

# Regional Portfolio Advisory Committee



**DATE:** Thursday, May 18, 2023

**TIME:** 9:30am – 3:15 pm Pacific

**LOCATION:** In-Person option: Columbia Conference Room, NEEA Office (700 NE Multnomah, Portland)

**WEBINAR:** MS Teams – See link in calendar invite or [register here](#)

**Packet  
Page #**

## AGENDA (All Times Pacific)

9:30-9:50 (20 min)	<b>Welcome, Introductions and Agenda</b>	All	<b>1-2</b>
9:50-10:20 (30 min)	<b>RPAC Round Robin</b> <ul style="list-style-type: none"> <li>Big changes (programs/personnel)</li> <li>Current challenges, lessons learned</li> <li>How utility activities relate to NEEA's</li> <li>Sharable tools/materials</li> <li>Equity, hard-to-reach markets</li> <li>Findings, filings, IRPs</li> </ul>	RPAC Members	--
10:20-10:45 (25 min)	<b>Housekeeping and Looking Ahead</b> <ul style="list-style-type: none"> <li>Announcements: EFX Recap</li> <li>HPWH Consumer Consideration Marketing Campaign</li> <li>Business Planning Update</li> <li>Federal Funding Coordination Work Group Update</li> </ul> <p><i>Desired Outcome: Committee aware of recent developments and upcoming topics for engagement.</i></p>	Alisyn Maggiora Britt Cutsforth Dawkins Becky Walker Jonathan Belais	--
15 min	<b>BREAK</b>	ALL	
11:00-12:00 (60 min)	<b>Market Transformation Refresher</b> <ul style="list-style-type: none"> <li>A brief review of market transformation basics and a chance to discuss topics for future RPAC sessions if desired.</li> </ul> <p><i>Desired Outcome: Increased understanding of the fundamentals of market transformation.</i></p>	Jeff Harris	<b>3</b>
45 min	<b>LUNCH</b>	ALL	
12:45-1:00 (15 min)	<b>Portfolio Update</b> <ul style="list-style-type: none"> <li>Review portfolio reforecast, highlights and composition</li> </ul> <p><i>Desired Outcome: Committee informed on portfolio status and priorities.</i></p>	Stephanie Rider	<b>4-12</b>
1:00-1:45 (45 min)	<b>Variable Speed Heat Pumps</b> <ul style="list-style-type: none"> <li>MT Program Overview</li> <li>Prep for planned Program Advancement milestone (Q3)</li> </ul> <p><i>Desired Outcome: Committee updated on program development and primed on upcoming program milestone, and any initial questions/concerns identified.</i></p>	Emily Moore Suzi Asmus	<b>13</b>
15 min	<b>BREAK</b>	ALL	



2:00-3:00 (60 min)	<b>Manufactured Homes Update</b> <ul style="list-style-type: none"> <li>Background on NEEA's Manufactured Home program</li> <li>Update on Federal standard, HUD code, and low income housing goals</li> <li>Review changes to ENERGY STAR specification</li> <li>Share status of manufactured home construction in region</li> <li>Discuss impact on regional programs</li> </ul> <i>Desired Outcome: Committee updated on regulatory and market changes and planned next steps for NEEA's program.</i>	Mark Rehley	14
3:00-3:10 (10 min)	<b>Public Comment, meeting debrief and adjourn</b>	Alisyn Maggiora	--

Informational updates on items highlighted during Housekeeping, or not requiring agenda time:

- **Page 15:** HPWH Consumer Consideration Campaign
- **Page 16:** Federal Funding Coordination Work Group Update
- **Page 17-18:** Committee Updates

Additional materials:

- **Programmatic Updates:**
  - Q1 2023 [Market Progress Report](#)
- **Committee Meeting Materials & Charters:**
  - Q1 2023 RPAC meeting [packet](#), [slides](#) and [notes](#)
  - Q1 2023 Products Coordinating Committee [packet](#), [slides](#), [notes](#)
  - Products Coordinating Committee [2023 Annual Work Plan](#)
  - Q1 2023 Integrated Systems Coordinating Committee [packet](#), [slides](#) and [notes](#)
  - Integrated Systems Coordinating Committee [2023 Annual Work Plan](#)
  - Q2 2023 Cost Effectiveness and Evaluation Advisory Committee [packet](#), [slides](#), and notes (forthcoming)
  - Q1 2023 Regional Emerging Tech Advisory Committee [packet](#), [slides](#) and [notes](#)
  - Charters: [RPAC](#), [ISCC](#), [PCC](#), [CEAC](#), [RETAC](#)
- **Newsletters:**
  - Q1 2023 [Market Research & Evaluation Newsletter](#)
  - Q1 2023 [Codes, Standards and New Construction Newsletter](#)
  - Q1 2023 [Emerging Technology Newsletter](#)



# Memorandum – *Agenda item*



May 11, 2023

TO: Regional Portfolio Advisory Committee (RPAC)

FROM: Jeff Harris, Chief Transformation Officer

SUBJECT: Market Transformation Foundations Overview

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**Our Ask of You:** For information only.

