Cost-effectiveness & Evaluation Advisory Committee Meeting

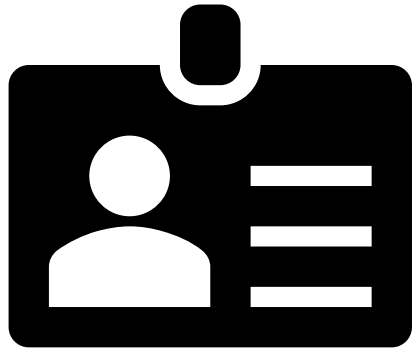
Northwest Energy Efficiency Alliance

November 30, 2023

CLASSIFICATION LEVEL: PUBLIC

Introductions

- Name
- Organization
- Question(s) for today?



Agenda

9:00AM	Welcome/Agenda Review
9:15	MRE Update
9:30	Market Progress Evaluation Report Recap
10:10	BREAK
10:20	Key Assumption Updates
10:50	State Energy Code Assessment Introduction
11:35	Wrap Up

Why are we here again?

CEAC Charter

Responsibilities

1. Review and advise regarding NEEA cost-effectiveness and savings information to inform 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 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.

LEADERSHIP IN
ENERGY EFFICIENCY
AWARDS

Join us for the hybrid ceremony!

NEEA's Board and staff will recognize individuals and teams for their exemplary dedication and performance in energy efficiency during the NEEA Board Annual Meeting on **December 4**.

Rising Star
Innovative Collaboration
Lifetime Achievement

To RSVP* go to: **neea.org/leadershipawards**

**in-person attendees must RSVP by Nov. 17*

Quick Updates

- 2024 CEAC Dates:
  - Q1 – Wednesday, February 28th
  - Q2 – Tuesday, April 30th
  - Q3 – Wednesday, August 28th
  - Q4 – Monday, November 4th
- Dual Fuel Work Group

Market Research and Evaluation (MRE) Update

Objectives

- Committee awareness of market research and evaluation activities

2023 Q3 Market Research & Evaluation Quarterly Newsletter

WHAT'S NEW:

Hello everyone!

Welcome to another issue of NEEA's quarterly Market Research and Evaluation (MRE) newsletter. There are a number of studies underway, many of which will be posted during the Q4 2023. Look for several market progress evaluation reports (MPERs) in the next few months, including the Luminaire Level Lighting Controls, Heat Pump Water Heater, Retail Product Portfolio, and Manufactured Homes MPERs. These are the annual mixed method evaluations that assess progress toward pre-defined market outcomes by measuring a set of market progress indicators (MPIs).

Earlier this year, the MRE team launched a combined MPER for two commercial HVAC programs – the electric High-Performance HVAC and natural gas Efficient Rooftop Units programs. The study will deliver individual evaluation reports to these two programs, but will create several efficiencies, such as combining recruiting and data collection efforts.

And finally, NEEA recently contracted with Dr. Michael Harnar, Director of the Interdisciplinary PhD in Evaluation at Western Michigan University, to conduct an assessment of MRE's approach to the evaluation of Market Transformation programs. The final report from that assessment is available on neea.org.

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

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At a Glance

MARKET RESEARCH & EVALUATION PROJECTS

	PLANNING*	FIELDING*	REPORTING*
Integrated Systems			
High-Performance HVAC: *Market Progress Evaluation Report #1*		✓	
Efficient Rooftop Units: *Market Progress Evaluation Report #1*		✓	
Luminaire Level Lighting Controls: *Market Sizing*			✓
Luminaire Level Lighting Controls: *Key Assumptions Review*		✓	
Luminaire Level Lighting Controls: *Market Progress Evaluation #2* Today!			✓
BetterBricks: *Commercial Building Market Research*		✓	
Products			
Extended Motor Products: *Market Progress Evaluation Report #1*	✓		
Efficient Fans: *Fan System Market Characterization*		✓	
Heat Pump Water Heaters: *Installer Focus Groups*			✓
Heat Pump Water Heaters: *Cold Climate Demonstration Installation Project*			✓
Heat Pump Water Heaters: *Market Progress Evaluation Report #7* Today!			✓
Retail Product Portfolio: *Market Progress Evaluation Report #2* Today!			✓
Motor-Driven Products: *Commercia-Sector Adjustable-Speed Drive Market Research Study*			✓

At a Glance

MARKET RESEARCH & EVALUATION PROJECTS

Codes, Standards, New Construction

	PLANNING*	FIELDING*	REPORTING*
Manufactured Homes: *Transition Market Progress Evaluation Report*			✓
Commercial Codes: *Idaho Commercial New Construction Code Evaluation*		✓	
Commercial Codes: *Montana Commercial New Construction Code Evaluation*		✓	
Commercial Codes and Residential Codes: *Market Progress Evaluation Report #2*		✓	
Residential Codes: *Idaho Residential Code Compliance Evaluation*		✓	
Residential Codes: *Oregon Residential Code Compliance Evaluation*	✓		
Residential Codes: *Montana Residential Code Compliance Evaluation*		✓	
Standards: *Non-Weatherized Gas Furnaces and Mobile Home Furnaces Standard Evaluation*	✓		
Standards: *Battery Chargers Standard Evaluation*	✓		

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

ANNUAL MARKET PROGRESS EVALUATION REPORTS

PURPOSE AND SCOPE

TRACK MARKET PROGRESS

To track market progress indicators and assess program effectiveness at overcoming barriers

REVIEW LOGIC

To review the program logic model and theory of change

ADAPTIVE MANAGEMENT

To provide current market intelligence for program adaptive management

Market Progress Evaluation Report Recap

NEEA Retail Product Portfolio (RPP) Market Progress Evaluation Report #2 Findings

Meghan Bean

Sr. Market Research & Evaluation Scientist

NEEA's RPP Program

Long-term objective: Manufacturers build energy efficiency into product designs for consumer goods

RPP Interventions
Emerging technology
Midstream incentives
Measurement and compliance
Specification advancement
Standards

NEEA's RPP Program

NEEA must partner with funders outside the Northwest so that the program is large enough to influence retailers and successfully advocate for updates to test procedures, federal standards, and ENERGY STAR® specifications

