] NEEA's Cost Effectiveness Advisory Committee reviewed this approach in November 2017.

Montana, Oregon, and Washington). While the specific objectives of these studies vary to address the team's specific involvement in and questions about a state's most recent code cycle, an overarching goal of these studies is to provide or inform estimates of state-wide, whole-home compliance with the most recent code.

- Commercial: Commercial building practices different significantly depending on the building type (office, restaurant, school, etc.) and the code measures. As a simplifying assumption, NEEA assumes a 75% compliance rate across commercial code savings because conducting research on compliance after each code across 16 different building types is cost prohibitive.

Accounting for Above Code Building Practices

NEEA recognizes that many buildings are built above the minimum code. In some cases, baseline building practices could be more efficient than the code. In others, the new code could encourage builders to go above the requirements. NEEA's code savings estimates do not account for these variances. This simplifying approach avoids counting energy savings that are being accounted for in NEEA and utility programs that encourage adoption of products and practices that are more efficient than a given state's code.

How does market influence link to energy savings estimates?

NEEA's approach to market transformation is a deeply collaborative process that delivers permanent market change through the identification and support of efficient innovations that can leverage the power of market forces to achieve the long-term goal of cost-effective energy efficiency. Alliance programs are designed to specifically address and overcome market barriers to enable accelerated market adoption of energy-efficient products, services and practices. The alliance conducts a variety of planned interventions (programs) that target various market actors throughout the supply chain to overcome identified barriers. Prior to the start of a program, a logic model is developed. This is an organized and visual way (road map) to display how a market transformation program is hypothesized to work and result in a sustained market change. It explains why the strategy is a good solution to remove/reduce barriers and/or capitalize on opportunities and depicts the "if-then" relationships between the strategies, activities, and outputs leading to outcomes, and the ultimate market transformation goal.

NEEA's market research and evaluation play an important role in articulating these barriers and identifying opportunities to move the market toward greater efficiency, specifically by enabling NEEA to develop targeted intervention strategies and to track and evaluate the effectiveness of these activities. NEEA's Market Progress Evaluation Reports (MPERs) specifically address the question of whether a given program is influencing the market in the manner predicted by the program's logic model, thereby providing evidence that NEEA's activities are transforming the market and increasing uptake of efficient technologies in ways that will lead to sustained market change and resulting energy savings.

For Market Transformation programs, the relationship between market influence and energy savings might not be immediately evident. While MPERs describe market influence, we rely on other data sources, such as sales data, naturally occurring baseline adoption, stock turnover and other modeling assumptions to estimate energy savings. These two reported outcomes of our alliance efforts – market influence and energy savings - are interdependent.

For example, if market progress evaluation results are positive, indicating that the market is transforming in the ways predicted in our program logic model, then we expect to see in the near to medium term an increase in reported energy savings. In other words, NEEA considers positive MPER results (and the claims they make about a program's market influence) as supporting evidence to parallel claims that the program has led to energy savings. Conversely, if MPER results indicate slowed or stalled progress, or perhaps even backsliding in the market, then we would expect to see analogies in estimates of energy savings. We scrutinize market data and savings estimates that are inconsistent with our qualitative understanding of market changes described in market progress evaluations. In this way, market influence substantiates energy savings.

MEMORANDUM

To: Amy Webb, Chris Cardiel, Meghan Bean, and Susan Hermenet, NEEA

From: Matt Woundy, Eugene McGowan, Jared Powell, and Monica Nevius, NMR Group

Date: July 3rd, 2024

Re: Interim Feedback on NEEA Approaches to Estimating Influence Over State Energy Codes

Background

In January 2024, the Northwest Energy Efficiency Alliance (NEEA) contracted with NMR Group to conduct an independent review of NEEA's approach to evaluating its influence on state energy code development and adoption. At the national level, NEEA is involved with the development of the International Energy Conservation Code (IECC). NEEA also engages with each state in NEEA territory (Idaho, Montana, Oregon, and Washington) to influence code development and adoption processes by providing technical support, advocacy, provision of supporting data, and supporting code training programs. NEEA's role varies by state and code cycle, but in each case, NEEA collaborates with key stakeholders to promote the best possible energy-efficiency outcomes.

