2025 Planned Activities Report: Prepared for Puget Sound Energy

OVERVIEW

NOTE: NEEA is currently drafting its 2025 Operations Plan. NEEA staff will present final draft to the NEEA Board of Directors for approval on December 5, 2024. If NEEA's 2025 planned activities change significantly, NEEA will update this report accordingly.

The Northwest Energy Efficiency Alliance (NEEA or the alliance) is an alliance of more than 140 Northwest utilities and energy efficiency organizations working on behalf of Northwest energy consumers. The alliance aggregates and leverages the power of the region to identify and vet emerging technologies, and then creates the market conditions necessary for them to take hold. The alliance also helps the region capture energy savings by influencing progressively efficient codes and standards. Puget Sound Energy has been a member of the alliance since 1997.

This report summarizes planned activities for the first year of NEEA's 2025-2029 Business Cycle. In 2025, NEEA will focus its Market Transformation efforts in five cross-sector product groups: **consumer products, HVAC, lighting, motor-driven products and water heating**. Most Market Transformation programs in both the electric and natural gas portfolio will be carried forward, as will high-value regional activities such as emerging technology scanning and product development, codes and standards, regional building stock assessments and the Efficiency Exchange conference.

EMERGING TECHNOLOGY

NEEA builds and maintains a regional pipeline of emerging or expanding energy-efficient products and manages those opportunities through its Initiative Lifecycle process. Emerging Technology activities include: 1) scanning for new technologies that support Northwest needs; 2) developing those technologies into products or measures that meet Puget Sound Energy's goals; and 3) tracking regional emerging technology activities and gaps in coordination with the Regional Emerging Technology Advisory Committee (RETAC)[1].

- **New Opportunity Scanning**: In 2025, NEEA will continue to scan the market for emerging energy efficiency opportunities, leveraging existing relationships with manufacturers, technology developers, utilities outside the Northwest, U.S. DOE labs, and other research and development entities. NEEA will also continue to welcome unsolicited proposals through https://neea.org. Focus areas will include:
    - HVAC technologies with an emphasis on dual-fuel systems, controls, design practices with hydronic system integration, and technologies that offer flexible load opportunities including peak load reduction.

[1] RETAC advises NEEA's Executive Director on the alliance's work toward achieving strategic pipeline goals and helps track and coordinate the progression of energy efficiency technologies to improve technology readiness and market adoption in the Northwest.

- Water heating technologies and opportunities including best design practices for systems approach, drain water heat recovery, recirculation design in residential applications and dual fuel systems.
- Opportunities to expand Motor Driven Systems including pumps and the integration of variable speed controls into existing applications.
- Trends towards Integrated Systems, e.g. lighting controls integrated with HVAC, and the continued prevalence of connected devices in the home, both with the capability of providing flexible load solutions.
- Building envelope, especially primary and secondary windows in alignment with product group priorities.

- **Product Management:** Once technologies are identified and prioritized, the alliance works to translate those opportunities into a product or measure that can be promoted through Market Transformation and/or utility programs and meet the region's goals. Key 2025 focus areas include:
  - Identifying and tracking new products and technologies that support NEEA's 2025-2029 strategic goals, including grid-enabled technologies, decarbonization, and peak reduction.
  - Support load flexibility and whole buildings special projects, and the expansion of the natural gas portfolio by identifying, vetting, and recommending products, practices, and services to bring the most value to the region.
- **Regional Coordination**: At the regional level, NEEA tracks ongoing emerging technology activities and identifies gaps in coordination with the Regional Emerging Technology Advisory Committee (RETAC) to maximize the leverage of NEEA's budget. In Cycle 7, NEEA will continue to coordinate regional emerging technology research with RETAC on a quarterly basis and convene Product Council meetings to disseminate research findings and technology innovation.

MARKET STRATEGY & EXECUTION (ELECTRIC)

NEEA's cross-sector approach to product groups allows the alliance to leverage shared relationships and market channels among programs, which delivers efficiencies for NEEA and its supply-chain partners. In addition to market transformation programs among the cross-sector product groups (**building envelope, consumer products, HVAC, lighting, motor-driven products and water heating)**, NEEA staff will continue managing two enabling infrastructure programs (**BetterBricks** and **Integrated Design Labs**) that provide cross-program support and services that build market capability, awareness and demand for the programs' energy-efficient products, services and practices.