2016
NEEA joins the national ESRPP program

2019
NEEA's RPP Program moves into Market Development

2021
NEEA begins facilitating the national ESRPP program

2021
RPP MPER #1
Focus on 2020 program year

2023
RPP MPER #2
Focus on 2021 program year

NEEA ESRPP MPER #2 Research Objectives

1. Evaluate NEEA's revised RPP logic model
2. Document the status of market progress indicators (MPIs) in the Northwest in 2021
3. Evaluate NEEA's assumption that participating retailer savings can be extrapolated to nonparticipating retailers
4. Assess how market "shocks" affect sales of RPP-supported products in the Northwest

NEEA ESRPP MPER #2 Research Objectives

1. Evaluate NEEA's revised RPP logic model
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Research Objective #2

Document the status of market progress indicators (MPIs) in the Northwest in 2021

MPI Assessment Methods

- Document review
  - Internal NEEA strategy documents
  - NEEA RPP MPER #1
  - Published evaluations of NEEA and partners' influence on test procedures and ENERGY STAR® specifications
- Sales data analysis

Market Progress Indicators (MPIs) by Product – 2021

Key MPIs differ for each product year-to-year based on the current strategy

	Retailers consider ESRPP qualification in assortment and marketing decisions	Market share of ESRPP-qualified product tiers increases	ENERGY STAR (or higher tier) qualifying criteria increases	Test procedures are improved	Federal minimum standard increases
Refrigerators	X	X	X	X	
Freezers	X	X	X	X	
Clothes washers	X	X			
Clothes dryers	X	X			
Room ACs	X	X	X		
Televisions			X	X	

Market Progress Indicators (MPIs) by Product – 2021

✓ Clear progress ---- Mixed or limited progress O Progress stalled

	Retailers consider ESRPP qualification in assortment and marketing decisions	Market share of ESRPP-qualified product tiers increases	ENERGY STAR (or higher tier) qualifying criteria increases	Test procedures are improved	Federal minimum standard increases
Refrigerators	✓	✓	✓	✓	
Freezers	----	----	✓	✓	
Clothes washers	✓	O			
Clothes dryers	✓	O			
Room ACs	----	----	✓		
Televisions			✓	✓	

Research Objective #3

Evaluate NEEA's assumption that participating retailer savings can be extrapolated to nonparticipating retailers

Background

- NEEA assumes that participating retailer sales can be extrapolated to nonparticipating retailers in the Northwest
- Is there evidence that NEEA's assumption is false?
- Methods
  - Literature review
  - Review of participating and nonparticipating retailer website pricing and brand information for ENERGY STAR products

Website Analysis Methods

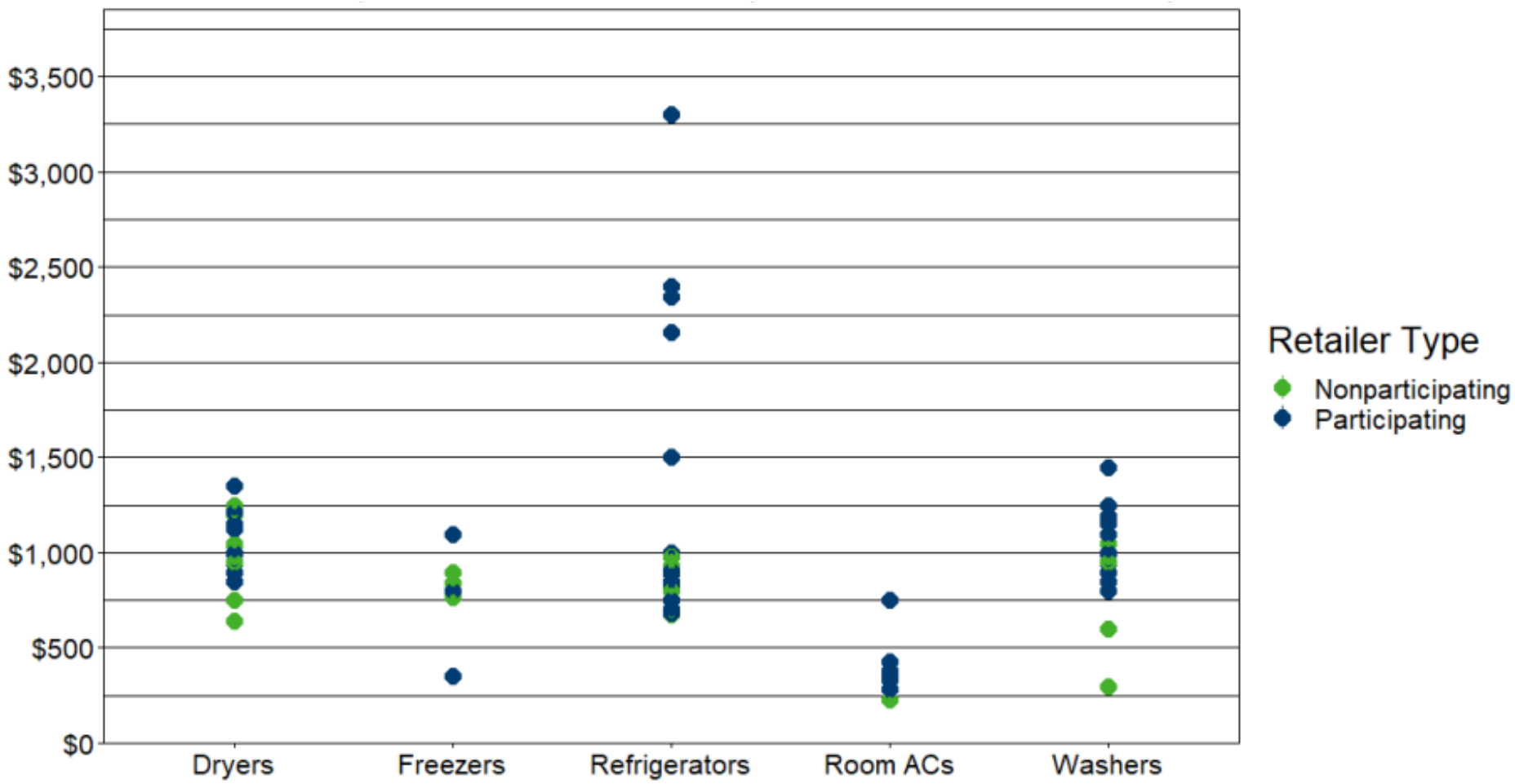
- 8 cities in the Northwest
  - Idaho: Boise & Idaho Falls/Pocatello
  - Montana: Billings & Missoula
  - Oregon: Portland & Bend
  - Washington: Seattle & Spokane
- Participating (Best Buy, Home Depot, Lowes, Nationwide Marketing Group) & nonparticipating retailers
- Collected data on the lowest priced ENERGY STAR product available

Findings

- Literature supports the assumption that ESRPP influences non-participating retailers
- For refrigerators, clothes washers, and clothes dryers, there is evidence that the program influences non-participating retailers
- Not enough information available for freezers and room ACs

Findings

Nonparticipating and participating retailers offer similar pricing for ENERGY STAR products.