The goal of this study was to review NEEA's current approach to assessing its influence on state energy codes, as described and reported in NEEA's Market Progress Evaluation Reports (MPERs). Separately, NEEA quantifies the energy savings from energy code updates that can be attributable to the advocacy work of NEEA and its partners (*cocreated* savings). Assessing the specific methodology used to calculate cocreated savings was not in the scope of this evaluation, but the study was designed to suggest potential methodological refinements that might improve the accuracy and defensibility of those calculations. This memo provides interim feedback based on NMR's review of NEEA's current approach alongside four potential alternate approaches to assessing influence and complements an interim results presentation delivered to NEEA's Cost-Effectiveness and Evaluation Advisory Committee Meeting (April 30, 2024). In reviewing the four alternate approaches to assessing influence, our team considered the methodological rigor and the financial feasibility of each approach within the context of NEEA's codes program budget and the regulatory environments within which NEEA and their funders operate. Final recommendations—which may deviate from the interim feedback—will be provided in October 2024.

NEEA continually seeks to refine its methodologies and identify opportunities to create more efficient, defensible, and accurate evaluations of its market transformation initiatives. Coincidentally, a recent evaluation conducted for two NEEA funder utilities included recommendations suggesting changes to the approach used by NEEA to assess its influence, in collaboration with its partners, on energy code outcomes and to calculate savings from these efforts. That evaluation recommended an adjustment factor be applied to the energy savings derived from codes work in a similar way that NEEA adjusts the savings reported from a subset

of NEEA's work, outside of its mainstream market transformation work, to influence the adoption of energy-efficient equipment standards. The savings that NEEA reports for its work on these "other standards" is adjusted downward heavily from overall gross technical potential (GTP) to reflect NEEA and its partners' specific role in equipment standards development and other factors that limit NEEA's influence on a new standard. The recommendation was non-binding, but NEEA did undertake the development of alternative approaches to reporting savings from its energy codes work and fielded this outside assessment of its code influence assessment approach to obtain feedback on opportunities for refinement.

Methodology

NMR interviewed NEEA staff to understand the alliance's work around energy codes and the methods used to evaluate influence and calculate savings. NMR spoke with seven NEEA staff over five interviews, in addition to holding a project kickoff and discussion session to discuss interim findings. The team also conducted a targeted literature review. The literature review provided examples of the methodologies included in the four approaches and NEEA's latest Codes Market Progress Evaluation Report (MPER) #5.[1]

In addition to the documents identified by NEEA for the literature review, NMR revisited codes evaluations led by NMR and other evaluation resources providing guidance on code program evaluation. NMR's approach was not to assess if any one approach was "best," but to assess distinct evaluation components and methodological steps and determine how, if at all, additional methodological refinements would benefit the accuracy, transparency, and defensibility of the market influence and savings numbers reported by NEEA.

[1] Northwest Energy Efficiency Alliance (NEEA) | Codes Market Progress…

Current and Alternate Approaches Considered in this Evaluation

In response to evaluators' recommendations that NEEA reconsider how it assesses its influence on code adoption, NEEA developed four potential alternate approaches that it could use to assess code-related influence and support its work to estimate code-related energy savings. Below, we provide a high-level summary of the current and four alternate approaches.

Current Approach: NEEA's current approach as captured in the Codes MPER #5 is based in part on standard market transformation (MT) approaches with adjustments to reflect the differences between energy codes and typical MT programs. NEEA developed a codes program theory and logic model (PTLM) outlining barriers, activities, outputs, and outcomes. NEEA (and contracted evaluators) revisit the logic model and progress indicators (PIs) developed to track NEEA and its partners' influence to assess if changes are necessary. Research begins with foundational interviews with NEEA staff and document reviews to better understand activities performed in each code cycle. Market actor interviews are used to gather qualitative data that provide evidence of NEEA's influence on the outcomes detailed in the logic model with data from key stakeholders on the importance of NEEA activities in a given code cycle. Codes MPER #5 found that the logic model components and PIs are better defined for NEEA's work on code compliance support training and less so for supporting code development, which is a more complex process that varies across states and may require different activities from NEEA in each state and code cycle.

Alternate Approach 1: California Evaluation Framework. This approach focuses on establishing the proportion of gross technical potential savings from code advancements attributable to the activities of a program administrator. It employs a Delphi Panel or similar market expert panel approach to estimate naturally occurring market adoption, the level of compliance with the newly adopted code, and normally occurring code change processes. Estimates are given for each individual measure affected by the code change. These estimates are used to adjust the gross savings produced by a code change down to only those that can be attributed to the program's intervention.

Alternate Approach 2: Count of Proposals. This simplified approach to evaluating code influence would assess NEEA's effectiveness through a ratio of successful energy-related proposals, that is, the number of proposals adopted into new code as a portion of the total proposals NEEA contributed to. This approach as presented did not include a system to weight proposals by factors such as technical potential energy savings or barriers to adoption.

