



Exhibit 10

2020-2021 Plan

Northwest Energy Efficiency
Alliance
(NEEA)

2020-2021 Planned Activities Report

Prepared for Puget Sound Energy

OVERVIEW

NOTE: NEEA is currently undergoing 2020 Operations. NEEA staff will present a final plan to the NEEA Board of Directors for approval in December 2019. If the final draft of the 2020 Operations Plan necessitates changes to NEEA's 2020-2021 planned activities, NEEA staff will update this report accordingly. Where possible, areas of uncertainty related to the business planning process have been identified.

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 creates the market conditions necessary for them to take hold. The alliance also helps the region capture energy savings through progressively more efficient codes and standards. Puget Sound Energy has been a member of the alliance since 1997.

In December 2018, NEEA's Board of Directors unanimously approved the alliance's Cycle 6 (2020-2024) Strategic and Business Plans. This report summarizes NEEA's 2020-2021 planned activities within each of its primary Business Plan strategies: Emerging Technology, Effective Portfolio Execution, Codes and Standards, Market Intelligence and, Convening and Collaborating with the region. Beginning in 2020, NEEA staff will manage the 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 will allow the alliance to leverage shared relationships and market channels between programs and to deliver efficiencies for both NEEA and its supply chain partners.

PRIMARY BUSINESS PLAN STRATEGY: EMERGING TECHNOLOGY

Emerging technologies and new efficiency measures offer new and significant energy efficiency and demand reduction potential for the Northwest. NEEA staff scan the market for emerging energy efficiency opportunities and conduct lab and field testing to verify product performance and energy savings. The following is a list of promising emerging technologies, services or practices, which NEEA staff identified through NEEA's scanning process and will continue to investigate in 2020-2021:

- **Ultra-High Definition (UHD) TVs (Consumer Products Product Group):** The alliance is continuing to collaborate on the development of an updated Department of Energy (DOE) TV Test Procedure and International Electrotechnical Commission (IEC) test clip for ultra-high definition and high dynamic range televisions. Updates to the IEC test clip will inform edits to the federal test method to address new technology features such as HDR and connectivity.
- **Switched Reluctance Motors (Motor-Driven Products Product Group):** Electric switched reluctance motors run by reluctance torque, which is easier to control and is more efficient. NEEA staff will assess the estimated technical energy savings potential of these motors to inform next steps for engagement with manufacturers.

- **Combination Electric Hot Water Heater and Space Heater (Water Heating Product Group):** The alliance will continue conducting field tests of both gas and electric products to demonstrate the performance and adaptability of heat pump-based space and domestic water heating systems in existing homes and small commercial applications.
- **Split System Heat Pump Water Heaters (Water Heating Product Group):** Split system heat pump water heaters separate the heat pump from the water tank, offering an alternative for locations where the integral product doesn't fit. The alliance will develop performance specification and begin field testing.
- **Lightweight Triple Pane Windows (Building Envelope Product Group):** These are primary windows that have three panes of glass: two of standard thickness and a third thin center pane. NEEA staff will engage with manufacturers for commercialization and begin field testing to establish and validate savings in real world conditions.
- **Window Attachments (Building Envelope Product Group):** The alliance will continue to assess energy savings and product performance of low-e surface applied window films, working with the Pacific Northwest National Lab (PNNL). Field testing will evaluate technical, qualitative, and product "fit for use" durational performance, including visual and thermal comfort improvements, and will occur through seasonal changes and temperature extremes.
- **Smart Thermostats (HVAC Product Group):** Smart thermostats control various heating and cooling equipment, use weather and occupancy data to better manage the systems, and engage homeowners to more closely manage energy use and comfort. In 2019, the Consumer Products Strategic Market Steering Team secured funding for thermostat research. Data collection, analysis and reporting will continue into 2020.
- **Residential Variable Capacity Heat Pump (HVAC Product Group):** This product is a split-system heat pump based on the successful inverter-driven technology found in ductless heat pumps. In 2020, the alliance will continue product testing to assess the technical potential of the technology and develop test methods to distinguish performance.
- **Clothes Washers (Consumer Products Product Group):** In 2020, the alliance will complete two projects for testing this residential appliance. The first project compares water and energy use differences between an ENERGY STAR certified GE agitator top load washer and a GE agitator washer that is not ENERGY STAR certified. The second project will develop and validate a lab test protocol that reflects real-world conditions.