Research Objective #4

Assess how market "shocks" affect sales of RPP-supported products in the Northwest

Market Shocks Assessed

- COVID-19 waves
- COVID-19 stimulus checks
- Temperature
- Housing
- Wages
- Air quality
- Energy prices
- Unemployment rates

Findings

- COVID-19 waves
- COVID-19 stimulus checks
- Temperature
- Housing
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- Air quality
- Energy prices
- Unemployment rates

 |

Findings

- Temperature
  - Spike in room AC sales during the 2021 heat dome event
  - Market share of ENERGY STAR models remained constant → retailers had stocked large quantities of efficient models
- COVID-19 stimulus checks
  - Refrigerator sales jumped concurrently with stimulus checks
  - Difficult to determine whether stimulus checks were a key contributor

Key Findings & Recommendations

Key Findings & Recommendations

- NEEA should consider additional research to investigate barriers to increased adoption of…
  - Top-loading clothes washers
  - Heat pumps dryers

- TRC found no evidence that NEEA should change its approach to extrapolating savings to the full market

Meghan Bean

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Luminaire Level Lighting Controls (LLLC) MPER #2

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MRE Scientist

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CLASSIFICATION LEVEL: PUBLIC

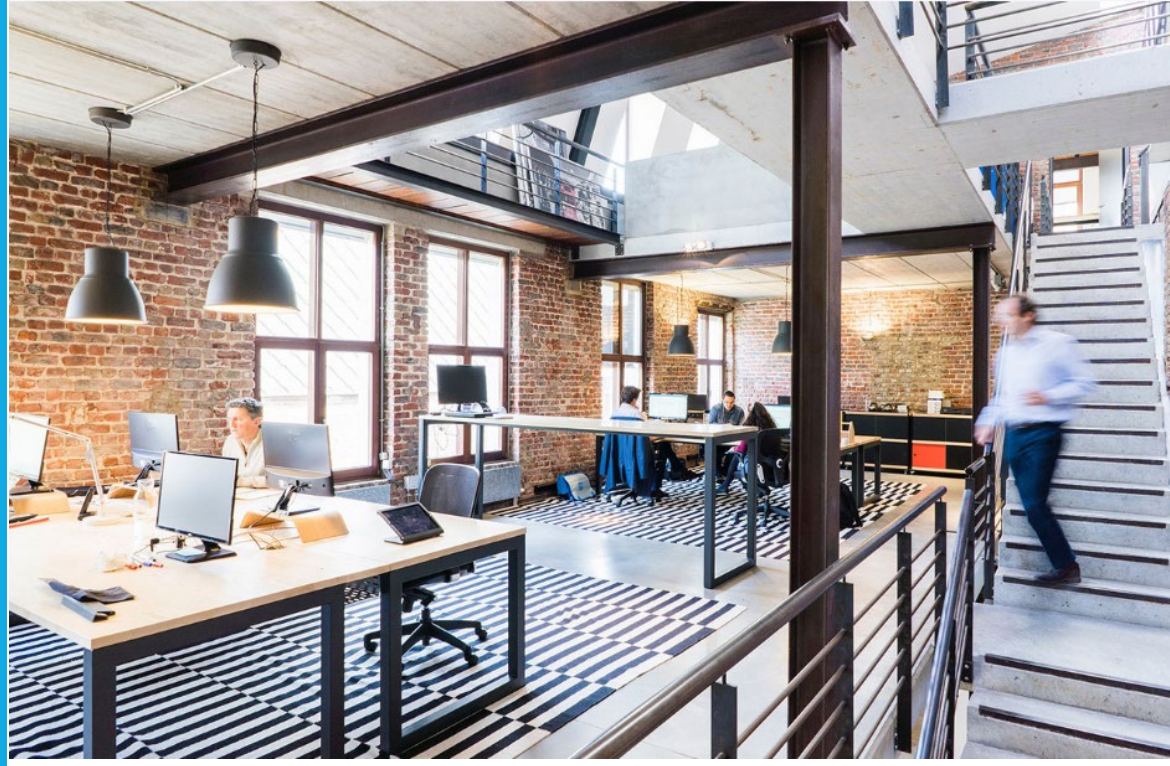


Image courtesy of Lutron Electronics

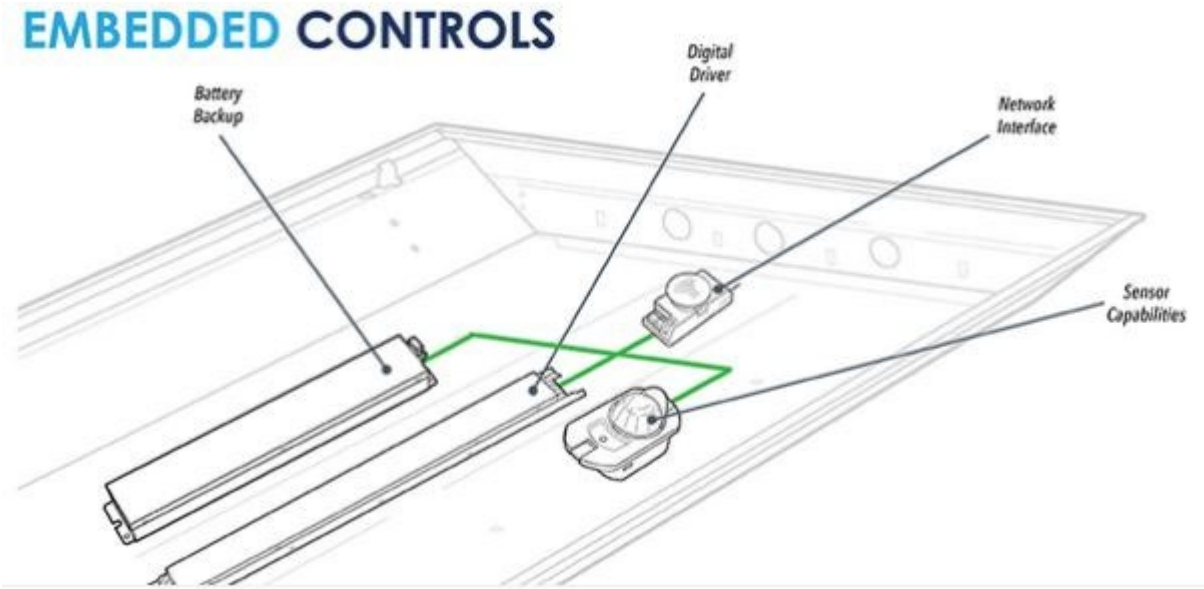
LLLC MPER #2

- LLLC capabilities
- LLLC Market Transformation Goal
- Research and Evaluation Questions
- Methods
- Conclusions & Recommendations

LLLC MPER #2: LLLC Capabilities

LLLC:

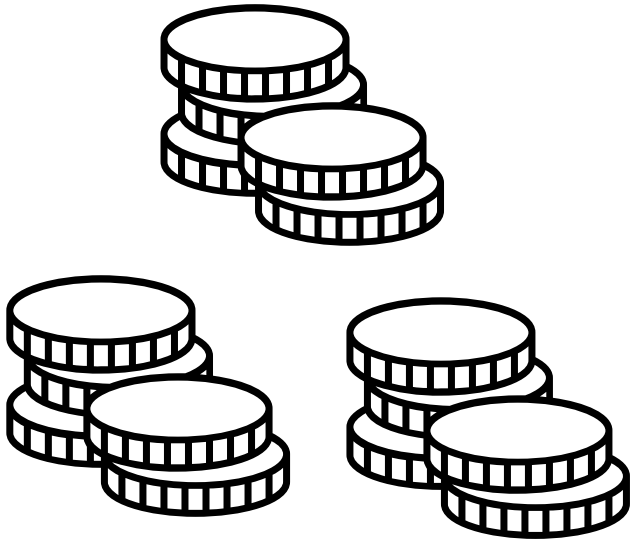
- Are networked connected lighting systems,
- Have at least 1 sensor per luminaire, and
- Feature:
  - Occupancy sensing
  - Continuous daylighting
  - High end trim
  - Asset Tracking

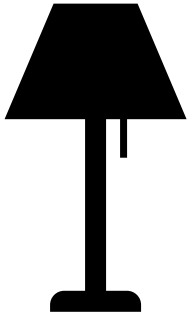


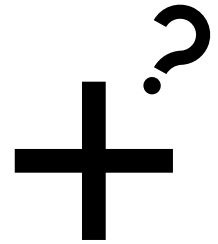
LLLC MPER #2: Market Transformation Goal

To create a market where LLLC are the standard practice for commercial buildings in the Northwest (including new construction, major renovations, and lighting retrofits).

LLLC MPER #2: Barriers to LLLC







LLLC MPER #2: LLLC Program Strategy

Addressing barriers by supporting:

- Product specification
- Development of utility incentive programs
- Updates to relevant codes
- Trainings for market actors
- Development of case studies highlighting value proposition

And by working with:

- Trade and industry associations to educate members
- Manufacturers to promote LLLC in their regions

LLLC MPER #2: E&R Questions

1. Does NEEA program strategy align with predicted market changes?
2. What changes are happening, relative to NEEA's predicted outcomes?
3. What insights can NEEA gain into the current lighting market?
4. What are decision-makers valuing and not valuing about their purchase and use of LLLC?

LLLC MPER #2: Methods

Participant Summary

Method	# of Participants
Market Actor Surveys:	
Manufacturers	4
Manufacturer Representatives	7
Distributors	1
Design/Specifying Company Reps	27
Installation Company Reps	30
Decision-maker Interviews	8
Alliance Utility Program Managers	5
NEEA LLLC Program Staff	3

LLLC MPER #2: How Each Q Address by Methods

E&R Question	Market Actor Survey	Decision-Maker Interviews	Review DLC Website	NEEA Staff Member Interviews	Review Program Strategy Materials	Utility Program Manager Interviews
1) Strategy Alignment?				X	X	X
2) Progress Towards Outcomes?	X	X	X			
3) Lighting Market Intelligence	X	X				
4) Decision-Maker Values & Experiences		X				

LLLC MPER #2: Conclusions

NEEA's program modifications have kept pace with LLLC market changes and continue to advance LLLC market share.

LLLC MPER #2: Conclusions

NEEA's efforts to advance LLLC have resulted in progress in several aspects of the LLLC market.

LLLC MPER #2: 3 Short-Term Outcomes Achieved

Table 2. 2022 Estimated Value for LLLC MPIs Assessed in MPER 2

Expected LLLC Program Outcome (Logic Model)	LLLC Program MPI	MPI 2021 Estimated Value	MPI 2022 Estimated Value
Outcome I (short term) 1. Utilities support LLLC through programs with incentives	**1A.** Utilities establish LLLC incentive programs	10 programs[a] (of 12 possible)	11 programs (of 12 possible)
Outcome II (short term) 1. DesignLights Consortium (DLC) maintains a Qualified Products List (QPL) 2. Specification continues to advance	**2A.** DLC regularly reviews the LLLC QPL	Achieved	Achieved – no changes
	2B. DLC regularly reviews LLLC specification and updates	Achieved	Achieved – no changes

LLLC MPER #2:
3 Short-Term Outcomes Achieved

Expected LLLC Program Outcome (Logic Model)	LLLC Program MPI	MPI 2021 Estimated Value	MPI 2022 Estimated Value
Outcome VII (short term) 1. LLLC is an optional path in Washington code, and LLLC is referenced in the 2018 International Energy Conservation Code (IECC)	**7A.** LLLC is an Optional Compliance Path in Washington code	Achieved	Achieved – no changes
	7B. LLLC is referenced in the 2018 IECC	Achieved	Achieved – no changes