Building Envelope Product Group

The building envelope product group works with the supply chain that manufactures, distributes and sells the physical separators between the interior and exterior of a building, as well as the end consumers who purchase them. These physical separators include walls, fenestration and roofs. In 2025, NEEA is moving the one building envelope program, High-Performance Windows, out of the program development phase of NEEA's initiative lifecycle due to cost-effectiveness and data challenges. NEEA is currently evaluating our influence to-date on the ENERGY STAR® version 7 specification and ways to track that influence over time. In 2025, NEEA will continue to participate in national collaborations for building envelope, including the Department of Energy's Partnership for Advanced Window Solutions (PAWS) with a goal of supporting technology research and code advancement until another market transformation program opportunity is identified.

Consumer Products Product Group

The **consumer products product group** works with the entire supply chain that delivers consumer goods and services in high volume. This includes manufacturers, distributors, physical and online retailers, contractors, installers and end consumers. With a current focus on developing energy efficiency opportunities in the television, laundry and refrigerator categories, the product group's sole program is the **Retail Product Portfolio**.

- **Retail Product Portfolio (RPP):** This program coordinates closely with the U.S. Environmental Protection Agency's (EPA) ENERGY STAR Retail Products Platform (ESRPP), utility organizations and large retailers around the country. The program offers incentives for retailers to preferentially stock efficient consumer products making them more available to Puget Sound Energy customers. In exchange for these incentives, participating retailers provide NEEA full-category sales data for each product in the portfolio, which NEEA and partners use to 1) support stricter ENERGY STAR specifications and federal standards, and 2) influence manufacturers to produce more efficient products. The products covered by the RPP have the potential to yield 500 aMW of energy savings in the Northwest over the next 20 years.

  In 2025, key program activities will include:

  - Leveraging the 2024 U.S. DOE rulemaking that advanced standards in refrigerator and laundry categories for the 2028–2030 time period, including taking an active role in the forthcoming ENERGY STAR specification revisions, and preparing for future opportunities to influence U.S. DOE test procedures in these categories. These efforts are vital to locking in the savings achieved through other program strategies.
  - Continuing to develop additional federal rulemaking activities for television, laundry and refrigerator categories, and evaluating significant emerging technologies for portfolio inclusion, including advanced-insulation refrigerators, all-in-one laundry equipment and improved operating systems for televisions.
  - Working with the Northwest Regional Marketplace (Enervee) scanning project to streamline the consumer energy-efficient product shopping experience and derive a better understanding of the potential of connected products and smart-home systems.
  - Building on the advent of a new television test procedure in late 2023, the program will establish partnerships and begin a new program to increase market share of ENERGY STAR televisions. This work will further ensure the continued relevance of test procedures and voluntary agreement specifications.
  - Continuing to support ESRPP and the CalMTA pilot by equipping the 18 program sponsors (representing 31% of U.S. households) with the tools and understanding they need to effectively evaluate the program, thereby supporting the continued success of the national ESRPP.

HVAC Product Group

The **HVAC product group** works with the supply chain that manufactures, distributes, specifies, designs and installs commercial and residential HVAC products, both gas and electric, as well as the end consumers who purchase them. To achieve NEEA's vision to reduce newly installed HVAC system energy use by 30 percent, and halt further increase of HVAC loads in residential and commercial buildings, NEEA is adopting two strategic priorities for the HVAC product group:

- Pursuing the highest impact portfolio possible across gas and electric technologies by:
    - Increasing residential gas HVAC load reduction and flexibility by proposing a Residential Dual-Fuel HVAC program.
    - Broadening market engagement and increasing demand by adding a gas-heating option to the very high efficiency dedicated outside air system (very high efficiency DOAS) specification.
    - Pursuing the potential product group inclusion of hybrid (i.e., heat pump with gas backup) and heat pump RTUs.
    - Informing future portfolio priorities by building a forecasting model that includes scenario comparisons across various HVAC opportunities and fuel types.
- Growing valued partnerships by collaborating internally and externally with market and efficiency community partners by:
    - Continuing to develop relationships and strategies to collect sufficient HVAC sales data to build a representative model of the four-state region's commercial market.
    - Continuing to leverage HVAC sales data to share targeted, relevant insights with program stakeholders and market partners.
    - Partnering with the Codes & Standards team and working with national organizations to increase NEEA's HVAC initiative presence and influence in the development of national codes, designer guidance, test procedures and metric development.
    - Serving as a regional conduit to national activity to amplify NEEA's influence and benefit from the investment of other groups and organizations. This includes venues such as the Advanced Heat Pump Coalition, the American RTU Collaborative (in partnership with the Consortium for Energy Efficiency), and the North American Gas Heat Pump Collaborative.
    - Coordinating cross-program market development activities and partnerships to ensure market clarity, expand market intelligence and streamline market partner engagement.