Alternate Approach 3: Standards Approach. NEEA employs this methodology to evaluate its influence on state and federal standards that are not part of a NEEA MT program (NEEA refers to these as "other standards"). It uses a document review and primary data collection through interviews with key stakeholders to determine what proportion of the gross technical potential savings created by the standard should be reported by NEEA and its partners. NEEA's evaluation contractor develops a series of influence adjustments based on barriers to passing the standard, the effectiveness of NEEA and partners in overcoming barriers through

their activities, and the role (primary, major, minor) NEEA and partners played in each activity. Weighting scores were developed for the magnitude of each barrier based on interview data. The recent evaluation conducted for a group of NEEA funder utilities recommended applying a version of this approach to codes evaluation.

Alternate Approach 4: Qualitative Description of Influence with State Plans. This approach stems from recommendations made in the recent Codes MPER #5. It is similar to NEEA's current approach of measuring code influence qualitatively by confirming activities and outcomes in the logic model but fills gaps in the logic model for state-specific code development activities. MPER #5 did not recommend PIs for NEEA code development activities given the complexity of assessing code influence, as well as the differences in code development and adoption in each state and, as a result, the differences in NEEA's role in each state. This approach suggests creating state specific plans reflective of the logic model to make it easier to create PIs that can be measured qualitatively for each code cycle.

Key Context for NEEA Codes Work

NEEA's regulatory obligations and the philosophy behind its codes work differ from that of other energy efficiency program administrators. In many jurisdictions, the savings claimed from code support activities—including code compliance enhancement programs or initiatives to promulgate more stringent code amendments—are subject to attribution research that identifies net savings claimable by the program administrator after factoring in influence from other stakeholders. In many cases, code attribution research develops multiple adjustment factors on the way to a final net savings result, based on compliance levels, estimates of naturally occurring market adoption (NOMAD), and the relative impacts attributable to the program administrator compared to other stakeholders.

NEEA, however, is not beholden to net savings evaluation methodologies or similar regulatory edicts. That said, NEEA does conduct evaluation research to track market progress, gathering and assessing evidence that the work it performs contributes to anticipated outcomes, given its commitment to evaluating the impacts of its market transformation initiatives. In this particular context, it also performs evaluations to better estimate achieved code savings, primarily by understanding code compliance levels. NEEA executes code compliance studies at the state level to estimate code compliance and adjust reported savings accordingly.[2] NEEA also tracks savings derived from influencing codes outcomes for a 10-year period after a new code is adopted, much shorter than the lifespan of a new building, to reflect changing market conditions that eventually raise market baselines beyond the stringency of that code.

Interviews with NEEA staff and our review of past NEEA evaluations have helped to identify some key components of NEEA's work that represent a departure from codes programs run by administrators in other jurisdictions. In some cases, for example, codes programs are focused solely on training to support increased code compliance. Elsewhere, a program administrator may develop and advocate for a select group of code amendments focused on specific measures where they see an opportunity to push more stringent requirements, such as lighting controls.

Given NEEA's unique approach to influencing energy code outcomes, assessing influence becomes challenging for a variety of reasons, described below.

- **NEEA's work has a broad, multi-level scope**
  - *NEEA's code work operates both at the national level (IECC) and at the state level in Idaho, Montana, Oregon, and Washington to influence the national model code before any model code comes up for consideration by each state. Also at the state level, NEEA works to influence the amendment process or any state-specific additions to*

[2] The relationship between non-compliance and lost energy savings potential is unclear, despite multiple studies from across the field. Given this, NEEA elects to apply a flat 25% adjustment for non-compliance to the commercial savings modeling rather than making adjustments as a direct result of commercial code compliance evaluation findings. However, the results of NEEA's cyclical commercial code compliance evaluation studies are carefully reviewed by the alliance's market analysts and assessed for evidence that would strongly contradict this 25% adjustment. Our understanding is that the commercial code savings NEEA reports is are typically not adjusted by as a direct result of commercial code compliance research evaluation findings, but that the associated savings models rather uses a flat 25% adjustment for non-compliance given the evaluation challenges of understanding commercial compliance rates; however, the results of NEEA's cyclical commercial code compliance evaluation studies are carefully reviewed and assessed for evidence that would strongly contradict this 25% adjustment.

the code, such as those used in Washington, and works to ensure that any model or proposed code updates are passed without edits that would weaken the initial proposals.