LLLC MPER #2:
1 Short-Term Outcome was the Same

Expected LLLC Program Outcome (Logic Model)	LLLC Program MPI	MPI 2021 Estimated Value	MPI 2022 Estimated Value
Outcome IV (short term) 1. Increase in supply-chain awareness among trade allies and lighting designers	**4A.** The percentage of lighting installation companies and the companies with lighting designers/specifiers who are aware of LLLC	Installation companies: 78% (n=179) Designer/ specifier companies: 68% (n=86)	Installation companies: 78% (n=33) Designer/ specifier companies: 82% (n=31)

LLLC MPER #2: Notable Progress in 2 Short-Term Outcomes

Expected LLLC Program Outcome (Logic Model)	LLLC Program MPI	MPI 2021 Estimated Value	MPI 2022 Estimated Value
Outcome III (short term) 1. Manufacturers formalize and provide LLLC training 2. Lighting Design Lab provides LLLC training 3 NEEA's NXT Level training includes LLLC	**3A.** Manufacturers with LLLC products on the DLC QPL offer LLLC training to at least one type of supply-side market actor	All manufacturers interviewed had LLLC trainings with at least one supply-side market actor (n=7)	All manufacturers interviewed had LLLC trainings with at least one supply-side market actor (n=4)
	3B. The percentage of lighting installation companies with at least one installer trained in LLLC	32%[c] (n=66)	71% (n=32)
	3D. The percentage of lighting installation companies with the capability to bid on a project that involves LLLC installation	66% (n=145)	71% (n=33)
	3E. Percentage of companies with at least one LLLC-trained installer in each state[b]	Not assessed in MPER 1	ID (n=20): 57% MT (n=8): 46% OR (n=23): 69% WA (n=24): 73%

LLLC MPER #2: Notable Progress in 2 Short-Term Outcomes

Expected LLLC Program Outcome (Logic Model)	LLLC Program MPI	MPI 2021 Estimated Value	MPI 2022 Estimated Value
Outcome V (short term) 1. Lighting designers and specifiers recommend LLLC solutions	**5A.** The percentage of companies with lighting designers/specifiers who have recommended LLLC to a decision-maker for at least one project	44% (n=75)	63% (n=27)
	5B. The percentage of companies with designers/specifiers who say they have written LLLC into at least one project plan	35% (n=78)	61% (n=27)

LLLC MPER #2: Baseline for Last Short-Term Outcome

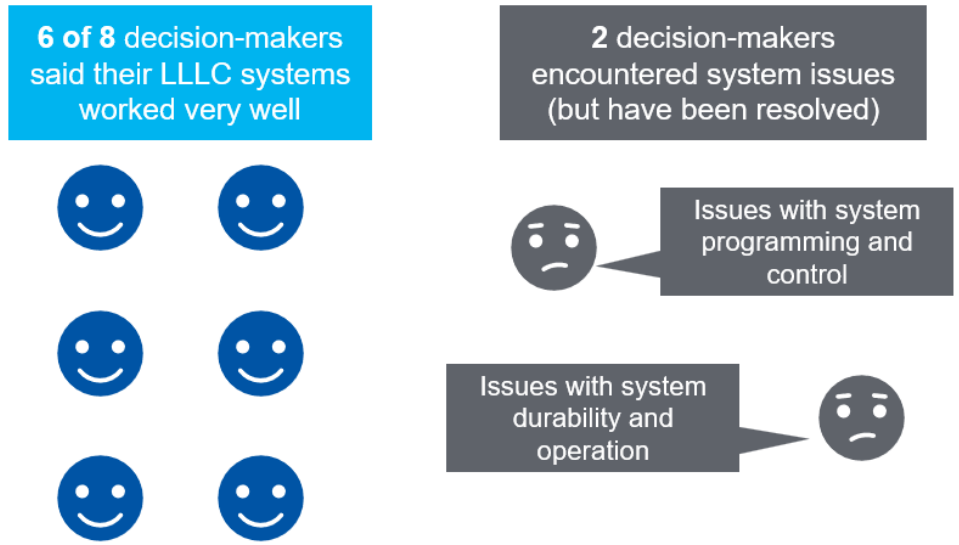
Expected LLLC Program Outcome (Logic Model)	LLLC Program MPI	MPI 2021 Estimated Value	MPI 2022 Estimated Value
Outcome VI (short term) Manufacturers increase the number of product types with embedded controls.	**6A.** Manufacturers say compared to the previous year, for at least one of these fixture types – low-bay, high-bay, recessed can, & retrofit kits – they have increased the number of products available with embedded controls	Not assessed in MPER 1	4 of 4 manufacturers
	6B. Sales reps say there are sufficient types and styles of fixtures with embedded controls to meet their customers' needs	Not assessed in MPER 1	6 of 7 manufacturer's representatives

LLLC MPER #2: Growth in One Medium-Term Outcome

Expected LLLC Program Outcome (Logic Model)	LLLC Program MPI	MPI 2021 Estimated Value	MPI 2022 Estimated Value
Outcome IX (medium term) 1. LLLC is accepted as the easiest-to-install lighting controls solution	**9A.** The percentage of installation companies that report having installed at least one LLLC system (i.e., "experienced installation firms")	61% (n=159)	63% (n=32)
	9B. The percentage of experienced installation companies that say LLLC systems are easier to install than other NLC systems	43% (n=59)	74% (n=21)

LLLC MPER #2: Baseline for 2nd Medium-Term Outcome

Expected LLLC Program Outcome (Logic Model)	LLLC Program MPI	MPI 2021 Estimated Value	MPI 2022 Estimated Value
Outcome XI (medium term) Increase in decision-maker selection of LLLC systems	**11B**. Year-over-year improvement in satisfaction level reported by customer-side decisionmakers who have purchased LLLC	Not assessed in MPER 1	6 of 8 respondents



LLLC MPER #2: Program on track

- ✓ Assessed MPIs for Outcomes 1 – 7, and 9 & 11
- ✓ Outcomes 1, 2 & 7 achieved
- ✓ Notable progress for Outcome 5 and parts of 3 & 9
- ✓ Maintained levels for Outcome 4 and parts of 3 & 9
- ✓ Attained baseline for Outcomes 6 & 11 and part of 3