There are three programs currently in the **HVAC product group**: **Advanced Heat Pumps**, **High-Performance HVAC** and **Efficient Rooftop Units** (see Natural Gas section below).

- **Advanced Heat Pumps:** This program aims to identify and drive adoption of product features, capabilities and ratings that will deliver higher efficiency in all residential two-stage and variable-speed heat pumps installed in the Northwest, including Puget Sound Energy's service territory. The program focuses on HVAC technologies with the following capabilities and features: low-load efficiency, cold-climate capability, minimizing supplemental heat, connected commissioning, and automatic load flexibility.

  In 2025, key program activities will include:

    - Leveraging the 10 NEEA-identified potential heat pump improvements to increase energy savings and load-flexibility, while reducing dependence on contractor capability.
    - Improving the accuracy of test procedure metrics, including by incorporating the impacts of defrost, standby losses, crank-case heater use, along with adding criteria for cold-climate capabilities, load flexibility, and dual-fuel ratings.

- Improving market awareness of, and ability to identify and differentiate products with, the HVAC capabilities and features promoted by the program.
- Continuing to lead the Advanced Heat Pump Coalition and serve on more than a dozen standards and technical advisory boards responsible for heat pump metrics and specifications to influence the adoptions of advanced heat pump improvements.
- Furthering the adoption of the new test procedure for air-source heat pumps (Canadian standard C700, U.S. DOE 10 CFR part 430, subpart A).
- Influencing tax credit specifications, ENERGY STAR requirements and U.S. DOE minimum federal efficiency requirements.
- Gaining manufacturer support of targeted heat pump improvements through product development, manufacturing, training, standards and specifications.
- Continuing to combine use of market data, field data, lab data and analysis to refine savings estimates and demonstrate improved product differentiation and value propositions for the customer, manufacturer and utility.

- **High-Performance HVAC:** This program works to transform the commercial HVAC market in the Northwest by accelerating the adoption of high efficiency HVAC systems and components, resulting in substantial energy and non-energy benefits throughout the region. The High-Performance HVAC program is focused on accelerating commercial-sector adoption of the very high efficiency dedicated outside air systems (very high efficiency DOAS) approach. Very high efficiency DOAS enables substantially higher energy savings above conventional DOAS configurations by pairing a very high efficiency heat recovery ventilator/energy recovery ventilator (HRV/ ERV) with a high efficiency heating and cooling system, along with additional key design principles. When compared to conventional HVAC systems, this approach demonstrates a reduction in commercial building energy use by an average of 48% and HVAC energy use by an average of 69%.

  In 2025, the program will continue to focus on the following goals and activities:

  - Educating and motivating manufacturers and distributors to become early adopters of this approach.
  - Engaging and educating to raise supply-chain and end-user awareness of the system approach and its significant cost savings and non-energy benefits. This includes training and education opportunities for market actors in Puget Sound Energy territory.
  - Increasing availability of qualifying HRV/ERVs.
  - Providing market data and evidence to influence the advancement of future local, state and federal codes.

  In 2025, the program will additionally:

  - Likely expand the program's scope to include natural gas high-efficiency dedicated outside air systems (HE-DOAS).
  - Adaptively manage to incorporate key findings from the forthcoming Market Progress Evaluation Report (MPER).

Lighting Product Group

The **lighting product group** works with the supply chain that manufactures, distributes, specifies, designs and installs lighting products, as well as the end consumers who purchase them. Specific lighting products include lamps, ballasts, controls and fixtures. The primary goal of this group is to transform the commercial lighting market so that the default becomes high-quality, networked lighting solutions that prioritize energy savings and whole-building system integration.

In 2025, overall product group strategies will include:

- Building Northwest demand for networked lighting solutions, particularly luminaire level lighting controls (LLLC), through regional and national market partnerships, utilities, trade ally networks and energy codes.
- Leveraging NEEA's partnerships with national manufacturers of LLLC solutions to position the technology as a priority in meeting local and state building renewal requirements, encourage the targeting of LLLC in Northwest utility programs, support code proposals favoring LLLC, and highlight success stories to influence decision-makers on the value of LLLC.
- Conducting data acquisition to deepen the program's lighting market intelligence and better understand current market trends.
- Researching the market to better understand the evolving networked lighting solutions landscape, improve LLLC product performance and specifications, and understand opportunities that incorporate lighting in other building-systems integrations.