**Brief Overview:** While NEEA delivers value to the region through several streams of work, the core of NEEA's regional value delivery results from accelerated market adoption of energy efficiency innovation through the practice of market transformation.

To facilitate discussions with regional stakeholders and market actors NEEA has standardized on a working definition of market transformation as the strategic process of intervening in the market to create lasting change.

For NEEA, market transformation represents a comprehensive paradigm to accelerate market adoption of energy efficiency innovations from the point of market entry to their adoption at full market potential. The planning, implementation and evaluation of our market transformation work is the foundation for the portfolio of initiatives reviewed by RPAC and managed through the initiative life-cycle process.

At the upcoming RPAC Q2 2023 meeting we will walk through a high-level overview of market transformation theory, practice and implications for RPAC. We will leave some time for questions and answers as well as identification of future topics for more in depth discussion at a future RPAC meeting if desired.

Please contact **Jeff Harris** [jharris@neea.org](mailto:jharris@neea.org) if you have questions about the market transformation and NEEA's practices.





## Memorandum – *Agenda item*

May 11, 2023

TO: Regional Portfolio Advisory Committee

FROM: Stephanie Rider, Director - Data, Planning and Analytics

SUBJECT: Electric Portfolio Update

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### Background

NEEA has recently completed the estimation of energy savings for 2022 and the reforecast of the full Cycle 6 (2020-2024) energy savings expectations for the current portfolio. The purpose of this memo is to provide visibility to the energy savings, related peak MW and carbon savings that we have realized and expect to realize in this cycle as well as key highlights across our work in the market.

To that end, the memo that was provided to the Cost Effectiveness and Evaluation Advisory Committee is attached for full detail. The Co-created savings forecast for this cycle did not change materially from the prior reforecast done last year. Market adoption trends continue to show upward trajectory and the current forecast for the cycle remains above the expectations set in the Cycle 6 Business Plan.

We will review this content in the upcoming meeting and have time for any questions on what is provided below.



# Memorandum – *Agenda item*



April 27, 2023

TO: Cost Effectiveness and Evaluation Advisory Committee

FROM: Ryan Brown, Manager - Planning and Analytics  
Stephanie Rider, Director - Data, Planning and Analytics

CC: Susan Hermetet, Vice President - Analytics, Research and Evaluation

SUBJECT: Electric 2022 Annual Report and Business Cycle Savings Update

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## Background

NEEA is an alliance of utilities and energy efficiency organizations that pools resources and shares risks to transform markets toward energy efficiency that benefits consumers in the Northwest. NEEA's role is to establish technology and market conditions that advance energy efficiency in markets in a sustainable way.

Energy savings are enabled by the alliance's market transformation efforts in removing market barriers, influencing energy codes and appliance standards, and investment in tools, training, resources, data, and research to support greater efficiency. These market transformation efforts seek to effect sustainable changes in markets, which then result in energy savings.

NEEA is a dual fuel organization and there is a companion memo to this that outlines the updates for the natural gas portion of NEEA's portfolio. For more information about NEEA's savings and cost effectiveness operational guidelines as well as other reference documentation please visit the Portal on NEEA.org (<https://neea.org/portal/savings-reports>).

## NEEA Energy Savings Approach

NEEA's work in the region and in the market is designed to create long-term, sustainable changes that transform markets to support greater efficiency over the long-term. NEEA aims to manage a portfolio that spans early development of technologies and market transformation opportunities, through program and market development, and finally to the long-term, sustained state of efficiency well beyond NEEA's direct investment in these markets, such as in a change in an energy code or adoption of a new appliance standard.

NEEA's tracking and reporting of energy savings is a measure of the resulting benefits of change in the market toward energy efficiency. NEEA employs a lifecycle management framework for each program in the portfolio. The programs listed below that are bolded are included in our regional reporting of

Northwest Energy Efficiency Alliance  
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savings above market transformation baseline (“Co-Created Savings”) for 2022. In all cases, NEEA tracks and reports incremental first year savings on an annual basis to monitor both adoption levels and associated energy savings. NEEA tracks savings above both the market transformation baseline and the Power Plan baseline, for various regulatory reporting purposes.