LLLC MPER #2: Conclusions

Additional insights into the market

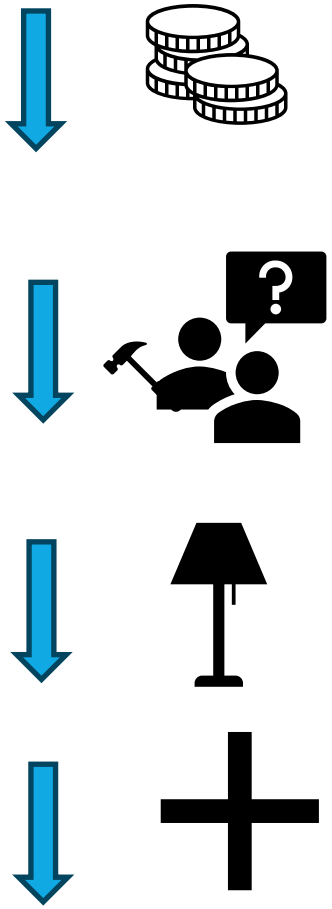
- 1 out of 5 installers felt less than confident selling LLLC
- Even though incremental costs compared with non-controlled lighting has come down by 44% since 2017, first cost is still the perceived as the first barrier by installers & designers
- Over half of installers & designers indicated that LLLC sales had increased

LLLC MPER #2: Conclusions

Additional information about decision-makers

- Reasons for upgrading lighting included energy savings, improved quality of light, enhanced control, and meeting code requirements during retrofits.
- After installation, respondents were most likely to share that they valued networked capabilities, zoning, individual addressability, and occupancy sensing.

LLLC MPER #2: Program is on track for market transformation goal as barriers being addressed



- LLLC is becoming less expensive compared to non-controlled lighting
- More downstream market actors have received training in LLLC, are recommending it to others, and are including it in their project plans
- Manufacturer representatives reported more LLLC product types available compared to previous year
- More installers & designers are knowledgeable about the value proposition

Questions?

Thank you!

November 30, 2023

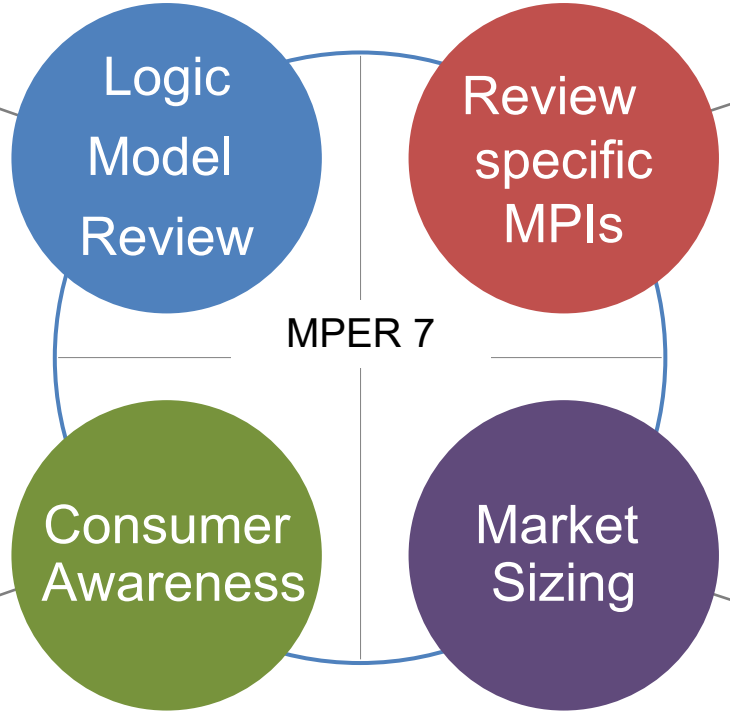
Heat Pump Water Heater 7th Market Progress Evaluation Report High Level Findings

Anu Teja, MRE Senior Scientist



MPER 7 Objectives

Ensuring that logic model is reflective of program theory towards Market Transformation.



Addressing MPIs related to high priority market barriers

Tracking consumer awareness per the Boring but Efficient Campaign

Conducting a review of the market size using historical trends from 2021 & MPER 7 primary data collection. (NEEA did not receive 2022 manufacturer sales and shipments data.)

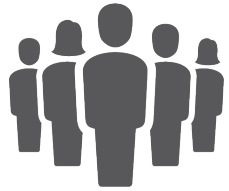
Some of this Year's Research Efforts

Activities can vary

Key Research Activities

- Review of current logic model
- Estimate size of HPWH market
- Survey water heater installers including those installers.
- Survey of general consumers
- Scrape retailer websites for stocking practices

MPER 7 takeaways on the Market



Strong foundation for HPWH adoption in the marketplace

- Installers express favorable opinions

Though now familiar w/HPWHs, installers still don't recommend them for all homes

- Call backs pose a concern
- Cost concerns prevail

Water heaters not top of mind for consumer

- Consumer survey indicates that WH failure or breakage result in need to purchase a new unit.

Retailers are still critical players in pushing HPWHs forward:

- They play a key role in the DIY market(59% of consumers said they purchased via retail channels)

Market Sizing Efforts

- Estimate that the total number of HPWHs in the region is 23,000 installs (new & existing construction)
- This equates to about 15% of market share in the NW.

Third Party Contractor Recommendations

- Continue to engage with installers to overcome the barriers that limit installer recommendations, empower them to address their head-on concerns.
    - Coordinate “simpler quality installations” to instill confidence.
- Increase visibility of HPWHs in retail stores & their online channels.
- Adjust logic model to better track consumer awareness and purchase of HPWHs
- Other suggestions are provided in the report

On-going Program Activities towards Market Transformation

- Continuing to grow consumer awareness of HPWHs in the region.
  - Efforts include digital market awareness campaigns in both urban and rural markets.
- Developing educational trainings and real-life installation scenarios to address current needs of installers in the region.
  - Helps to boost confidence to ensure they can tackle more complex installations as needed.
- Increased efforts to engage with retailer channels is underway, to advance HPWH visibility among potential purchasers.

Preparing for MPER 8

- RFP & selection of new contractor in Q3 2024.
- MPER 8 activities start in Q4 2024 thru Q2 2025.

Questions?

Thank you!

BREAK

Key Assumption Updates

2023 Q4 Key Assumptions Quarterly Report

WHAT'S NEW:

Greetings from the NEEA Data, Planning and Analytics team!

