



Exhibit 10

2020 Annual Report

Northwest Energy Efficiency Alliance
(NEEA)

Activities and Accomplishments





2020 Annual Report for Puget Sound Energy

INTRODUCTION

The Northwest Energy Efficiency Alliance (NEEA or "the alliance") is a nonprofit organization working in collaboration with Puget Sound Energy and more than 140 other Northwest utilities and energy efficiency organizations to accelerate the innovation and adoption of efficient products, services and practices throughout the region. With funding and engagement from Puget Sound Energy and these other entities, the alliance intervenes in the market to create lasting change by removing barriers and leveraging opportunities to accelerate the adoption of cost-effective energy efficiency.

For additional information about alliance programs and approved alliance activities, the 2020 Operations Plan is available on neea.org.

PRIMARY BUSINESS PLAN STRATEGY: EMERGING TECHNOLOGY

To ensure the continued availability of energy-efficient products, services and practices to Northwest consumers, the alliance identifies emerging energy efficiency opportunities and works with manufacturers and the market to test and validate product performance and energy savings. These efforts are coordinated through the Regional Emerging Technology Advisory Committee (RETAC), which is facilitated by NEEA staff. Puget Sound Energy is a member of RETAC.

In 2020, the alliance continued to maintain the region's only shared emerging technology database. The database, which is housed on ConduitNW.org, increases regional visibility into emerging technology activities across organizations and reduces development costs by avoiding redundancies. In 2020, more than 25 regional emerging technology projects and products were added to the database.

In addition, NEEA staff scanned the market in 2020 to identify promising new energy-efficient products, services and practices, HVAC, water heating, motor-driven systems, and lighting with HVAC controls. NEEA staff conducted research, testing and vetting of these promising opportunities in 2020:

1. **Fan Motor Systems:** These products are an integrated fan/blower with a motor and control system. The alliance is working to develop a standardized specification, testing method and label to properly reflect performance and energy use of each product. Currently, system efficiency is indicated via the new Fan Energy Index (FEI) label. In 2020, NEEA staff worked with the Air Movement and Controls Association (AMCA) to finalize the FEI label and with the Regional Technical Forum (RTF) to establish planning savings values for fan systems.
2. **Thin Triple Windows:** This product is a primary window with three panes of glass (or film or rigid plastic), two of which are standard thickness and the third of which is a center thin pane of glass (or film). The overall thickness and weight are similar to standard double pane windows so they can be hung in a standard window frame. In 2020, NEEA staff continued to develop the business case for these products by researching manufacturer interest in mass production,

developing cost estimates, and starting discussions with volume home builders to understand their interest and challenges with Thin Triple products.

3. **Combination Hot Water and Space Heat:** This product is an integrated system that provides both space and water heating. It can be used in both electric and natural gas applications. In 2020, the alliance conducted testing to demonstrate the performance and adaptability of combination systems in existing homes and commercial applications. Installer, operator and homeowner experiences were documented to enhance understanding of market barriers and opportunities for these products. Findings helped validate the performance of the product and will inform strategies for emerging high-efficiency products.
4. **Variable Speed Heat Pumps:** Also known as variable capacity, inverter-driven and cold climate heat pumps, variable speed heat pumps (VSHP) offer a wider temperature range and significant efficiency improvements over traditional single-speed heat pumps. VSHPs are available in single and multi-head ductless as well as ducted applications. In 2020, NEEA staff worked with a national heat pump collaborative to collectively validate the CSA-EXP-07 test method, which is a more representative test of the ability of heat pumps to operate efficiently in various climates including all Washington climate zones. In addition, NEEA staff began developing a Market Transformation program concept for VSHPs that builds upon the alliance's Ductless Heat Pump program, which transitioned to long-term monitoring and tracking at the end of 2020.
5. **Ultra-High Definition TVs:** In 2020, the alliance continued to work with ENERGY STAR, the U.S. Department of Energy (U.S. DOE), Consumer Technology Association (CTA) and the International Electrotechnical Commission (IEC) to establish a new test method to accurately measure the energy consumption of Ultra High Definition TVs. This effort resulted in six major TV manufacturers, ACEEE, and NRDC releasing a letter of intent in 2020 to develop a voluntary agreement around this test method, signaling broad support from the TV industry for this new test method and future TV energy efficiency improvements. The announcement cited NEEA's revised TV energy performance metric as the target, marking a major milestone to secure an accurate method for one of the nation's most prevalent consumer products.
6. **Machine Learning Systems for Building Control:** NEEA staff are investigating a new group of products that use machine learning and controls to optimize interactions between building systems that typically operate autonomously. These products track everything that's happening in a building, and the systems operate and then optimize the interactions in a way that humans can't. In 2020, NEEA staff reviewed several products and coordinated with Lawrence Berkley National Lab to plan field tests for 2021.
7. **Clothes Washers and Dryers:** In 2020, NEEA staff tested new efficient clothes washers (including top load washers) and provided comments to the U.S. DOE for changes to the standard test method and the RTF for updates to savings values of these products. In addition, NEEA staff identified several new technologies for efficient dryers and began testing these products in 2020.
8. **Luminaire Level Lighting Controls (LLLC) with HVAC Control:** These are LLLC lighting systems with additional sensors and supports for HVAC control. NEEA staff are analyzing how these integrated systems can provide greater granularity of control and real-time data. In 2020, NEEA staff coordinated with University of Oregon Integrated Design Lab to field test a Luminaire Level Lighting product that has a HVAC control system. Several sites have been identified and a test plan developed, but actual testing was delayed due to COVID-19.