Table 1: Programs in NEEA’s portfolio		
Program Development	Market Development	Previous Investments
High-Performance Windows	Heat Pump Water Heater	Reduced Wattage Lamp Replacement
	Luminaire Level Lighting Control	Efficient Homes
Fan Systems	Retail Product Portfolio	Ductless Heat Pumps
	Manufactured Home	Strategic Energy Management
	Efficient Pumps	
	High-Performance HVAC	
	New Construction: Residential Building Codes	
	New Construction: Commercial Building Codes	
	Products: Federal and State Standards	

## 2022 Savings Results

NEEA estimates and reports the annual energy savings from the NEEA portfolio each year in order to support the ongoing long-term viability and estimation of the market transformation value as well as to serve as a foundation for funder needs and their local regulatory reporting activities.

As with every annual reporting update, NEEA receives and analyzes full year market data as well as new evaluation reports that inform updates to market trends, adoption estimates and unit energy savings estimates or other key assumptions as needed. After incorporating these updates, co-created savings across all investments in NEEA’s portfolio grew by 2.7 aMW from the prior year showing an increasing overall trend for the portfolio.

Table 2: 2022 Electric Co-Created Savings		2021 Reported	2022 Reported
All Investments	aMW	36.0	38.7

This increasing trend was due to a number of market developments including:

- continued market share gains for Heat Pump Water Heaters driven by the ‘Boring but Efficient’ awareness campaign and builders continuing to use Heat Pump Water Heaters in new construction.



- new construction savings increases in both commercial and residential as projects are built under new codes that have become effective in each state.

See [Appendix A](#) for more details about updates and market progress by program.

Net Market Effect savings are also tabulated as part of NEEA's annual reporting. NEEA staff coordinate with funding partners each year to tally the efficient units that are being tracked and reported at the local level. NEEA does this only to avoid double-counting savings, not to assign attribution to NEEA. This year, NEEA staff aggregated a total of 11.3 aMW through local programs in the markets NEEA is tracking, resulting in Net Market Effect savings of 27.5 aMW for 2022.

## Savings Forecast – 2020-2024 Business Plan

It is important to look at a longer time horizon for NEEA's Market Transformation portfolio. The above figures provide an annual and year-over-year snapshot, but they need to be considered in the context of the market transformation horizon in which NEEA works.

A primary focus for NEEA's portfolio for Cycle 6 has been to ensure continued growth in two programs: Heat Pump Water Heaters (HPWH) and Retail Products Portfolio (RPP), and in increasing diversity in the portfolio. NEEA has seen great traction in both programs. RPP is actively influencing many ENERGY STAR and federal energy appliance standards, including ENERGY STAR version 9 for Televisions which is expected to be the largest energy saver for the program going forward. HPWH is seeing continued growth in total units and has become a staple measure in new construction in Washington and Oregon in particular. In addition, NEEA facilitated a joint recommendation to the U.S. Department of Energy on active federal standard rulemaking for water heating that was signed by efficiency advocates as well as manufacturers and industry groups.

NEEA is also tracking the continued utilization of the SEM program across the utilities in our region. NEEA launched this program in 2010 within the industrial segment and has since transitioned to managing the education platform, known as the SEM Hub, to enable utilities across the region to expand SEM to the many other customers across commercial and industrial spaces. NEEA has tracked over 71.6 aMW since 2011 on behalf of the region, and the volume of energy savings through SEM remained relatively consistent in 2022, at 8.75 aMW in total.

The other primary focus for NEEA's portfolio in Cycle 6 has been to diversify the portfolio composition in terms of sectors addressed, the risk profile of the portfolio and other portfolio metrics. This will aid the development of a long-term, sustainable portfolio that creates a continuation of energy savings for the region well into the future. Meaningful progress was made in 2022 in this regard as NEEA advanced 2 new programs into market development, both with long-term value. In order to build for Cycle 7, NEEA also advanced 2 concepts into the program development portfolio: Efficient Fans and Variable Speed Heat Pumps (Residential). These are intended to unlock earlier savings potential to build up a consistent value stream in the nearer term for our region. NEEA expects to bring these programs to market and recognize energy savings as early as 2025.

Overall, NEEA is pleased that the forecasted energy and carbon savings for this 2020-2024 business cycle are exceeding the planned expectations as a result of all of our efforts toward sustained efficiency in the region. As seen in Table 3 below, NEEA has tracked 114 aMW of co-created savings, 37 aMW of local programs, and 77 aMW of net market effects during the first three years of this business cycle (2020-2022).



Table 3: 2020-2024 Electric Savings (aMW)	2020-2024 Business Plan Range	2020-2024 Current Forecast (range)	Cycle to Date (2020-2022)
Savings Category			
Co-Created	115-152 n/a	161 (144-176) <sup>1</sup> SEM: 46 (39-49)	85 29
Local Programs			37
Net Market Effects			77

## Additional Metrics

In addition to tracking and reporting the co-created savings for NEEA's regional portfolio, NEEA staff also estimates the regional value of a set of additional metrics.