PRIMARY BUSINESS PLAN STRATEGY: EFFECTIVE PORTFOLIO EXECUTION (ELECTRIC)

Beginning in 2020, the alliance's portfolio of market transformation programs will be managed in seven cross-sector Product Groups: Building Envelope, Consumer Products, HVAC, Lighting, Motor-Driven Products, New Construction, and Water Heating. This creates efficiencies for the supply chain whose delivery channels and technology applications frequently target multiple customer sectors.

Consumer Products Product Group

NEEA's Consumer Products group comprises the entire supply chain, including manufacturers, distributors, retailers – physical and online – contractors and installers that deliver consumer goods and

services in high volume as well as end customers who purchase them. Planned 2020-2021 activities for the alliance's Consumer Products initiatives are listed below.

- **Retail Product Portfolio:** NEEA's Retail Products Portfolio (RPP) program coordinates closely with the ENERGY STAR RPP (ESRPP) Program and works directly with national retailers to provide midstream incentives on qualified energy-efficient products. Over the next two years (2020-2021), the alliance will continue close coordination with the ESRPP program and national products teams to maximize influence on the consumer products market. Activities will include: developing strategies to round out full-category sales data by including online sales; exploring and testing alternative incentive structures to best address online sales; and, developing product-specific intervention strategies to support products with the highest savings (e.g., refrigerators and washers).
- **Super-Efficient Dryers:** In 2020-2021, the Super-Efficient Dryers program is focused on building market demand to increase the number of qualified dryer models available to Northwest consumers. Key activities will include leveraging partnerships with regional market actors and manufacturers to motivate widespread technology adoption thereby bringing the product cost down for consumers. This product is anticipating a move into the market development phase of NEEA's initiative lifecycle process in 2021.

Motor-Driven Products Product Group

NEEA's Motor-Driven Products group includes the supply chain that manufactures, distributes, specifies, designs and installs a variety of motor-driven products such as pumps, fans, compressed air systems and high-performance motors, as well as the decision-makers who influence the purchase of these products. Planned 2020-21 activities for the alliance's Motor-Driven Products initiatives are listed below.

- **Extended Motor Products:** The Extended Motor Products (XMP) program will continue working with Northwest pump distributors to build understanding of what tactics work in what market segments to shift the sales mix toward efficient pumps and circulators 50hp and below. Key activities will include collecting sales data to inform the region of the stock and sales flow in the pumps and circulators market and raising market awareness of the value of energy-efficient pumps by promoting and providing education on the Hydraulic Institute's Energy Rating Label.

Water Heating Product Group

NEEA's Water Heating Products Group includes all tank type electric water heaters, including the supply chain that manufactures, designs and installs commercial water heaters and end consumers who purchase these products. Planned 2020-2021 activities for the alliance's Water Heating Products initiatives are listed below.

- **Heat Pump Water Heaters:** Over the next two years (2020-2021), the Heat Pump Water Heater (HPWH) program will continue to drive market adoption of HPWHs with the goal of influencing a Federal Standard in 2023. Key activities will include working with manufacturers to launch a 120-volt HPWH product to address challenging installation scenarios; driving Northwest installer adoption of HPWH retrofit installations through a targeted Key Account strategy; and, actively leveraging extra-regional support to accelerate market adoption nationally, which is necessary to achieve sufficient market share to influence the Federal Standard and keep manufacturers engaged.

HVAC Products

NEEA's HVAC Product group includes the supply chain that manufactures, distributes, specifies, designs and installs commercial and residential HVAC products and end consumers who purchase them. Planned 2020-2021 activities for the alliance's HVAC Products initiatives are listed below.

- **High-Performance HVAC:** The High-Performance HVAC program is currently focused on supporting the market adoption of VHE DOAS technology (very high efficiency dedicated outdoor air systems). 2020-2021 focus areas are: 1) increasing the number of manufacturers with qualifying heat recovery ventilator (HRV) product lines; 2) developing a strong value proposition for VHE DOAS by refining product requirements; and, 3) elevating product awareness and uptake among early adopters by continuing to support the alliance's partner-generated demonstration projects.
- **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 for DHPs. The program's 8th Market Progress Evaluation Report (MPER8) was completed in Q3 2019, and NEEA staff is considering the findings, as well as stakeholder feedback, during the 2020 Operations Planning process to develop the transition plan to long-term monitoring and tracking (LTMT). During 2020, NEEA staff will work with the region on transition strategy recommendations and further inform the transition by conducting research to address some remaining knowledge gaps identified in MPER8. These include a cost analysis and additional research into the sustainability of the market for DHPs in cold climates. NEEA will also continue to collaborate with utilities to address and measure cost-effectiveness.