- 9. Central Heat Pump Water Heaters** – Central Heat Pump Water Heaters: Electric heat pumps with a hot water distribution system that provides domestic hot water to apartments in a multifamily building. In 2020, NEEA staff coordinated with Bonneville Power Administration and New Buildings Institute to develop design guidance and technical product requirements for new large electric air-to-water heat pumps in a central water heating application.

PRIMARY BUSINESS PLAN STRATEGY: EFFECTIVE PORTFOLIO EXECUTION (ELECTRIC)

In 2020, NEEA staff managed a portfolio of Market Transformation programs in seven cross-sector Product Groups: Building Envelope, Consumer Products, HVAC, Lighting, Motor-Driven Products, New Construction, and Water Heating. Each Product Group includes multiple programs and emerging technologies that share supply chain opportunities. This product group approach allows the alliance to leverage shared relationships and market channels among programs and to deliver efficiencies for both NEEA and its supply chain partners.

BUILDING ENVELOPE PRODUCT GROUP

NEEA's Building Envelope Product Group includes 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 2020, Window Attachments was the sole program in the Building Envelope Product Group.

Window Attachments – The Window Attachments program seeks to accelerate the adoption of high-performance window attachment products in existing buildings. In 2020, the program focused on secondary windows – a transparent pane and frame that attaches to an existing window, either on the inside or outside – in the commercial market. To advance the market for secondary windows products, NEEA staff developed data-sharing agreements with manufacturers, established data collection processes, and launched a field test to validate product performance. To support product differentiation in the market, the alliance works closely with the Attachments Energy Rating Council (AERC), which released its commercial certification for window attachment products – the first certification program of its kind – in 2020. As of Q4 2020, three manufacturers certified commercial products, which are now listed on the [AERC website](#).

CONSUMER PRODUCTS PRODUCT GROUP

NEEA's Consumer Products Product Group focuses on the entire supply chain that delivers consumer goods and services in high volume. This includes manufacturers, distributors, physical and online retailers, contractors, installers, as well as end consumers. In 2020, Retail Product Portfolio was the sole program in the Consumer Products Product Group.