- **NEEA serves various roles and provides different research or data support for different states and code cycles**
  - *NEEA may adapt its approach depending on the state and the motivations, priorities, and perspectives of the stakeholders with which they collaborate. NEEA also tries to fill gaps (whether technical expertise, data, or others) as they arise in each code cycle.*
- **NEEA has been advocating for code improvements in the Northwest for a long time and takes a long-term perspective in influencing code updates**
  - *While NEEA is not the only program administrator that has run code programs over a long period of time, the historical presence of NEEA in code cycles across the four-state region is a factor in its level of influence and ability to identify areas of need in each code cycle. NEEA also supports code amendments that may not be adopted in the present code cycle but lays the groundwork for an amendment (or something similar) to be adopted in a future code cycle. This approach to taking the "long game" is possible because NEEA is not required to conduct regulatory net savings reporting or cost effectiveness testing. However, the outcomes of multi-cycle code influence may be more difficult to measure in traditional attribution approaches. At a minimum, recall will be an issue when asking stakeholders to think back several years to which parties most effectively primed stakeholders to be more accepting of a given proposal.*
- **NEEA focuses on collaboration and co-created savings with other key stakeholders**
  - *Many other organizations' evaluations assessing net savings for codes work focus on isolating the impact of the efforts of the party being evaluated, while NEEA emphasizes collaboration with stakeholders to improve overall outcomes. Accordingly, NEEA does not report savings due solely to its own efforts but reports region-wide savings that are "co-created" by NEEA and its partners—a critical distinction to consider when discussing attribution. Because NEEA is focused on maximizing savings outcomes and not preparing for this work to be evaluated for attribution, the available documentation may not allow evaluators to fully identify (and quantify) NEEA influence, relative to the influence of other stakeholders. In addition, the stakeholders may not be prepared to discuss a counterfactual scenario of how outcomes change if NEEA's support was not available given the collaborative nature of code development within an extremely complex process.*

High-Level Review of Alternate Approaches to Assessing Influence on State Energy Codes

In the following subsections, we provide high-level, interim findings regarding the four alternate code influence evaluation methodologies proposed by NEEA and considered as a part of this evaluation.

1. California Evaluation Framework

One key difference between the California evaluation approach and NEEA's current approach is the inclusion of an attribution component. It includes a downward adjustment to gross savings based on the specific portion of savings attributable to the party responsible for the market intervention. Additionally, the California approach represents a substantial increase in methodological rigor – and evaluation cost. It represents a thorough and rigorous evaluation of code influence and adopting a similar approach could produce results with a high level of confidence and defensibility. However, it also would require additional data collection well beyond the scope of NEEA's current evaluation approach, including adding a Delphi Panel approach and gathering information from respondents at the measure level, rather than assessing overall savings due to the code change.

NMR does not currently recommend that NEEA adopt this approach. Increasing the accuracy and precision of results certainly represents a desirable outcome, particularly if doing so yields measure-level results with defensible estimates. However, the costs and the difficulty in obtaining the necessary data are likely far too high to justify such an approach. The MPER #5 study points out the difficulty in assigning PIs related to code influence because many market actors would not understand NEEA's influence on certain outcomes, and that concern would likely impact the results of this approach as well. In addition, we anticipate that evaluation studies rigidly adhering to this approach would be extremely expensive and could substantially outpace NEEA's typical spending on codes evaluation research (possibly by an order of magnitude or more, depending on the scope of the evaluation).

2. Count of Proposals

NMR does not recommend adopting this approach as a primary means of assessing influence due to its relatively low rigor. As mentioned in Codes MPER #5, a count or percentage of accepted proposals only considers the quantity but not the quality or generated savings of those proposals. Without an additional means of assessing relative savings, it would treat every proposal NEEA contributes to as having the same value or impact on the market, which is unlikely. A commercial HVAC code change, for example, might have a larger impact on savings than a residential lighting code change would. A potential refinement here could be to rank the proposals or assign each proposal a certain percentage of the total expected savings all the NEEA proposals would generate. Another factor to consider here is the possibility that oversaturating a code update process with proposals can have negative consequences, for example by overshadowing one particularly impactful proposal with several less impactful proposals in an environment where only a limited number are expected to be chosen.

Additionally, this approach does not capture the full picture of what NEEA's codes work is intended to achieve. It does not tie savings back to the logic model or progress indicators but rather assesses proposed changes solely based on the results of an individual code cycle. This approach only focuses on short term outcomes and may penalize NEEA for contributing to proposals that may be part of a longer-term strategy. For example, NEEA might contribute to proposals that have a lower probability of being adopted in a certain code cycle to increase awareness and the likelihood of it being adopted in future code cycles. It also does not consider

that a longer-term market transformation strategy might dictate a lower or higher number of proposals in a given code cycle.