### Benefit Cost Assessment

One such metric is the benefit cost assessment of the NEEA portfolio. NEEA's goal is to have a portfolio benefit-cost ratio greater than 1. As mentioned above, there are 2 new programs that advanced into market development during 2022 which is the point at which programs contribute to the portfolio cost effectiveness calculation. This makes a total of 6 market transformation programs that constitute the portfolio benefit-cost assessment: Retail Products Portfolio, Heat Pump Water Heaters, Manufactured Homes, Luminaire Level Lighting Controls, Efficient Pumps, and High-Performance HVAC (see table 1 above). Leveraging data from the Northwest Power and Conservation Council's (NWPCC) ProCost tool for the 2021 Power Plan, NEEA has assessed the long-term total benefit-cost ratio for the market transformation portfolio at 1.99.

### Peak Capacity and Avoided Carbon Emissions

NEEA staff also uses data from the NWPCC to enable the regional reporting for both peak capacity value and avoided carbon emissions. For 2022, the peak capacity value is a regional value assessed on all programs contributing co-created savings (see table 1), for a total benefit to the region of 75 MW of winter peak and 57 MW of summer peak savings.

For the estimation of avoided carbon emissions, NEEA includes the benefit from all of the co-created savings of the electric and gas portfolios. The 2022 co-created savings value of 38.7 aMW translates to a total of approximately 170,000 tons of avoided carbon emissions in 2022, at a monetized value of \$11.7 million.

Table 4: 2020-2024 Additional Co-Created Value Metrics			
	Avoided Carbon Emissions (tons)	Winter Peak Savings (MW)	Summer Peak Savings (MW)
2022	170,000	75	57
2020-2024	803,000-983,000	330-405	270-330

<sup>1</sup> Strategic Energy Management savings were not included in the forecast at the time NEEA's 2020-2024 Business Plan was under development so they are removed to compare with the business plan forecasted range of savings.



## Appendix A: Program-Specific Information

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### 2022 Highlights

Overall, NEEA is estimating the region produced nearly 39 aMW of co-created and 27 aMW of net market effects savings in 2022. NEEA influenced the creation of these savings through market transformation work that spans [in-market programs](#), [building codes](#), [federal and state standards](#), [emerging technology](#), as well as complementary [data collection and research efforts](#). The following sections highlights this work for 2022.

#### In-market Programs

NEEA operates a portfolio of Market Transformation programs in seven cross-sector groups—consumer products, building envelope, HVAC, lighting, motors, new construction, and water heating. The programs within these sectors intervene in markets to create lasting change by removing barriers and leveraging opportunities.

#### Heat Pump Water Heaters (HPWH)

Regional sales of Heat Pump Water Heaters in 2022 increased by approximately 17% over the prior year. NEEA successfully completed in-person installer training for installers in Montana alongside a cold climate pilot program to help drive adoption within the state. Regionally, NEEA completed the ‘Boring but Efficient’ awareness campaign, which led to an increase in awareness and drove successful conversions to heat pump water heaters for customers inside the NEEA service territory. At a national level, the market saw the introduction of Demand Response Testing to achieve an ENERGY STAR label and ANSI/CTA-2045 standards, both of which are met by heat pump water heaters currently on the market. Additionally, NEEA participated in the development of a joint recommendation to U.S. Department of Energy (DOE) alongside industry and consumer advocates which will affect the upcoming national water heater standard. HPWHs are also an option that builders commonly use to meet the Washington residential building codes. NEEA will continue to work in the water heating market to sustain the momentum.

#### Retail Products Portfolio

NEEA expects savings from its Retail Products Portfolio to increase as a share of its portfolio savings over time. In 2022, manufacturer shipments of appliances decreased for refrigerators and laundry equipment, but ENERGY STAR and ENERGY STAR Most Efficient product market share remained strong across all categories in 2022.

Looking forward, NEEA is anticipating a new development in Television performance could bring significant savings in 2023. NEEA’s television efforts began several years ago, resulting in a NEEA-developed test procedure to better estimate energy usage. The test procedure was adopted by ENERGY STAR and the Consumer Technology Association (CTA-2045-C and D) and is scheduled for adoption by the DOE in 2023. Additionally, as part of NEEA’s work on TVs, major manufacturers have committed to a voluntary agreement to provide their TV energy performance, which will provide consumers with more transparent information on TV energy consumption and inform future midstream incentives through the program. The voluntary agreement will also provide energy use estimates to provide more accurate tracking of energy savings from the new ENERGY STAR specification. NEEA expects to begin reporting



market progress for ENERGY STAR Televisions in 2023, which has been a large focus for the program in recent years.