Retail Product Portfolio – The alliance's Retail Product Portfolio (RPP) program coordinates with the ENERGY STAR® Retail Products Platform (ESRPP) program to provide mid-stream incentives on a portfolio of qualified energy-efficient products. These incentives influence retail buying and stocking practices and send a signal to manufacturers to develop more energy-efficient products, in turn ensuring that a greater number of these products are available to Washington consumers. In 2020, NEEA continued to work closely with the Environmental Protection Agency (EPA) on the development of Version 9 of the ENERGY STAR television specification, which is scheduled for release mid-2021. This work included developing improved testing procedures and collaborating with industry

organizations and manufacturers to ensure support of the new specification. Also in 2020, the alliance conducted significant testing on residential and commercial clothes washers to increase understanding of the product's real-world impact on energy consumption. The testing identified multiple washer cycle variables that impact the wash load's remaining moisture content, which significantly impacts dryer energy use. This data can be used to develop guidance to support future test procedures and standards. Additionally, the alliance tested a selection of residential refrigerators to quantify the potential energy savings of advanced compressor technologies. These data were used to inform responses to U.S. DOE proposed rulemakings and supported collaboration with the EPA to introduce an Emerging Technology Award – an award given to innovative technologies that meet rigorous performance criteria to reduce energy use without sacrificing features or functionality – for these advanced compressors in Q4 2020. Finally, in Q4 2020 the new ENERGY STAR specification for air cleaners took effect, which was heavily influenced and informed by alliance data and comments. In fact, a third-party evaluator found that NEEA's work sped up the timing of the update and increased the stringency of the specification.

HVAC PRODUCT GROUP

NEEA's HVAC Product Group works with the supply chain that manufactures, distributes, specifies, designs and installs commercial and residential HVAC products, as well as the end consumers who purchase them. In 2020, there were two programs in the HVAC Product Group: High-Performance HVAC and Ductless Heat Pumps.

Ductless Heat Pumps – Since 2008, the Ductless Heat Pump (DHP) program has worked to accelerate the adoption of inverter driven DHPs in electrically-heated homes by building distribution channels, market capacity and consumer demand. After a decade of market activity, a third-party evaluation concluded that the market for DHPs in the Northwest would continue to transform without NEEA's intervention. As a result, the alliance concluded its market development activities in 2020 and will wind down final program activities and assets in 2021. Going forward, NEEA will continue to collect data to monitor and track market adoption and assess whether additional intervention may be warranted. Results of the first Long-term Monitoring and Tracking study are expected in Q3 2021. Also, as part of the program transition, in 2020 NEEA staff delivered more than 20 cold climate focused live webinars to installers, distributors, manufacturer representatives, and utility staff in addition to publishing cold climate resources to provide DHP installers with installation techniques that maximize the performance and longevity of DHPs in the coldest temperatures of the Northwest. More than 260 attendees participated in the webinars, approximately 45 of which were Washington-based.

High-Performance HVAC – The High-Performance HVAC program aims to transform the commercial HVAC market in the Northwest by accelerating the adoption of high-efficiency HVAC systems and components, focusing initially on Very High Efficiency Dedicated Outside Air Systems (VHE DOAS). To increase the availability of VHE DOAS systems that meet energy efficiency requirements, the program released a Systems Requirements and Recommendations Summary in 2020. This resource provides guidance to manufacturers, designers and specifiers for developing and installing VHE DOAS systems that are energy efficient and perform well in Northwest climate zones. To build interest and market capability, the program held a webinar in Q2 2020 to familiarize attendees with VHE DOAS by educating on a wide range of ventilation topics including system design, specification and installation for high performance commercial buildings. In addition to the webinar, the program released several market-facing resources, including case studies and a comprehensive product design guide.

LIGHTING PRODUCT GROUP

NEEA's 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. In 2020, Luminaire Level Lighting Controls was the sole program in the Lighting Products Group. In addition, this Product Group is supported by two enabling infrastructure programs: Top Tier Trade Ally and the Distributor Platform.

Luminaire Level Lighting Controls – Luminaire Level Lighting Controls (LLLCs) combine LEDs with integrated controls and sensors to offer improved building performance and occupant comfort while increasing energy savings. In 2020, the program focused on cultivating awareness and understanding of LLLCs by providing technical trainings and educational webinars for lighting professionals, utility staff, program implementers and energy efficiency partners. In total, the program supported eight technical trainings delivered by Lighting Design Lab and worked with utilities, BetterBricks and industry organizations to deliver another nine webinars over the course of 2020. To increase market adoption in the Northwest, the program continued to work with supply chain partners, securing agreements with four manufacturers to work with the program to help strengthen LLLC sales in the region. Lastly, at the end of 2020 the program secured a monthly LLLC spotlight in EC&M Magazine, a major publication for professionals who design, construct, operate and maintain electrical systems. This spotlight will help drive awareness of LLLCs in the market by engaging key influencers in the supply chain and sales channels to create more effective LLLC champions.