Lighting Products

NEEA's Lighting Products group includes the supply chain that manufactures, distributes, specifies, designs and installs lighting products, including lamps, ballasts, controls and fixtures as well as the end consumers who purchase these products. Planned 2020-2021 activities for the alliance's Lighting Products initiatives are listed below.

- **Luminaire Level Lighting Controls:** In 2020-2021 the Luminaire Level Lighting Controls (LLLC) program has two primary focus areas: 1) building capacity and promoting LLLC technology by providing education and resources to Northwest installers, lighting designers and specifiers; and, 2) creating more effective market champions of LLLCs by engaging key influencers in upstream supply chain and sales channels.

Building Envelope

NEEA's Building Envelope Product group includes the supply chain that manufactures, distributes and sells the physical separator between the interior and exterior of a building, which includes walls, fenestration and roofs and the end consumers who purchase them. Over the next two years (2020-2021), NEEA will focus on window products, such as secondary glazing systems (SGS), low-e storm windows (LeS), and shades and blinds within the commercial sector. Planned activities for the alliance's Building Envelope initiatives are listed below.

- **Window Attachments:** The Window Attachments program seeks to accelerate the adoption of high-performance window attachment products in existing residential, commercial and multifamily buildings. The current focus for the program is secondary windows - a window unit with a pane and frame that attaches to an existing window. Between 2020-2021, the program will undertake activities to increase product differentiation, engage manufacturers to certify products and share sales data, design and implement field tests, and gather data to inform and refine the program

strategy in preparation of the next phase of the program. In addition, the program will continue collaborating with utilities to design and implement field tests to inform and refine the program strategy.

New Construction

New Construction programs maximize energy efficiency opportunities for new residential and commercial buildings through code requirements and inform and enable code advancement through market adoption of energy-efficient products and practices. Planned 2020-2021 activities for the alliance's New Construction initiatives are listed below.

- **Commercial Code Enhancement:** Commercial Code Enhancement (CCE) works with utilities and key code stakeholders to identify future code proposals and align utility programs and market best practices with future code changes. Over the next two years, CCE will continue to focus on supporting improvements in building efficiency and working within established state energy code collaboratives to prepare for future code cycles. Additionally, the program will use the Washington state commercial code technical roadmap to prepare various code proposals for the 2021 Washington state code.
- **Manufactured Homes:** In 2018, the alliance first introduced the NEEM+ specification to the market - an advanced tier of energy-efficient manufactured homes leveraging ENERGY STAR's NEEM (Northwest Energy Efficient Manufactured Housing) program. In 2019, the Manufactured Homes program secured participation from two key manufacturers and their main retailers. Over 2020-2021, the program will focus on continuing and growing manufacturer participation to ensure NEEM+ is available throughout the region, engaging retailers to drive NEEM+ sales, and creating sustained consumer demand while NEEA reduces investment into the program.
- **Next Step Homes:** Next Step Homes is the alliance's only dual-fuel market transformation program. In 2020, the alliance is shifting the program's focus away from increasing participation in utility residential above-code programs and more toward activities that directly influence future code advancement. This transition will allow the program to focus on advancing emerging technologies and new construction best practices in 2021 to prepare the market for future code enhancements.

Infrastructure Programs:

Each Product Group includes enabling infrastructure that is leveraged by multiple alliance programs to build market capability, awareness and demand for energy-efficient products, services and practices or create new customer engagement opportunities for funders. Planned 2020-2021 activities for the alliance's Infrastructure programs are listed below.

- **Integrated Design Labs:** The mission of the Integrated Design Labs (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. IDLs exist at the Universities of Idaho, Oregon and Washington, and Montana and Washington State Universities. Anticipated projects with the IDLs during the 2020-2021 period include: training, awareness and adoption support in the building professional community for Luminaire Level Lighting Controls (LLLCs); lab and field testing of new HVAC and lighting controls technologies; and support for the City of Seattle Retrofit Accelerator pilot with technical assistance to gather learnings and resources for regional use by the BetterBricks platform.