Luminaire Level Lighting Controls is currently the sole program in the lighting product group.

- **Luminaire Level Lighting Controls (LLLC):** This commercial program works to increase market engagement and adoption of LLLC, an advanced lighting control product that allows building owners and managers to tailor lighting systems to maximize energy use, optimize tenant comfort and integrate additional energy-efficient building systems for overall improved operational performance. To drive adoption of this product, the LLLC program uses extra-regional partnerships, leverages existing training and complementary national efforts to strengthen the skills required for successful project execution, increases regional supply-chain promotion and furthers energy-code integration.

  In 2025, key program activities will include:

  - Leveraging local sales channels, key lighting specifiers, and targeted professional associations to influence decision-makers on the full value and relevance of LLLC.
  - Continuing to support educational efforts targeted at perceived barriers to adoption in collaboration with alliance funder programs, including Puget Sound Energy, established training programs such as NXT Level, and supply chain partners.
  - Continuing to coordinate with national organizations, such as U.S. DOE, Illuminating Engineering Society (IES), and Design Lights Consortium (DLC) to strengthen their focus on LLLC. These extra-regional partnerships will help to build LLLC market demand outside of the Northwest, thereby increasing market impact and amplifying program efforts.
  - Exploring the feasibility of expanding the program to include exterior LLLC, particularly for outdoor parking lots.

Motor-Driven Systems Product Group

The **motor-driven systems product group** works with the supply chain that manufactures, distributes, specifies, designs and installs a variety of motor-driven systems, as well as the decision-makers who influence their purchase. Specific motor-driven technologies include pumps, fans, compressors, as well as related sensor and control technologies, such as variable-speed drives. Product group strategy is focused on driving the market to adopt motor-driven products designed to optimize system efficiency, often through integrated sensors and speed control.

Key product group priorities for 2025 will include:

- Increasing the territory coverage of pump manufacturer representatives and exploring the expansion of the product group's pumps to include additional markets, including chemical and agricultural.
- Building interest in a fan coalition to motivate participation from manufacturers in the Air Movement and Control Association (AMCA).
- Exploring the creation of Fan Energy Index (FEI) levels beyond federal minimums.
- Continuing to work through the Motors Coalition to develop a voluntary motors label based on the Power Index metric in support of a market transformation program for variable-speed drives.
- Furthering emerging technology research in Power Index metric limitations, variable-speed drive technology and application opportunities, and market opportunities for additional pump technology.
- Conducting industrial motor-driven systems market research to benefit both programs in the product group.
- Exploring the development of a cross-product-group engagement plant for specifiers and energy code.

This product group includes two programs: **Efficient Fans** and **Extended Motor Products–Pumps (XMP–Pumps)**.

- **Efficient Fans:** This program is in Program Development and primarily works with manufacturers and their representatives to leverage the FEI rating system to increase efficient fan sales and educate the commercial and industrial markets on the advantages of efficient fan systems. Specifically, the program focuses on commercial and industrial fans with FEI ratings of less than 1.00, and that are sold as standalone fans or fans embedded in other packaged equipment lacking an energy-efficiency metric. Examples include exhaust, custom air-handling and industrial-process equipment.

  In 2025, key program activities will include:

  - Maintaining relationships with two manufacturers to continue gathering sales data and growing program impact. Adding more manufacturer representatives to the program.
  - Optimizing fan selection software to help the market select fans with strong FEI ratings.
  - Working with fan specifiers to test program messaging by enhancing our understanding of key influencers and communication channels. This will include leveraging the **BetterBricks** platform to test and refine messaging to manufacturer representatives that highlights the energy and non-energy benefits of efficient fans. (See below for more information on the **BetterBricks**

enabling infrastructure program).

- Refining logic model and theory based on market characterization study findings.
- Convening an Efficient Fans coalition of manufacturers, utilities and energy efficiency organizations to create the next level of federal FEI minimums and make recommendations to the U.S. DOE on future test procedures and federal standards.
- Testing the accuracy of our product definition using sales-data identifiers and market feedback.
- Collaborating with states during the code-proposal process to reference FEI with increasing stringency.

- **Extended Motor Products–Pumps (XMP–Pumps):** This program works to transform the pumps and circulators market by increasing the percentage of regional pump sales that are highly efficient Smart Pumps and Smart Circulators with electronically commutated motors (ECMs), along with other high-efficiency products. Working to reduce and remove market barriers, this program guides pump buyers, specifiers, sales engineers and facility managers to understand and embrace these more efficient options.