#### Manufactured Homes

The DOE established a new energy code for manufactured homes (enforced by U.S. Department of Housing & Urban Development (HUD)). The new code goes into effect May 31<sup>st</sup> as does the requirements for U.S. Environmental Protection Agency ENERGY STAR and DOE Zero Energy Ready that define eligibility for a \$2,500 and \$5,000 federal manufacturer tax credit respectively. The federal standard change and these programs were influenced by market evidence provided by NEEA's Manufactured Home program. The DOE specification is roughly equivalent to the NEEM 1.1 with the addition of a heat pump. NEEA is currently collaborating with DOE to define in-factory actions to ensure a good post code change transition.

#### Extend Motor Products—Pumps

Market adoption of efficient pumps in commercial applications is meeting expectations. One aspect of the program is to differentiate efficient pumps and circulators through the usage of energy rating labels. NEEA interviewed market actors in 2022 to develop this market transformation strategy and increase adoption of energy efficient pumps and circulators.

#### New Construction: Building Codes

The NEEA Codes and Standards efforts support regional stakeholders in the development and adoption, training, and implementation of energy building codes. Each state in the region has different code timing, needs and opportunities. The following describes the current status for each individual state code process.

- **Washington:** The new code, 2021 WSEC, is expected to go into effect July 1, 2023. The new Washington residential energy code will be among the first to require electric or gas heat pumps for space and water heating in many cases. Washington's new commercial code will require electric heat pumps for primary space and water heating.
- **Montana:** The 2021 IECC was adopted by Montana with weakening residential energy code amendments. Based on Pacific Northwest National Laboratory's 2021 IECC analysis, Montana's new residential and commercial energy codes are roughly 4% and 11% more efficient, respectively, than its prior codes.
- **Oregon:** NEEA is currently working on the next Oregon code. On the Commercial side, Oregon formalized its process of adopting the most recent version of ASHRAE 90.1 as the energy provisions of its commercial energy code, the Oregon Energy Efficiency Specialty Code (OEESC). On the residential side, NEEA submitted four code change proposals, and a representative of NEEA was selected to fill one of the nine seats on the Oregon Building Codes Division. One of the proposals submitted by NEEA was recommended for approval by the committee. NEEA expects to begin reporting savings from these code changes in 2024.



- **Idaho:** Based on Pacific Northwest National Laboratory's 2018 IECC analysis, Idaho's new commercial energy code is roughly 3.9% more efficient than prior code.<sup>2</sup> The residential code is approximately 11.6% more efficient.<sup>3</sup>

#### Products: Federal and State Appliance Standards

NEEA signed onto more than 75 comments on federal standards/test procedure updates for 53 different products including pumps, fans and blowers, clothes washers, and water heaters. Through these comments, NEEA provides strategic direction to support the process. In the long-term, the new standards could bring the Northwest additional energy savings. The energy savings analyses will be conducted over the upcoming years and published with future annual reports as data becomes available.

#### Emerging Technology

##### New Programs

NEEA moved its High-Performance HVAC program into Market Development in 2022. The program aims to transform the commercial HVAC market in the Northwest through the adoption of a very high efficiency dedicated outside air system (DOAS) approach that pairs high efficiency HVAC equipment with set design principles that optimize efficiency. Primary interventions include motivating manufacturers and distributors to promote the system approach, defraying the incremental cost of ERVs/HRVs, providing education and training to manufacturers, distributors, and designers, raising supply chain awareness of system approach benefits, and providing market data and evidence to influence the advancement of local, state, and federal codes to require elements of the entire system approach.

NEEA is also working on programs for Fans (Commercial & Industrial), most efficient Variable Speed Heat Pumps, and High-Performance Windows (Residential).

#### Voluntary Standards/Test Procedure Work

Six ENERGY STAR specifications were finalized or went into effect that NEEA has provided input into, three of which will significantly impact the region. Version 6.1 for Central and Ductless Air Conditioners and Heat Pump was finalized in January 2022 and became effective in January 2023; Water Heater v 5.0, which covers electric, gas, heat pump water heaters, and tankless water heaters, was finalized in July of 2022 and becomes effective in April of 2023. Lastly, Television v 9.0 was released in January 2022 and became effective in October 2022. The ENERGY STAR label will help markets and regional energy efficiency programs differentiate the most efficient products.