- **BetterBricks:** BetterBricks is a resource that supports alliance and regional commercial programs by raising market awareness and capability for energy-efficient technologies and decision-making. The target audiences for BetterBricks include building owners, property managers, building facilities staff, architects, designers, engineers and contractors. Over the next two years, BetterBricks will continue to position itself as a trusted resource for commercial building professionals and engage with key partners.
- **Distributor Platform:** The Distributor Platform is comprised of key market relationships, ongoing data collection activities and repeatable program processes. Originally developed through the alliance's former Reduced Wattage Lamp Replacement (RWLR) program, the Distributor Platform supports multiple alliance programs including Luminaire Level Lighting Controls, Extended Motor Products and Heat Pump Water Heaters. Over the next two years, the Platform will continue to support data collection and deliver market intelligence for the regional Commercial Lighting Sales and Data dashboard and support commercial lighting research and data gathering for long-term monitoring and tracking. It will also support the implementation and data gathering efforts of the LED commodity lamp midstream pilots with Seattle City Light (SCL) and Snohomish PUD, which are testing the opportunity for possible midstream market transformation interventions that could be applied more broadly as the region's LED programs respond to changes in the market.
- **Top Tier Trade Ally Advanced Lighting Training:** Through the NXT Level training and designation program, Top Tier Trade Ally (TTTA) builds lighting trade ally skills to support the delivery and market differentiation of more advanced energy-efficient commercial and industrial lighting retrofit projects. Between 2020-2021, the program will focus on: 1) continuing to expand the base of trade allies with Level 1 and Level 2 designation; and, 2) positioning the NXT Level training platform to eventually transition to the market by increasing the efficiency and scalability of NXT Level implementation and growing market demand for NXT Level designated contractors.
- **Strategic Energy Management:** Beginning in 2020 and continuing throughout the business cycle (2020-2024), Strategic Energy Management (SEM) will be a Special Project, funded by a portion of NEEA's funders outside of NEEA's core business plan-approved budget. Strategic Energy Management (SEM) will continue to offer a holistic set of tools and resources via the SEM Hub website. In addition, the alliance will convene the Northwest SEM Collaborative with a focus on the most pressing needs of funders. In addition to these existing resources, aggregating and analyzing data to inform programs will be an important new tool for identifying best practices and opportunities.

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

2020 marks the beginning of the second cycle for the alliance's natural gas market transformation efforts, and the first cycle in which gas activities are integrated into NEEA's Business Plan. In 2020 and 2021, NEEA will operate a portfolio of natural gas market transformation programs that includes two gas-only programs (Condensing Rooftop Units, Efficient Gas Water Heating) and one dual-fuel program (Next Step Homes). Focus areas are:

- **Continued Dual-fuel Opportunity** - Developing dual-fuel Product Group strategies that support the alliance in identifying natural gas opportunities for near- and long-term success.
- **Savings Reporting** – Reporting savings for Next Step Homes and establishing a framework for future savings reports and evaluations.

- **National alignment** – Participating in a national Gas Heat Pump Collaborative to enable coordination and accelerate gas heat pump market adoption.

This work will support a well-rounded, successful portfolio of programs that meets the regions' needs for market transformation impact, near-term savings, and managed market risk. Planned 2020-2021 activities for the alliance's Natural Gas initiatives are listed below.

- **Efficient Gas Water Heaters:** In 2020, the program will join with utilities across North America in a field demonstration of near-production GHPWH units. This effort will support the expected 2022 product launch by spurring utility program development, validating performance in cold climates, identifying potential barriers to market acceptance, and initiating market awareness and experience with the product. The program will also seek to identify additional natural gas technologies that can deliver similar levels of performance and to better understand how existing efficient gas water heater technology can prime the market for GHPWH. Finally, the program will explore opportunities to highlight the potential of GHPWHs to play an instrumental role in achieving carbon reduction goals.
- **Condensing Rooftop Units:** The Condensing Rooftop Unit (C-RTU) program aims to transform the commercial HVAC market by establishing a minimum efficiency level of 90% for commercial warm air furnaces found in rooftop units. In 2020-2021, the C-RTU initiative will focus on three areas: 1) researching ways to reduce the cost and/or effort required for condensate disposal to broaden the range of C-RTU applications; 2) continuing to prepare and support C-RTU adoption in buildings with high heating loads; and, 3) investigating other efficient RTU measures for adoption by the broader market. This program is anticipating a move into the market development phase of NEEA's initiative lifecycle process in 2021.