  In 2025, key program activities will include:

  - Continuing engagement with participating manufacturer representatives, including in Puget Sound Energy territory, to preferentially stock and increase sales of smart pumps and smart circulators.
  - Exploring opportunities for geographic program expansion, as well as identifying opportunities to incorporate additional pump types (including larger pumps and those not covered by the U.S. DOE's Pump Energy Index) and sectors (including the industrial, agricultural and municipal markets).
  - Evaluating load flexibility opportunities through our engagement with the Hydraulic Institute, a pump industry trade association.
  - Working with manufacturers and the Hydraulic Institute to more aggressively market Smart Pumps and pumps with high Energy Rating label scores (a metric created by the Hydraulic Institute).
  - Collaborating with the Hydraulic Institute to ensure their Energy Rating label is as useful to specifying engineers as possible.
  - Continuing our work with manufacturers to expand Smart Pumps into more pump types.
  - Producing additional Smart Pump success story case studies.

Water Heating Product Group

NEEA's **water heating product group** works with the supply chain that manufactures, distributes (wholesale and retail), specifies, designs and installs electric and natural gas commercial and residential water heaters, as well as the end consumers who purchase them.

There are two programs currently in the **water heating product group**: the **Electric Heat Pump Water Heater (HPWH)** program and the **Advanced Commercial Gas Water Heating (ACGWH)** program (see Natural Gas section below).

- **Heat Pump Water Heaters (HPWH):** This program aims to increase adoption of electric HPWHs for emergency and planned replacements and new construction in single-family homes and low-rise multifamily dwellings. Since 2011, the program has made significant progress in overcoming key market barriers to adoption and influencing manufacturers to invest in advanced technology performance. This work coincided with NEEA's collaboration with manufacturers, energy efficiency organizations, and a consumer organization in recommending efficiency levels for the U.S. DOE's rulemaking process. NEEA's participation ensured that the needs of all Northwest consumers were met, including those in cold climates, with challenging installation locations, and across all income levels. In May 2024, this work paid off with the U.S. DOE publishing a final rule mandating a shift for most electric storage water heaters to heat pump technology by 2029—a significant milestone in the overall goal to transition the majority of the market to HPWHs.

  In 2025, key program activities will include:

  - Undertaking market-readiness activities to prepare the regional and national markets for the federal water-heating efficiency changes, including by:
    - Engaging the supply chain to increase product availability in the Northwest.
    - Supporting installers to increase acceptance and confidence in HPWH technology, including by encouraging them to recommend HPWH as an emergency-replacement solution and increasing overall customer demand for HPWH. This work includes aligning voluntary specifications by leveraging NEEA's national partnerships, including ENERGY STAR, Center for Energy and Environment (CEE) and ASHRAE.
    - Influencing and supporting manufacturers to bring additional HPWH products to the market that will address unique and challenging installations.
    - Reducing market resistance by continuing regional and national engagement to identify barriers and solutions to increase HPWH adoption in areas and populations with historically low adoption rates.

Enabling Infrastructure Programs

These programs develop and implement crosscutting enabling infrastructure that builds market capability, awareness and demand for energy-efficient products, services and practices, while also offering new customer engagement opportunities for funders. There are currently two enabling infrastructure programs: **BetterBricks** and the **Integrated Design Labs**.

- **BetterBricks:** This is a centralized market engagement platform that enables alliance and funder programs to remove persistent barriers to commercial building efficiency by leveraging NEEA's extensive relationships, resources and market knowledge in an efficient, coordinated and streamlined manner. The platform supports alliance programs that address energy-efficient technologies and practices in the commercial building sector by providing a pathway for intervention strategies, supporting market interest and capability to participate in local efficiency programs, leveraging and cultivating market relationships, providing a treasury of tools and resources, and maintaining communication channels that deliver targeted communications. The platform's target audiences include building owners, property managers, building facilities staff, architects, designers, engineers and contractors.

  BetterBricks is a recognizable brand and resource in the Puget Sound area and regularly supports training and educational events and resources that benefit market actors in the Puget Sound Energy

territory. In 2025 and beyond, the market's growing emphasis on commercial building sustainability, energy efficiency and decarbonization presents significant opportunities for the platform to support these efforts with innovative solutions, unbiased information, and streamlined compliance assistance.