Although NMR does not recommend this approach as an overall method to assess influence, we consider it a useful progress indicator to supplement the evidence already collected to qualitatively describe influence. It is a metric that NEEA already has on hand and so would not require additional data collection and helps speak to the fact that NEEA works over the long-term to get proposals included in code updates, even if proposals are not accepted immediately.

3. Standards Approach

While there is some overlap between the way NEEA approaches codes evaluation and standards evaluation, the approach used to evaluate influence on standards that are not part of a current NEEA MT program ("other standards") takes a further step to create an adjustment to the total gross technical potential savings based on the extent to which NEEA efforts contributed to the adoption of the new standard. The adjustment is arrived at through market actor estimates of NEEA's effectiveness in overcoming barriers to adoption as well as NEEA's role or primacy in various activities. NMR does not recommend applying this method to the calculation of code influence for two reasons: 1) as mentioned in Codes MPER #5, the market actors who would be relied on to make the assessment of the proportion of the code change influenced by NEEA and its partners efforts may not actually understand NEEA's influence since many of NEEA's activities are aimed at filing gaps in the process that may not appear as direct influence, and 2) the additional costs to study influence are not justified by the level of certainty in results that this would produce.

While this overall approach is not currently recommended, there are aspects of the approach that might be considered. The standards approach gives each identified PI an ordinal assessment: "Yes, NEEA had influence," "No, NEEA did not have influence," or "NEEA had some influence." In the event that PIs for NEEA's influence code development are created based on the state-specific plans recommended in Codes MPER #5 and described below, NMR would recommend NEEA consider adopting this type of qualitative assessment for those PIs in its codes evaluation as well.

4. Qualitative Description of Influence

This approach is similar to the way NEEA has been evaluating its Codes program through MPERs, with some added planning and data collection. Codes MPER #5 recommended that specific plans for each state and code cycle be created to supplement the overall program theory logic model before intervention activities occur. The recommendation stems from the finding that establishing progress indicators for code influence was difficult due to the difference in code processes in each of the four states in the NEEA region, and the fact that the logic model attempts to be general enough to cover all of them. State-specific plans could be adaptations of the logic model that are tailored to the unique circumstances and planned interventions in each state which would increase the likelihood of establishing measurable progress indicators.

Creating separate plans and PIs would take time and effort from NEEA on the front end of a code cycle, including but not necessarily limited to documenting and organizing evidence for activities

that are already occurring. NEEA already plans code interventions in each state; these efforts may simply need to be formally documented and mapped out to complement the logic model, in which case the necessary investment of time and effort may be relatively low. Each of these specific plans would be based on the logic model but simplified, with state and code cycle specific activities in place of the higher-level concepts. PIs intended to be measured qualitatively would also need to be established for these plans so that they can be measured, and having state specific plans would make that more achievable. Data collection from market actors will look similar in this approach with the caveat that it may be broken out by state.

NMR recommends incorporating this approach into NEEA's MPERs. It is in line with current codes MPER methods with refinements to measure influence and characterize other stakeholders more thoroughly. This will add time and budget to NEEA's planning and evaluation, but it will make the assessment of the influence of NEEA and its partners on state energy codes more transparent and defensible.

Preliminary Recommendations

Preliminary recommendations for NEEA's approach to assessing its influence on state energy codes center primarily on adjustments to current research methods that tell a deeper story of the code development process in each state and provide more robust and defensible support for the savings NEEA reports. Below we provide our overarching recommendation followed by supporting recommendations with specific methodological suggestions. **Readers should note that this evaluation is not yet complete, and these preliminary recommendations are subject to change. Readers should also note that these are not recommendations regarding the specific methodology that NEEA uses to quantify savings associated with improvements to energy code, only how NEEA assesses its influence on code changes.**

Overall Recommendation: In MPERs, conduct deeper, state-specific 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.

To support the first recommendation, the NMR team offers additional methodological recommendations, designed to better document NEEA's impacts in this space.

Recommendation: 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 cocreated 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. NEEA is not subject to regulations that require net savings impact accounting and attribution evaluation. There are no binding regulatory requirements for NEEA to apply any type of adjustment to the cocreated codes savings they report on behalf of NEEA and partners. As such, 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.

Recommendation: Create strategy plans for each state and code cycle as recommended in Codes MPER #5 and integrate their development and execution into the Codes 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.

Recommendation: 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.