In this report, NEEA staff have assumption updates for High-Performance Windows, Heat Pump Water Heaters, HVAC Data Collection, and Advanced Heat Pumps. NEEA staff will present on these assumption updates at the upcoming Q4 Cost Effectiveness Advisory Committee (CEAC) meeting, which takes place on November 30, 2023.

As always, committee members can access the full set of assumptions for each reporting year on NEEA's Funder Portal.

~ **Stephanie Rider**, Director of Data, Planning & Analytics ~

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Questions about this report may be addressed to:

Stephanie Rider
Director of Data, Planning and Analytics
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PUBLISH DATE: November 21, 2023

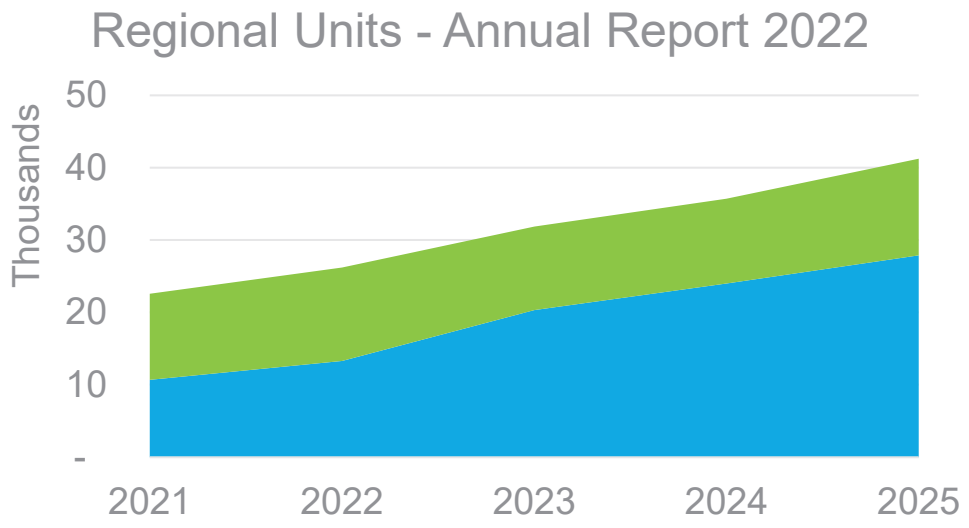
Available in meeting packet and at https://neea.org/portal/savings-reports

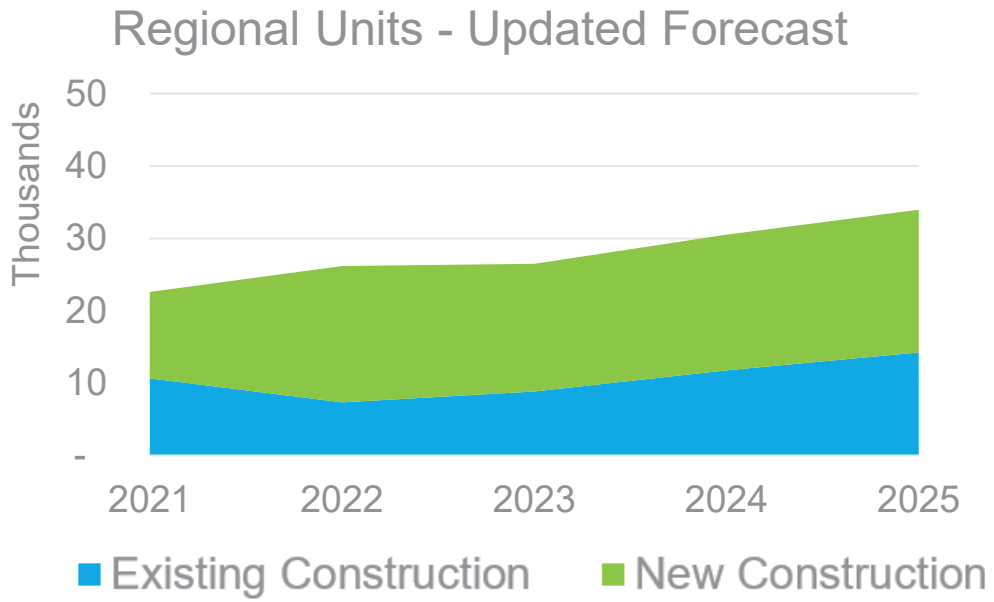
Heat Pump Water Heaters – New Construction Update

- WSEC 2018 Residential Code Evaluation Study was finalized and published in July 2023
  - Significant increase in percentage of homes using electric water heating over homes built under WSEC 2015, from 37% to 89%
  - Of homes using electric water heating, more than 90% had installed a heat pump water heater
- New construction market channel estimates have been updated
  - Regional estimates of HPWH installed in new construction increased from 49% to 77% for 2022
- These estimates are corroborated by distributor data provided to NEEA

Heat Pump Water Heaters – Regional Market Forecast

- Data provided by distributor and retail partners shows a declining trend in sales from Q4 2022 through Q2 2023
- Forecast estimates have been adjusted to anticipate a year of flat sales growth within the region for 2023
- Forecasts have also been adjusted to account for slower than estimated growth in the replacement market channel





Heat Pump Water Heaters – Savings Preview

aMW	HPWH Savings		Approximate New Construction Washington Code Savings		Combined Savings	
Year	Annual Report 2022	Updated	Annual Report 2022	Updated	Annual Report 2022	Updated
2023	4.5 - 6.0	3.5 - 4.5 **(-24%)**	1.0	1.5 **(+50%)**	5.5 - 7.0	5.0 - 6.0 **(-12%)**
2024	5.0 - 7.0	4.0 - 4.5 **(-29%)**	1.5	2.5 **(+67%)**	6.5 - 8.5	6.5 - 7.0 **(-10%)**
2025	6.0 - 8.5	4.0 - 5.5 **(-34%)**	1.5	2.5 **(+67%)**	6.5 - 10.0	6.5 - 8.0 **(-12%)**

State Energy Code Assessment Introduction

Evaluation of NEEA Impacts Allocated to Idaho Power Company and Avista Utilities within the State of Idaho – Background and Recommendations

Cost Effectiveness and Evaluation Advisory Committee

November 30, 2023

Becca Yates, Executive Director
Susan Hermenet, VP, Analytics, Research & Evaluation