MOTOR-DRIVEN PRODUCTS PRODUCT GROUP

NEEA's Motor-Driven Products Product Group works with the supply chain that manufactures, distributes, specifies, designs and installs a variety of motor-driven products, as well as the decision-makers who influence the purchase of these products. Specific motor products include pumps, fans, compressed air systems and high-performance motors. In 2020, Extended Motor Products was the sole program in this Product Group.

Extended Motor Products – The Extended Motor Products (XMP) program works to accelerate the adoption of more efficient motor-driven products, such as pumps, fans and compressors, focusing initially on packaged pump systems in applications of 50 horsepower and below. In 2020, to better understand the market and continue to shift the sales mix toward these more efficient pumps and circulators, the program partnered with seven Northwest pump distributors. These distributors have agreed to share full category pump sales data with the alliance each month on an ongoing basis. This data will help the program understand pump purchasing trends, resulting in more effective, targeted activities to further market adoption. To raise market awareness and enable product differentiation, the program continued to partner with industry groups to develop and promote the Hydraulic Institute Energy Rating label, which helps customers understand the relative energy performance differences between pump models. Lastly, to motivate distributors to preferentially stock and sell efficient products, the alliance provided midstream incentives and other support. As a result, high-efficiency commercial pump sales comprised 40% of total commercial pump sales from January through July 2020, a 12% increase over the same time period in 2019.

NEW CONSTRUCTION PRODUCT GROUP

Working closely with the alliance's Codes and Standards team, the New Construction Product Group maximizes energy efficiency opportunities for new residential and commercial buildings by enabling code advancement through the market adoption of energy-efficient products and practices. In 2020, there were three programs in the New Construction Product Group: Commercial Code Enhancement, Manufactured Homes, and Residential New Construction.

Commercial Code Enhancement – The Commercial Code Enhancement (CCE) program supports commercial code advancement in the Northwest by influencing commercial code proposals and preparing the market and utilities for future code requirements. In 2020, the alliance completed and published the Washington State Commercial Code Technical Roadmap, which identifies advanced technologies and building strategies that will guide code development over the next several code cycles. The Roadmap will assist Washington State in achieving its goal of reducing commercial building energy use by 70% relative to the 2006 Washington code by 2030. NEEA staff are working with Washington stakeholders using the Roadmap to identify proposals for Washington's 2021 code cycle. To overcome barriers to adoption, the program offered in-depth training on the Total System Performance Ratio (TSPR) for Washington State commercial designers, garnering more than 350 attendees. TSPR is a methodology to establish relative whole-system efficiency for commercial HVAC systems, rather than their individual components, which intends to level the playing field for efficient technologies, promote more efficient design approaches and help buildings save more energy. The TSPR trainings provided an overview on how and when TSPR is required in the new Washington commercial code (2018 Washington State Energy Code effective on Feb 1, 2021), details on the modeling process, and where additional information can be found. These trainings were made available on waenergycodes.com, a website launched by NEEA staff in 2020 that houses helpful technical resources and supports the process of demonstrating compliance with the Washington State Energy Code (WSEC) Commercial Provisions.

Manufactured Homes – The Manufactured Homes program works with the supply chain to increase availability and demand for NEEM+ certified energy-efficient manufactured homes. In the first half of 2020, the program ran a salesperson challenge, which resulted in 53 NEEM+ home sales, a 76% increase over the previous three quarters. To further increase awareness, the program launched an online digital campaign in Q2 2020 targeting potential homebuyers through promoted search results that generated over 174,000 search impressions, more than 10,000 visits to the NEEM+ campaign landing page and 1,400 clicks to retailer websites. In addition, the program launched a retail display home incentive to increase the number of homes with NEEM+ on display at retail sales centers. Retailers report that many customers order homes with the same features and options as those included in the display home, which suggests that NEEM+ in display homes could prove to be an effective, long-lasting sales tactic. Lastly, to address the manufacturer cost barrier of building to the NEEM+ specification, the alliance supported manufacturers with upstream incentives for each NEEM+ home built. As of 2020, three manufacturers are building and selling NEEM+ manufactured homes, with a fourth manufacturer in the process of switching their entire production to NEEM+. In total, 99 NEEM+ homes were completed in 2020, with 26 sold in Washington. Fifty-eight utilities throughout the region now offer a NEEM+ incentive, including Puget Sound Energy.