#### Data Collection and Research

##### Market Data and Research

NEEA plays a key role in regional market research needed to develop Market Transformation programs, assess their performance, and find new opportunities in the market. NEEA completed several studies in 2022 including an annual progress evaluation for the [Heat Pump Water Heaters program](#), a supply chain awareness study for the [Extended Motor Products program](#), and a market research study for [variable speed heat pumps](#) in the Northwest. These studies bring increased understanding of the market opportunity for these efficient products, as well as NEEA's progress toward its Market Transformation goals.

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<sup>2</sup> [PNNL-28125.pdf](#)

<sup>3</sup>Go to [neea.org](#), portal login, savings, codes



NEEA also leverages its relationships with key market actors on a regional and national scale to collect data. These relationships afford NEEA access to key sales and shipment data from manufacturers, distributors, and retailers. The data informs NEEA's program strategy as well as enables the region to track and report adoption of efficient technologies.

#### Stock Assessments

Stock assessments are an important complement to market research, providing another lens for identifying efficiency opportunities and tracking regional progress. NEEA is in the process of publishing the third Residential Building Stock Assessment (RBSA). The RBSA provides data on the existing housing stock in the Northwest to help with planning. The third RBSA includes the addition of tracking solar panels, electric vehicle chargers, presence of electric vehicles and accessory dwelling units. NEEA staff with regional stakeholders are currently in the planning phase for the next Commercial Building Stock Assessment.

#### End Use Load Research (EULR)

The EULR project is an ongoing regional study designed to gather accurate end-use load profiles for electrically powered equipment in homes and businesses. NEEA presented findings in 2022 to its Working Group on how to use the end-use load research data in nine ways other than energy efficiency including electrification, decarbonization, electric vehicle load growth, battery energy storage, distribution planning, power quality, demand response / flexible end-use load, load forecasting, and ratemaking for improved price signals. The project also analyzed 2021 data, comparing it to historical end-use loads and identifying the evolving impacts of COVID-19.

NEEA completed its initial database transfers to a cloud data warehouse platform that can efficiently manage the massive database of billions of observations coming from continuously metering hundreds of homes with thousands of end-uses at 1-minute intervals. The public dataset is now downloaded from NEEA.org by universities, consulting firms, government agencies, and utilities. Meanwhile, NEEA will continue to gather more data. In 2022, NEEA installed continuous end-use metering by circuit in an additional 146 Northwest homes and 45 commercial office/retail buildings.



# Memorandum – Agenda Item



May 11, 2023

TO: Regional Portfolio Advisory Committee (RPAC)

FROM: Suzi Asmus, Program Manager

SUBJECT: Variable Speed Heat Pumps Program Overview and Preview for Planned Program Advancement Milestone Vote



## OUR ASKS OF YOU:

1. Reach out to [Suzi Asmus](#) or [Alisyn Maggiora](#) with any initial questions you have, to be addressed at the May RPAC meeting.
2. Communicate with relevant members of your residential HVAC team and set aside time on your busy summer calendars to review Milestone documents ahead of the August 29 vote.
3. If you already know you or your team would like to schedule meeting time with NEEA to review the program or Milestone documents ahead of the August 29 vote, please reach out to [Alisyn Maggiora](#) schedule. Meetings will be scheduled August 2-11.

## Context:

In Q1 2021, the RPAC approved Concept Advancement for the Residential Variable Speed Heat Pump program. Since that time, the team has focused Program Development efforts and resources on market research, product research, test procedure development, manufacturer engagement, and national coalition building. The team has also sought and incorporated funder feedback through the Q4 2022 work group, as well as other formal and informal funder engagement channels.

With the results of our program development work, we've refined and updated the program Market Transformation Theory, pinpointed key market barriers, and identified key market interventions. The team shared these updates at the Q1 RPAC meeting. We will provide a brief review along with any new updates since that time at the Q2 RPAC meeting in preparation for a planned Q3 milestone vote for Program Advancement.



# Memorandum – *Agenda item*



May 11, 2023

TO: Regional Portfolio Advisory Committee (RPAC)

FROM: Mark Rehley, Director Codes, Standards, New Construction, and Emerging Technology

SUBJECT: Manufactured Homes Update

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## Our Ask of You:

***Bring your questions about manufactured homes market trends and Federal standards changes. We know that there is a lot of confusion especially about the Federal standard, the Housing and Urban Development (HUD) code, and ENERGY STAR changes, so this is an opportunity to get answers to your and your staff's questions.***

## Overview:

On August 1, 2022, the U.S. Department of Energy (DOE) published a final rule to an updated energy conservation standards for manufactured homes. The standard improved efficiency for double and larger manufactured homes. The single wide requirements were only slightly changed. The compliance date was set for May 31, 2023. It took more than 25 years to update the previous standard, and NEEA staff have been preparing the program for transition to Long Term Monitoring and Tracking (LTMT) since the standard is nearly changed, ENERGY STAR is being updated, and the market appears stable. However, legal action from the Manufacturing Housing Association is creating uncertainty about the future of this standard and of NEEA's program.