In 2025, key program activities will include:

- Raising awareness of and demand for energy-efficient and grid-interactive efficient buildings that utilize grid-enabled end-use technologies.
- Helping the market translate GHG reductions resulting from energy-efficient and smart-building investments into a competitive business advantage.
- Creating and curating entry-level energy efficiency content and resources relevant to a wider audience to better represent the diverse Northwest market.
- Capitalizing on the market's emphasis on sustainability, energy efficiency and decarbonization by enhancing the platform's digital presence, continuing to build strong relationships with industry influencers, and ensuring that rural and underserved markets are not passed by.

- **Integrated Design Labs (IDLs):** The mission of the IDLs is to transform the design, construction and operations of commercial, institutional and residential buildings to advance energy-efficient, high-performance and healthy buildings in the Northwest. The IDLs exist at several regional universities including the University of Washington and Washington State University. They are a critical partner to alliance programs, accelerating Market Transformation through research, technical assistance and education that are used by NEEA programs and market partners. There are two types of NEEA funding for the IDLs: (1) Base funding, which funds lab operations, such as exploratory research, facility and equipment costs, and/or staff; and (2) Services funding, which provides funds for discreet projects.

WORKSTREAM: MARKET STRATEGY & EXECUTION (NATURAL GAS)

Heading into Cycle 7, NEEA's natural gas portfolio is comprised of two active Market Transformation programs – one program in development (Advanced Commercial Gas Water Heating) and one in the market (Efficient Rooftop Units). In 2025, NEEA expects to bring at least one new dual-fuel or fuel-neutral program opportunity to the Natural Gas Advisory Committee for advancement into the portfolio. This growing portfolio will require the full suite of management processes that the electric portfolio has been utilizing and greater integration of electric and gas portfolio management.

- **Advanced Commercial Gas Water Heating (ACGWH):** This program is in Program Development and aims to stimulate market conditions to accelerate technological advancements and generate demand for more efficient commercial gas water heating, including gas heat pump (GHP) and dual-fuel water-heating systems. By transforming the commercial and multifamily water-heating retrofit market to increase the adoption of GHP and dual-fuel water-heating systems, the program works to reduce gas consumption and carbon emissions in these sectors.

  In 2025, key program activities will include:

  - Exploring dual-fuel solutions that deliver energy efficiency and load flexibility benefits in the residential, commercial and multifamily sectors. This work will include lab testing technologies such as GHP and dual-fuel configurations to inform energy savings and load flexibility potential, while demonstration projects will validate product performance and sales potential, inform design and installation bets practice guidance, and provide opportunities to engage the supply chain to learn about in-field opportunities.

- Integrating equitable strategies that capitalize on an affordability benefit provided by dual-fuel operational flexibility.
- Refining our understanding of barriers to GHP and dual-fuel adoption in North America to help build a value proposition for key decision-makers, while informing program strategy and utility incentive programs.

- **Efficient Rooftop Units (ERTU):** This program aims to increase the efficiency of rooftop units through product differentiation and, ultimately, federal standards. Gas-fired packaged RTUs are HVAC systems that contain all the components needed to provide conditioned air and ventilation in a single box. Commonly found in commercial applications, they are particularly prevalent in low-rise commercial buildings, and condition approximately 35% of gas-heated commercial floor area in the Northwest.

  In 2025, key program activities will include:

  - Continuing to encourage manufacturers to develop and promote ERTUs for the light commercial market.
  - Creating awareness of ERTUs to increase their sales through promotion, training and/or incentives, including by supporting and motivating manufacturers and their representatives, distributors and utilities across the U.S. and Canada.
  - Developing a clear, cohesive set of ERTU value propositions for use throughout the supply chain.
  - Increasing availability of qualifying units by building demand through utility adoption of the specification and working with manufacturers to expand options.
  - Working with alliance stakeholders to increase utility programs that reference NEEA's ERTU specification.

WORKSTREAM: CODES AND STANDARDS

To lock in energy savings through progressively effective codes and standards, NEEA's Codes and Standards team supports stakeholders in Washington state with energy code development, adoption, training and implementation, and provides technical guidance and expertise to U.S. DOE and other national bodies.

Standards: In 2025, NEEA staff will serve as technical and market experts in the U.S. DOE's standards rulemaking process. Focus areas include:

- Increasing the stringency of federal standards relevant to the Northwest.
- Completing and/ or updating three to five codes and standards strategies for each Market Transformation program.
- Adding one new contractor to support standards development activities.
- Completing and publishing the residential clothes dryer test procedure research.
- Integrating a new database for tracking standards into daily activities.
- Initiating a strategic framework for developing and managing diverse coalitions of energy efficiency advocates, manufacturers, and other industry representatives to co-create recommendations to federal appliance standards.