Residential New Construction (formerly Next Step Homes) – In 2020, following an independent, third-party assessment, the Next Step Homes program underwent an internal review to realign the

program strategy with an updated program vision, current market status and integration with NEEA's Codes Program. This review resulted in the decision to transition the program goal from increasing participation in utility residential above-code programs to focus on activities that will more directly influence future code advancement. As the alliance's only dual fuel program, the newly renamed Residential New Construction (RNC) program focuses on removing barriers to the adoption of above-code efficiency measures in new construction and collecting market evidence that will support future code advancement. To accelerate market adoption, the RNC program influences builders and key subcontractors to adopt above-code technologies and best practices. In 2020 the program held 13 interactive webinars and trainings to enhance technical education for builders in the Northwest. These trainings attracted more than 700 participants, with two of the trainings focused on Washington, including a four-part webinar series called Chasing Points that focused specifically on Washington residential code updates (2018 WSEC). Finally, in 2020 the program began to transition Performance Path program implementation to utilities. The Performance Path allows builders flexibility in meeting the energy code requirements by providing various combinations of design strategies, components and technologies to choose from. To ensure a seamless transition, the program held roundtable discussions with utility partners, including those from Puget Sound Energy, to provide details on transition scope, timeline, program evolution and current changes. The program anticipates the full transition to be complete in Q1 2021.

WATER HEATING PRODUCT GROUP

NEEA's Water Heating Product Group engages the supply chain that manufactures, distributes (wholesale and retail), specifies, designs and installs electric commercial and residential water heaters, as well as the end consumers who purchase them. In 2020, electric Heat Pump Water Heaters was the sole electric program in the Water Heating Product Group.

Heat Pump Water Heaters – The electric Heat Pump Water Heater (HPWH) program seeks to increase adoption of HPWHs for emergency and planned replacements in single family homes and to influence the Federal Standard in 2023 to require HPWHs for all electric storage tanks 45 gallons or larger. In 2020, significant strides were made in the Puget Sound area for HPWHs. NEEA staff partnered with Puget Sound Energy and other Washington-based utilities to drive retail sales of HPWHs through a midstream HPWH program. The alliance provided support by funding a percentage of midstream incentives based on the regional Retail Sales Allocation Tool. And, to help installers overcome challenging installation barriers for replacement installations, the alliance introduced nine advanced HPWH trainings that are eligible for Continuing Education Units (CEUs) accreditation in Washington and Oregon. Lastly, the program continued to influence product advancement through NEEA's Advanced Water Heating Specification (AWHS), a resource that provides guidance to manufacturers for developing products that provide high levels of consumer satisfaction and energy performance. The AWHS outlines different tiers of product performance, including forward-looking tiers that serve as a guide for how the specification and product will evolve. In 2020, the first Tier 4 product became available, the highest level of efficiency currently available.

INFRASTRUCTURE PROGRAMS

In addition to its Market Transformation programs, the alliance develops and implements enabling infrastructure that builds market capability, awareness and demand for energy-efficient products, services and practices or new customer engagement opportunities for funders. Infrastructure programs include: BetterBricks, Top Tier Trade Ally, the Distributor Platform, the Integrated Design Labs and one special funded project, Strategic Energy Management, of which Puget Sound Energy is a funder.

BetterBricks – BetterBricks is a long-standing, trusted regional resource for building professionals that supports alliance and funder programs by raising market awareness and capability for energy-efficient technologies and decision making through its robust catalogue of online resources and multiple educational and engagement opportunities (webinars, etc.). With the shift to online learning in 2020 driven by COVID-19, the BetterBricks platform saw an uptick in engagement, with market partners turning to the site for its broad catalogue of commercial building content.