PRIMARY BUSINESS PLAN STRATEGY: CODES AND STANDARDS

The alliance works to support Northwest states in adopting and implementing progressively effective energy codes and to positively influence State and Federal Standards-setting processes. Planned 2020-2021 activities for the alliance's Infrastructure programs are listed below:

- **Codes:** The alliance will focus on: supporting the development of the ASHRAE Standard 90.1 (Energy Standard for Buildings); updating NEEA's Washington State commercial code online compliance portal; and providing technical support, education and training to support code compliance in all four Northwest states.
- **Standards:** The alliance will focus on developing and supporting new test methods and federal rule-makings, including: developing a load-based test-rating method for rooftop units; conducting repeatability testing of heat pumps using a new load-based testing rating standard; and, participating in the federal rule-making processes for variable refrigerant flow air conditioners and heat pumps, as well as clothes dryers and clothes washers.

PRIMARY BUSINESS PLAN STRATEGY: MARKET INTELLIGENCE

Market Intelligence is defined as the systematic and objective identification, collection, analysis and dissemination of data, information and insight for assisting decision making to advance and report progress of energy efficiency and market transformation. This includes work in evaluation, research, regional studies, planning and market trend analysis.

Market Research and Evaluation

- **Market Research and Evaluation** – Market research and evaluation at NEEA provides actionable information for market transformation efforts and formal evaluations of alliance programs in the market. Between 2020-2021, the alliance is planning on conducting more than 50 research reports to support both its natural gas and electric programs.

Regional Studies

- **Commercial Building Stock Assessment:** In 2020, the alliance will finalize and present findings on the latest Commercial Building Stock Assessment (CBSA). The CBSA is a regional baseline stock study that informs efficiency planning and market models and provides inputs into regional load forecasts. The final data set and a summary report will be available in Q1 2020. In 2021, the alliance will begin the region’s first Multi-Family Stock Assessment.
- **End Use Load Research:** The Northwest End Use Load Research project is a detailed survey of energy-use in the region by both residential (Home Energy Metering Study - HEMS) and commercial (Commercial Energy Metering Study - CEMS) customers. The first of its kind in 30 years, the study seeks to help the entire region achieve its energy goals by better understanding how and where energy is used on a daily basis. Installations and data collection will continue over 2020-2021.

PRIMARY BUSINESS PLAN STRATEGY: CONVENE AND COLLABORATE

The alliance’s Convene and Collaborate activities are overseen by the Stakeholder Relations and Corporate Strategy and Communications functions at NEEA. They include internal and external activities that support effective and transparent regional collaboration and market transformation programs. Planned 2020-21 activities are listed below.

- **Regional Coordination through Alliance Committees:** In 2020-2021 the alliance will continue to ensure regional alignment and coordination on alliance activities through a robust committee structure. In 2019, after a year-long process and at the request of NEEA’s Board of Directors, a task-force of NEEA staff and funders recommended an evolution to NEEA’s existing advisory committee structure. The intent of this evolution is to:
 - Clarify roles and responsibilities between alliance advisory committees to increase effectiveness of electric program coordination, and
 - Provide efficiencies in process resulting in cost savings of \$250,000 over the 2020-2024 timeframe.

In 2020, NEEA staff will work closely with the Regional Portfolio Advisory Committee (RPAC) to successfully transition to the new structure and achieve the NEEA Board’s requested cost reduction to NEEA’s “Convene and Collaborate” function.

- **Conduit (conduitnw.org):** A partnership between NEEA and Bonneville Power Administration, Conduit provides information sharing, coordination and collaboration among energy efficiency professionals in the Northwest. Beginning in 2020, Conduit will transition from its current state as an online community to a file sharing resource. Conduit will retain its core functionality and activities that have been identified as critical to regional market transformation efforts, including: The Regional Emerging Technology Advisory Committee (RETAC) database, the Efficiency Exchange site, and the file sharing functionality for regional working groups.

- **Efficiency Exchange Conference:** Co-hosted by the alliance and Bonneville Power Administration and sponsored by the Northwest Power and Conservation Council, Efficiency Exchange is a networking and learning conference for energy efficiency professionals from across the Northwest. The 2020 Efficiency Exchange Conference will be in Portland, Oregon, May 12 and 13. Per the Cycle 6 Business Plan, NEEA is transitioning the Efficiency Exchange conference to a self-funded model in 2020 and 2021 and for the duration of the Business Plan. NEEA staff are currently working to confirm the date and location for Efficiency Exchange 2021.

Additional Information

More information on NEEA's market transformation programs, as well as NEEA's quarterly and annual reports, can be found online at: neea.org.

Questions or comments about this report? Please contact Stephanie Lane, Communications Specialist at: slane@neea.org.