Today's Agenda

- Background – Idaho Evaluation
- NEEA Board Expectations
- Role of CEAC
- Process and Milestones

Timeline of Events

- **August 13, 2021**: In the proceeding regarding Avista's 2018-2019 Energy Efficiency Expenditures, the Idaho Public Utilities Commission ordered Avista to conduct a separate EM&V for NEEA to be included in the next DSM filing.
- **December 27, 2021:** In the proceeding regarding Idaho Power's 2020 DSM expenses the IPUC ordered Idaho Power to conduct and independent evaluation of NEEA's EM&V practices.
- **March 15, 2022:** Idaho Power files an application for 2021 expenses and states they are working with Avista to put together an RFP for a third-party evaluator, expecting results by the end of 2022.
- **October 20, 2022:** NEEA staff received first data request from ADM, the third-party evaluator
- **April 7, 2023:** NEEA received letter and draft evaluation report from Avista and Idaho Power
- **April 24, 2023:** NEEA staff met with Executive Committee to discuss recommendations & draft response
- **May 4, 2023:** NEEA provided response to recommendations and report to Idaho Power and Avista
- **May 17, 2023:** ADM, Avista, Idaho Power and NEEA teams meet to discuss NEEA response
- **May 17-early June 2023:** NEEA provided additional data/information to ADM
- **June 14, 2023:** Avista, Idaho Power and NEEA staff share top-line findings from report with NEEA Board
- **July 12, 2023:** Final report posted with case files including the addendum to the evaluation report

Recommendations with minimal impact on NEEA operational costs

Rec. #	Description	NEEA Response
#1	Request NEEA to report annual savings via service territory methodology.	Standard offering since 2010, at the request of a funder.
#2	Request that annual savings reports include estimates of administrative costs, incentive costs, and non-incentive costs by service territory.	Impact on labor cost to produce cost estimates specific to Idaho.
#4	Track progress for each code change relative to administrative dollars spent towards state level codes and associated energy savings accrued by each state-level code.	Impact on labor cost to produce report specific to Idaho.
#5	Detail measure-level values as accurately as possible, and that each field is completed in the workbook to allow for year-over-year tracking of regional units, baseline units, retirement units and unit energy savings over time.	This is NEEA's current practice.
#6	~~NEEA to distribute naturally occurring baseline units more equitably between local program units and total regional units. (Evaluator rescinded in June addendum)~~	This is NEEA's current practice.
#8	Complete third-party influence evaluations for all federal standards claimed by NEEA, as well as any future standards in which NEEA hopes to claim savings for the future. Using quantitative estimate of influence calculate a naturally occurring baseline for each standard.	This is NEEA's current practice.

Recommendation #9

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.

The highlighted text was added as part of the June 15th addendum.

- NEEA's Response:
  - NEEA conducts 3rd party influence evaluations for all of its market transformation work, including state energy codes. NEEA does not attempt to develop a quantitative influence score for market transformation work which would be used to report energy savings.
  - NEEA does develop a 3rd party quantitative influence score for a stream of opportunistic work for some federal standards work which is used to report energy savings.

Board Direction: Conduct a review of evaluation methods for state energy code work.

Description:

- NEEA conducts a review of evaluation methods with a third-party review.
- Results and recommendations are reviewed through the Cost Effectiveness Advisory Committee:
  - Embeds process within NEEA's current operating parameters.
  - Honors NEEA's regional collaborative approach.
- Any additional evaluation costs capped at $500K for the business cycle.

Board Parameters

- Staff provide quarterly status to Board of Directors
- Evaluation methods be reviewed and supported by CEAC and approved by NEEA Executive Director.
- Must not exceed $500K over the five-year business cycle.
  - Budget would be either absorbed within current draft C7 budget or added to.
  - If absorbed in current draft budget, staff would look for trade-offs to bring forward as part of annual Operations Planning.

Potential Implications: Conduct a review of evaluation methods for state energy code work.

- Resource burden for CEAC – tight timeline.
- Possible implications to other NEEA core Market Transformation work.
- Impact to other funders, including reported energy savings.
- Operations planning trade-offs.
- Uncertain outcome.

Outcomes and Objectives to Address Recommendation #9

- Outcome:
  - Develop a recommendation for a framework for evaluating state energy codes that is most applicable to Market Transformation and NEEA's current framework for reporting energy savings.

- Objectives:
  - Assess the current evaluation approach to state energy codes.
  - Explore alternative frameworks for evaluating and reporting energy savings associated with state energy codes.

CEAC Process & Timeline

Date	Topics
Q4 2023 Nov. 30.	Provide background and process.
Q1 2024 Feb 28	Provide an overview of the work NEEA does to influence state energy codes, including how it compares to its work in influencing federal standards. Provide current state of evaluation approaches used to evaluate state energy codes, federal appliance standards work, and other federal standards work.
Q2 2024 April 30	Review approach and key assumptions used in estimating and reporting energy savings from state energy codes work. Present draft approaches with an opportunity for discussion and feedback, including early assessment from the 3rd party evaluator.
Q3 2024 Aug 28	Present refined draft approaches with 3rd party evaluator assessment. Staff provides initial recommendation.
Q4 2024 Nov 4	Staff provides final recommendation with implications. Staff will also address if this recommendation would need to be tested before full implementation.

Questions?

TOGETHER We Are Transforming the Northwest

Avista
Bonneville Power Administration
Cascade Natural Gas Corporation
Chelan County P.U.D.
Clark Public Utilities
Cowlitz PUD
Energy Trust of Oregon
Grant PUD
Idaho Power An IDACORP Company
NorthWestern Energy
NW Natural
Pacific Power
PGE
PSE Puget Sound Energy
Seattle City Light
Snohomish County PUD Public Utility District No. 1
Tacoma Power Tacoma Public Utilities

Upcoming Meeting Topics

Q1 – February 28, 2024

- Update: State Energy Code Assessment

Q2 – April 30, 2024

- Savings and Cost-effectiveness Overview
- Annual Reporting
- Update: State Energy Code Assessment
- Key Assumption Updates

Topic Requests?

How was your experience?

Meeting Wrap-up

- Public Comment?
- Upcoming Meetings:
  - February 28, 2024
- Feedback:
  - Overall
  - Agenda
  - Packet Materials
  - What went well?
  - What needs work?