Top Tier Trade Ally – The Top Tier Trade Ally (TTTA) infrastructure program builds the skills of lighting contractors in the Northwest through the NXT Level training and designation. NXT Level training encompasses two levels of comprehensive online and in-person curriculum that support the delivery and market differentiation of more advanced energy-efficient commercial and industrial lighting retrofit projects. In 2020, the program saw continued uptake of NXT Level 1 and 2 training in the Puget Sound area, with an additional 16 lighting trade allies achieving Level 1 designation for a total of 87 designees since the training launched in 2016. And, since the launch of NXT Level 2 in 2018, 23 trade allies have now achieved Level 2 designated in the Puget Sound area.

Distributor Platform – The Distributor Platform supports multiple alliance programs with real-time sales data and market intelligence. It is comprised of more than 24 regional and national electrical distributors, representing more than 260 branches across all four Northwest states. The Platform collects full category lighting sales data for the region to gain additional insights about the lighting market, with a focus on the Puget Sound region. For example, in 2020, the alliance leveraged the Distributor Platform to track possible lighting market response to updated Washington legislation, giving insight into market shifts as states develop more stringent efficiency policies.

Integrated Design Labs – The mission of the Integrated Design Labs (IDLs) is to transform the design, construction and operation of commercial, institutional and residential buildings to advance energy-efficient, high-performance and healthy buildings in the Northwest. The IDL in Washington state exists at the University of Washington in Seattle and aims to provide regional design teams access to the best building-performance knowledge available, project-by-project support, and education and training on how to design, construct and operate the healthiest, most productive and energy efficient buildings. As a critical partner to alliance programs, the alliance provides annual base funding to support each IDL. In 2020, the IDLs supported training, awareness and adoption in the building professional community, particularly for LLLCs.

Strategic Energy Management – The alliance develops, maintains and delivers a holistic set of tools that support Northwest utilities, including Puget Sound Energy, in providing strategic energy management (SEM) resources to customers. In 2020, the alliance continued to manage and maintain [SEMHub.com](https://www.semhub.com), which houses a library of tools and resources in SEM design, implementation and evaluation efforts for program administrators and stakeholders to use. Despite the COVID-19 pandemic, the program held its 2020 Annual Northwest SEM Collaborative Workshop as a virtual event. More than 80 attendees participated in the workshop. In addition, the program delivered one new and one refreshed SEM online and on-demand trainings in Q4. The two courses, both focused on operations and maintenance, can be found on SEMHub. Lastly, to deepen regional expertise on SEM practices, the program continued its support of the Northwest SEM Collaborative Leadership Team and its three active working groups, reaching more than 65 work group members in the region.

PRIMARY BUSINESS PLAN STRATEGY: EFFECTIVE PORTFOLIO EXECUTION (NATURAL GAS)

In 2020, NEEA operated a portfolio of Natural Gas Market Transformation programs that included two gas-only programs; Efficient Gas Water Heaters and Efficient Rooftop Units, and one dual fuel program: Residential New Construction (formerly Next Step Homes). 2020 activities for the alliance's Natural Gas initiatives are listed below:

Efficient Gas Water Heaters – The Efficient Gas Water Heater (EGWH) program is working to develop the market for efficient gas water heating products, bring a gas heat pump water heater (GHPWH) to market and ultimately influence the passage of a federal standard by 2030. In 2020, the program continued to co-fund a North American GHPWH field demonstration in coordination with energy efficiency organizations, a major manufacturer and multiple utilities across North America. The goals of this forthcoming demonstration project are to verify cold climate product performance of GHPWHs, inform utility program development and prepare for market entry of the first commercialized product (anticipated in 2022). The program also participated in the North American Gas Heat Pump Collaborative, which launched in January and includes over 14 utilities in the U.S. and Canada. The Collaborative's mission is to develop and implement activities to accelerate the adoption of gas heat pump technologies in North America. Participation in the Collaborative enables the program to leverage the collective market reach in our work with market partners and more easily engage co-funding for projects in the GHPWH initiative. To reduce risk related to limited technology options, the program team finalized a strategy to review currently known technologies while also seeking out new gas heat pump technologies for use in a residential GHPWH. Together with similar activities taking place in the market, this activity is expected to increase likelihood of a commercialized GHPWH that meets price, performance and scalability targets.