At the May 18, 2023, RPAC meeting we will share the background on NEEA's manufactured home program, the status of the market and standards, and the potential future of the market and the program.

Please contact [Mark Rehley](#) if you have questions about the **NEEA's manufactured home program or the status of the Federal standard.**



# Memorandum – *Agenda item*



May 11, 2023

TO: Regional Portfolio Advisory Committee (RPAC)

FROM: Britt Cutsforth Dawkins, Manager, Program Marketing Strategy

SUBJECT: Proposed Heat Pump Water Heater (HPWH) Consumer Consideration Campaign

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## **Our Ask of You:**

Please review the overview of this proposed marketing campaign below and plan to attend the early July RPAC+ webinar.

## **Overview:**

Per the 2023 HPWH Operations Plan, the Program’s primary focus this year is on the supply side (manufacturers/distributors/installers). We’re currently working with distributors and installers to increase their preference for HPWHs and drive midstream adoption. At the same time, to ensure the Program is simultaneously continuing to move consumers along in their journey and ultimately drive long-term downstream demand for HPWHs, we recommend running a small-scale consumer consideration campaign.

Consumer awareness of HPWHs has grown significantly in the Northwest, [increasing from 28% in 2016 to 57% in 2021](#), and early findings from the 2022 Boring But Efficient post-campaign survey indicate the campaign increased rural awareness by approximately 20%<sup>1</sup>. Consumer interest is growing, as indicated by the positive response to the Boring But Efficient campaign, and this interest is expected to continue to grow given the federal tax credits offered for HPWHs.

The purpose of this campaign is to take advantage of this current momentum and move these consumers from their current understanding of HPWHs (the awareness phase—on which our previous two marketing campaigns were focused) to the next step (the consideration phase), so that they proactively ask for a HPWH when they determine they need to replace their existing water heater (the conversion phase).

## **Next Steps:**

A RPAC+ webinar will be held in early to mid-July to review the proposed campaign, with time allowed for comments and revisions. The proposed campaign would run between the end of Q3 and into Q4 2023.

Please contact Britt Cutsforth Dawkins ([bdawkins@neea.org](mailto:bdawkins@neea.org)) if you have questions about the proposed HPWH Consumer Consideration Campaign.

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<sup>1</sup> More refined data will be available this year when the HPWH Market Progress Evaluation Report #7 is released.



# Memorandum – *Informational Update*



May 11, 2023

TO: Regional Portfolio Advisory Committee (RPAC)  
FROM: Jonathan Belais, Policy Manager  
SUBJECT: Update on Federal Funding Coordination Work Group

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## **Our Ask of You:**

Please review the memo and bring any questions, recommendations, feedback, or concerns to the Q2 RPAC meeting, or contact NEEA staff listed below.

## **Context**

Following the Q1 RPAC meeting, NEEA staff solicited feedback regarding the creation of a regional work group to discuss federal funding opportunities and support regional coordination on these opportunities. Receiving unanimously supportive feedback, NEEA and BPA staff organized a kickoff meeting for this work group, which was held on May 4, 2023.

## **Kick-off Meeting**

During the first meeting, work group members shared their current activities, priorities and questions related to the federal opportunities created as part of the Inflation Reduction Act (IRA) and the Infrastructure Investment and Jobs Act (IIJA). This conversation was followed by a short presentation by US Department of Energy (DOE) staff working on [Home Rebate Programs](#) and group discussion of priorities related to these programs. The meeting concluded with a brief discussion of preferred cadence, priority topics for future discussion, and next steps.

During the roundtable shareout and discussion, a few thematic topics were identified for additional near-term discussion. Work force needs were highlighted repeatedly, both availability and quality issues, with suggestions to coordinate and pool training and best practice resources where possible. Additionally, the risks associated with customer confusion was discussed, and work group members suggested regional coordination of communication and marketing may reduce both confusion and costs. Further discussion around needs specific to low-income, tribal, and multifamily communities highlighted additional knowledge and coordination gaps that may be require future inclusion of non-energy stakeholders in these discussions.

## **Next Steps**

In discussion of next steps the committee coalesced around the convening another broadly focused meeting sometime in Q3, aligned with the planned release of DOE guidance on the Home Rebates Program. In the interim, NEEA staff will work with interested work group members on more targeted discussions for the priority topics identified during the meeting. Additionally, work group members are encouraged to share questions, information, and new activities with the group via email.

Please contact Jonathan Belais ([jbelais@neea.org](mailto:jbelais@neea.org)) if you have questions.