Codes: NEEA's wholistic support of regional and national code stakeholders includes developing energy code proposals for Washinton state, supporting code implementation, measuring compliance and market challenges

and working to remove barriers to implementation (see New Construction and Training below). Focus areas include:

- Working to maintain and/ or increase the stringency of energy codes in Washington to maximize the value to home buyers and commercial building owners.
- Completing state-level code roadmaps prior to the beginning of each code development cycle in Washington state.

New Construction and Training: NEEA supports the new construction market by offering training opportunities customized to each state, case studies and educational materials highlighting technologies and techniques for meeting and exceeding code, hotlines to answer questions about code, and support for the RTF new homes protocol and utility programs that provide data for code development activities. Focus areas include:

- Updating the Regional Technical Forum (RTF) new homes protocol and AXIS database.
- Supporting utilities who offer performance path new construction programs, including Puget Sound Energy.
- Ensuring residential and commercial websites as well as compliance tools are current and offer relevant content. Includes BetterBuiltNW, BetterBricks, Washington code portal, and code cookbooks.
- Increasing the number of people participating in code trainings along with the range / diversity of attendees.
- Ensuring attendee feedback is collected in a standardized way across the training program.
- Establishing, with a coalition of other organizations, a rural codes collaborative.

WORKSTREAM: ANALYTICS, RESEARCH & EVALUATION

NEEA's Analytics, Research & Evaluation strategy is delivered by three teams: Market Research and Evaluation (MRE), Data, Planning and Analytics (DPA) and Energy Use Studies (EUS).

Market Research and Evaluation (MRE)

MRE provides actionable insights for Market Transformation programs throughout their lifecycle and conducts formal evaluations of programs in the Market Development and Long-Term Monitoring and Tracking phases. Key 2025 activities will include delivering more than 32 market research and evaluation reports to inform Market Transformation efforts, formal evaluations of programs in market development, and NEEA's Codes and Standards efforts, and research to support the equitable distribution of Market Transformation benefits to all Northwest customers, including those who have been traditionally underserved.

Data Planning and Analytics (DPA)

DPA is responsible for cost-benefit analysis, energy-savings forecasting and reporting, value-metrics reporting, market analysis and data management. This group also maintains NEEA's centralized sales data hub. Key 2025 activities will include enhancing the water heating data set for the new gas program, developing strategic web scraping data sets to deliver program insights and opportunities, and developing new portfolio decision making criteria for peak load reduction, data and analysis to support the new strategies and needs of the Cycle 7 business plan.

Energy Use Studies (EUS)

The EUS team develops, manages and analyzes large regional studies and associated data sets including those from the Residential and Commercial Building Stock Assessments and the End Use Load Research project.

- **End Use Load Research Project (EULR):** Initiated in 2017, the EULR project is specially funded by a group of regional electric utilities, including Puget Sound Energy, and government agencies and composed of two studies: the Home Energy Metering Study (HEMS) and the Commercial Energy Metering Study (CEMS). With the goal of collecting clean, continuous circuit-metered data, the HEMS team has installed circuit meters in 99 Northwest homes to collect data at 1-minute intervals, while the CEMS team has installed circuit meters in 60 office and retail buildings to collect data at 15-minute intervals.

  Key 2025 HEMS and CEMS activities will include:

  - Continuing metering for the **Home Energy Metering Study (HEMS)** into June 2025 when metering for residential homes is scheduled to end. A final report will be produced in Q3 2025. Data analysis will be ongoing.
  - Continuing metering for the **Commercial Energy Metering Study (CEMS)** into June 2025 when metering is scheduled to end. To analyze the relative contribution to building peak demand by each metered end use, NEEA will continue to pursue access to AMI data on study participants. Data analysis will be ongoing.

- **Residential Building Stock Assessment (RBSA):** The RBSA team collects, analyzes and publishes building characteristic and energy usage data for single-family and multi-family residences in the Northwest. This information is used by NEEA, funders and other regional stakeholders to support diverse activities that include Market Transformation and energy efficiency programs, energy resource forecasting and planning, conservation potential assessments, and integrated resource plans.

  Key 2025 activities will include:

  - Convening a workgroup to identify needs and approaches to incorporate into the **2027 Residential Building Stock Assessment (2027 RBSA)** and releasing an RFP before the end of the year so study implementation can begin in 2026.