Efficient Rooftop Units (formerly Condensing Rooftop Units) – The Efficient Rooftop Unit (RTU) program aims to increase the efficiency of RTUs through product differentiation and ultimately Federal Standards. Formerly focused on condensing rooftop units (C-RTUs), the program transitioned to a broader rooftop unit approach in 2020 because of installation challenges with C-RTUs and new opportunities from evolving test procedures. The alliance has been working as part of a bi-national, cross-industry committee to revise the CSA Group's P.8 standard for Thermal Efficiencies of Industrial and Commercial Gas-Fired Package Furnaces to more accurately represent the overall energy consumption of the entire commercial gas-fired packaged unit. To inform these efforts, the alliance published an energy modeling study to better understand the operating modes and energy consumption of different equipment. The program also continued building manufacturer relationships and began defining the Efficient RTU product and target market. At the end of the 2020, the program partnered with Nicor Gas, a gas utility in Illinois, to analyze the P.8 modeling results to better understand the annualized energy impact of various efficiency options, which will inform the product definition and manufacturer engagement activities. This partnership will continue in 2021 with Nicor co-funding several additional program development activities.

PRIMARY BUSINESS PLAN STRATEGY: CODES AND STANDARDS

In 2020, NEEA continued to influence the development and successful implementation of energy codes, appliance and equipment standards, and test procedures to materially improve efficiency outcomes. The Codes and Standards program relies on and is closely coordinated with strategies and activities with the alliance's Market Transformation programs and above-code new construction

programs, including Residential New Construction, Commercial Code Enhancement and Manufactured Homes.

Codes – NEEA provides training and technical assistance on both current and upcoming commercial and residential Washington energy codes. In 2020, the alliance delivered more than 45 webinars and virtual and on-demand trainings to more than 5,000 attendees across the Northwest. In addition, the alliance published a Washington Commercial Code Roadmap, which identifies key measures and potential energy savings of technologies and strategies that will be considered for adoption in current and future code cycles. Lastly, NEEA staff convened a working group with code experts and conducted several rounds of brainstorming sessions in support of the 2021 Washington commercial code cycle.

Standards – In 2020, The U.S. Department of Energy (U.S. DOE) issued a large number of Requests for Information (RFIs) and Notices of Proposed Rulemaking (NOPRs), initiating appliance and equipment standard rulemaking for more than 40 rulemaking activities covering nearly 40 electric and natural gas products. NEEA staff collaborated with partners to respond to more than 30 of these RFIs in 2020. These responses included regional sales data, lab testing results, field validation data and other technical data to support recommendations for enhanced test procedures and improved efficiency levels.

PRIMARY BUSINESS PLAN STRATEGY: MARKET INTELLIGENCE

Market Intelligence activities are conducted by the Market Research and Evaluation, Data, Planning and Analytics and Energy-use Studies teams. Together, these teams comprise NEEA's Analytics, Research and Evaluation Division. In 2020, this division focused on building capacity for in-house data management and analysis, growing quality data sets and insights to share with regional partners, and increasing visibility to Market Transformation outcomes and market progress indicators in addition to energy savings.

Market Research and Evaluation – Market Research and Evaluation (MRE) provides actionable insights for Market Transformation programs throughout their lifecycles and conducts formal evaluations of programs in market development. These research and evaluation efforts provide data and analytical services for the benefit of Puget Sound Energy customers. In 2020, the alliance delivered more than 15 market research or evaluation reports to support both electric and natural gas programs, all of which are publicly available at neea.org.

Stock Assessments – The alliance finalized its fourth Commercial Building Stock Assessment (CBSA). The resources from the study include a final database, summary report and summary tables and are available [on neea.org](http://neea.org). The CBSA is a comprehensive study of existing Northwest commercial buildings and the elements within those buildings that impact energy use. Results inform utility energy efficiency programs as well as regional power planning efforts. Also in 2020, NEEA staff began planning for the next Residential Building Stock Assessment (RBSA), a comprehensive study of residential buildings in the region. While the timeline for RBSA is subject to change due to uncertainties related to the COVID-19 pandemic, data collection is currently anticipated to be complete in 2022, with data and reports anticipated to be published in early 2023. The RBSA and CBSA are comprehensive inventories of existing Northwest buildings managed by NEEA staff approximately every five years.