# Memorandum – *Informational Update*



May 11, 2023

TO: Regional Portfolio Advisory Committee (RPAC)

FROM: Alisyn Maggiora, Stakeholder Relations Manager  
Jonathan Belais, Policy Manager & CEAC Meeting Facilitator

SUBJECT: Update on Q1 & Q2 2023 Committee Meetings

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## **Our Ask of You:**

Please review the memo and bring any questions, recommendations, feedback, or concerns to the Q2 RPAC meeting, or contact NEEA staff listed below.

## **Integrated Systems Coordinating Committee (ISCC):**

The Integrated Systems Coordinating Committee uses an annual planning process to co-create high priority regional topics for each program in NEEA's Integrated Systems portfolio [Variable Speed Heat Pumps (VSHP), Luminaire Level Lighting Controls (LLLC), High-Performance HVAC, High-Performance Windows, and Better Bricks]. This year's co-created regional priority topics are listed in the [ISCC 2023 Workplan](#).

A recap of the Q1 meeting was covered in the Q1 RPAC committee update, available [here](#).

In the upcoming Q2 meeting (May 15), Committee stakeholders and NEEA staff will lead a regional discussion around LLLC Education (current resources and gaps). Objectives include discussing regional learnings about successful approaches, challenges and gaps in LLLC education, and assess where to focus next. Committee members and NEEA program managers will also share out on program, regional, and/or organizational updates. See [Q2 2023 ISCC Agenda Packet](#) for more details.

Please contact [Stephanie Quinn](#) or [Alisyn Maggiora](#) with any questions about the ISCC.

## **Products Coordinating Committee (PCC):**

As with ISCC, the Products Coordinating Committee uses an annual planning process to co-create high priority regional topics for each program in NEEA's Products portfolio [Heat Pump Water Heaters (HPWH), Consumer Products/Retail Product Portfolio (RPP), Extended Motor Products (XMP) Pumps & Circulators, and Efficient Fans]. This year's co-created regional priority topics are listed in the [PCC 2023 Workplan](#).

A recap of the Q1 meeting was covered in the Q1 RPAC committee update, available [here](#).

In Q2 (June 6 & 7), the PCC will focus on the following regional priority topics from the 2023 annual workplan: 1) *HPWH Installer Engagement* (includes NEEA updates on active installer and cold climate research, in addition to a regional share-out on what local programs are doing with installers); 2) a regional discussion about *Online Retail Marketplaces and opportunities for midstream coordination*; and 3) a regional discussion on *Distinguishing Circulator Barriers for Residential & Commercial ECM Markets*, with a focus on the plumber audience. Committee members and NEEA Program Managers will also share out on current program highlights and other organizational updates.

Please contact [Stephanie Quinn](#) or [Alisyn Maggiora](#) with any questions about the PCC.



## **Regional Emerging Technology Advisory Committee (RETAC)**

At RETAC's Q1 meeting, Andrew Lick & Scott Schuetter with Slipstream shared the results of two emerging technology pilot projects that Slipstream staff researched, split reluctance motors for fans and smart valves for hydronic systems, respectively. The committee had a good discussion on these technologies and other potential opportunities for collaboration. Following this, NEEA staff shared updates to the Product Council, the updated web page on [neea.org](https://neea.org) to view the schedule and recordings of product council meetings, and how to submit requests for product councils. The committee provided feedback that is now incorporated into the site. For additional details, please see [Q1 2023 RETAC Meeting Notes](#).

The agenda for RETAC's Q2 meeting (June 27) will include a presentation by Snohomish PUD staff on their emerging technology research projects. We are also coordinating with Energy Solutions to present on California's IOU emerging technology program. Finally, NEEA staff will share highlights of NEEA's emerging technology research.

Please contact [Eric Olson](#) or [Alisyn Maggiora](#) with any questions about RETAC.

## **Cost-Effectiveness Advisory Committee (CEAC)**

During the Q1 committee meeting on February 28, 2023, NEEA staff reviewed updates on Market Research and Evaluation (MRE) activities and answered committee questions regarding activities in the MRE quarterly newsletters. Additionally, in preparation for annual reporting, NEEA staff provided an overview of NEEA's market transformation approach and calculating associated costs, benefits, savings.

During the Q2 meeting on April 27, 2023, NEEA staff reviewed and answered questions regarding activities highlighted in the quarterly MRE newsletter. Staff then provided an overview of key portfolio metrics from 2022 and updates to key assumptions. To provide additional context for annual reporting, the meeting concluded with a review of key market stories from 2022.

Please contact [Stephanie Rider](#) or [Jonathan Belais](#) if you have questions about CEAC.