- **Commercial Building Stock Assessment (CBSA):** The CBSA collects, analyzes and publishes building characteristic and energy usage data for commercial buildings in the Northwest. This information is used by NEEA, funders and other regional stakeholders to support diverse activities that include Market Transformation and energy efficiency programs, energy resource forecasting and planning, utility conservation potential assessments, and utility integrated resource plans.

  Key 2025 activities will include:

  - Recruiting commercial and multi-family buildings into the **2025 Commercial Building Stock Assessment (2025 CBSA)**, collecting building characteristic and energy usage data from these buildings, and beginning to develop the structure of the final datasets that will be made available upon completion of the study.

- **Motor System Stock Assessment (MDSSA):** This study will collect motor characteristic data on stand-alone motor-driven equipment in a representative sample of commercial and industrial facilities. This data has not been collected in the region since 2000.

Key 2025 activities will include:

- Convening a workgroup to identify goals and priorities for the **Motors Systems Stock Assessment (MSSA).** Once study priorities are identified, NEEA plans to release an RFP and contract with a firm to begin study implementation in the second half of 2025.

Specially Funded Projects

A number of opportunities have been identified that align with NEEA's strategic goals, while also 1) delivering a primary benefit other than energy efficiency, and/or 2) addressing needs that are not shared across the region. These opportunities are funded outside of Business Plan/core funding by a subset of regional funders or other stakeholders wishing to pursue them. Primary Specially Funded Projects in 2025 are a regional end use load flexibility effort and strategy for whole-building efficiency.

- **End Use Load Flexibility (EULF) Project:** With this Project, NEEA seeks to catalyze innovation and Market Transformation towards a more flexible and reliable energy system. The near-term goal is to expedite the integration of features that enable end use load flexibility and gain insight into related opportunities. Although the initial focus will be on residential end-use technologies, future activities may extend to commercial/ non-residential end-use applications. Results and learnings from the Project are intended to inform a longer-term End Use Load Flexibility Market Transformation Portfolio. **Tom Smith,** Product Development Manager - Demand Response/Customer Energy Management at Puget Sound Energy is the Steering Committee Chair for the EULF project.

  Key 2025 activities will include:

  - Finalizing development of a long-term End Use Load Flexibility Market Transformation Portfolio
  - Completing initial reporting on two end-use technology demonstrations, to bolster rapid adoption of controllable technologies in the region
  - Concluding a market research effort yielding learnings that will enable a narrowed and more strategic focus on products and programs for a future

- **Commercial Whole Building Special Project:** This project will focus on motivating the commercial building sector to undertake deep energy efficiency and decarbonization retrofits in a way that is widely accessible, scalable, and affordable for owners and occupants. This special project was developed over the past year in close conversation with several PSE staff members and other funders and is slated to begin in January 2025. The proposed two-year project includes two tasks: regional resource development and Market Transformation concept refinement. The project will provide near-term resources and tools for efficiency programs and set the region up for a full Market Transformation program in 2027. Currently six NEEA funders plan to join PSE in funding this opportunity: Bonneville Power Administration, Clark PUD, Energy Trust of Oregon, Seattle City Light, Snohomish PUD and Tacoma Power.

  Key 2025 activities will include:

  - Begin building regional resources to support successful building renovations including curated resources and tools to simplify navigating BPS compliance, a compilation of funding and finance opportunities, and case studies illustrating a clear and compelling business case holistic renovations.

- Conduct targeted market characterization and analysis to refine understanding of market barriers, leverage points, and priority interventions.
- Prototype market intervention concepts. Recruit participants for concept testing.
- Beginning an emerging technology landscape assessment of whole building technologies, services and practices.

WORKSTREAM: CONVENE AND COLLABORATE

The Convene and Collaborate strategy is carried out by NEEA's Corporate Strategy, Communications and Relationships Division. Stakeholder Relations helps NEEA staff maintain high-functioning engagement practices with stakeholders to ensure effective collaboration and satisfaction with alliance activities. Corporate Strategy is responsible for identifying and leading enterprise-wide planning initiatives, including NEEA's 5-year strategic and business plans as well as its annual operations planning process. Corporate Communications oversees external communications and events and supports alignment on key internal strategic initiatives.

Key focus areas for the Division in 2025 are supporting the transition to Cycle 7, maintaining high-functioning stakeholder forums and processes, and convening the region to share information and best practices.

Additional Information

More information on NEEA's Market Transformation programs, as well as NEEA's quarterly and annual reports, can be found at neea.org.

Questions or comments about this report? Please contact NEEA at: info@neea.org