End Use Load Research – The End Use Load Research (EULR) project continued collecting data on selected residential and commercial electric end-uses, including ductless heat pumps, ducted heat

pumps, heat pump water heaters, central air conditioning, forced air furnaces and baseboard heaters. As the largest end use load research project in the Northwest since the 1980s, this work will greatly support regional planning and program design. Puget Sound Energy is a contributing funder for the research and its staff participate in technical advisory and oversight roles for the project. Across the region, over 200 homes are being metered for the residential Home Energy Metering Study (HEMS) with a goal of 400 by project end. The Commercial Energy Metering Study had just begun when COVID-19 arrived. Eight commercial buildings are being metered for the study, with a goal of 100 by 2023. Data is being collected by circuit for each residential and commercial building in one-minute intervals. However, due to COVID-19, all new installations were put on hold as of March 14, 2020. Lastly, the first year of data collected for HEMS became available in 2020 and was posted [on neea.org](https://www.neea.org). The second year of HEMS data will be made available in Q2 2021.

PRIMARY BUSINESS PLAN STRATEGY: CONVENE AND COLLABORATE

The alliance's Convene and Collaborate strategy is carried out by NEEA's Stakeholder Relations, Corporate Strategy and Communications Division.

Efficiency Exchange – Due to the COVID-19 pandemic, the alliance pivoted its annual Efficiency Exchange conference, hosted in collaboration with Bonneville Power Administration and the Northwest Power and Conservation Council, to a virtual webinar series. More than 430 energy professionals in the Northwest participated across all three webinars to convene, trade ideas and share best practices. More information on the virtual webinar series can be found [on Conduit](#).

ConduitNW.org – Developed in partnership with the Bonneville Power Administration, the Conduit website facilitates information-sharing, coordination and collaboration among energy efficiency stakeholders in the Northwest. 2020 marked the first year that the Conduit platform existed as a file and resource sharing platform after its transition in 2019 from its previous state as an online community. In 2020, the website continued its core functionality and activities that have been identified as critical to regional Market Transformation efforts. These include the RETAC Database, Efficiency Exchange website, and the file sharing functionality for regional working groups.

REGIONAL COORDINATION

Alliance programs are coordinated through regional working groups and committees, whose membership includes representatives from Puget Sound Energy staff. NEEA staff formally solicits input from the Regional Portfolio Advisory Committee (RPAC), the body responsible for overseeing the alliance's Market Transformation portfolio, at critical program decision-points. NEEA staff are grateful for the time and energy Puget Sound Energy staff dedicate to participating in these forums and on NEEA's Board of Directors, including:

Board of Directors: Bob Stolarski

Regional Portfolio Advisory Committee: Jeff Tripp

Integrated Systems Coordinating Committee: Mark Lenssen, Michael Lane

Products Coordinating Committee: Chris Boroughs, Amit Singh, Patrick Weaver

Regional Emerging Technology Advisory Committee: Rem Husted

Natural Gas Advisory Committee: Andy Hemstreet, Rem Husted

Natural Gas Board Committee: Bob Stolarski

Cost Effectiveness Advisory Committee: Kasey Curtis, Jim Perich-Anderson

Northwest End Use Load Research Steering Committee: Bob Stolarski

Northwest End Use Load Research Working Group: Lorin Molander

ADDITIONAL INFORMATION

For additional information, NEEA's [2020 Quarterly Performance Reports, newsletters](#) and the [2019 Annual Report](#) are available online at neea.org.

NEEA staff encourage stakeholder participation and appreciate input at all NEEA board meetings, committee meetings and energy efficiency events around the region. The next NEEA Board of Directors meeting will be held virtually on March 15-16, 2021. Meeting details will be posted on neea.org in advance.

Please direct questions or comments about this report to info@neea.org.