

**2017 Planned Activities Report**

**Prepared for Pacific Power**

**OVERVIEW**

***NOTE: NEEA is currently undergoing operations planning for its 2017 activities. All activities outlined in this report are pending NEEA Board approval at the end of 2016. If there are any material changes to NEEA’s current draft Operations Plan, NEEA will update the following information accordingly.***

The Northwest Energy Efficiency Alliance (NEEA) is an alliance of more than 140 Northwest utilities and energy efficiency organizations working on behalf of Northwest energy consumers. NEEA aggregates and leverages the power of the region to identify and vet emerging technologies and create the market conditions necessary for them to take hold. NEEA also helps the region capture energy savings through more efficient codes and standards. Pacific Power funds NEEA directly on behalf of its Washington customers and indirectly, through Energy Trust of Oregon, for its Oregon customers.

NEEA’s 2015-2019 Business Plan outlines two strategic goals: 1) Fill the energy efficiency pipeline with new products, services and practices; and 2) Create market conditions that will accelerate and sustain the market adoption of efficient product, service and practices. This report summarizes NEEA’s 2017 planned activities to support these business plan goals. It is based on the draft version of NEEA’s 2017 Operations Plan, which will be approved by the NEEA Board in December, 2016.

**FILLING THE ENERGY EFFICIENCY PIPELINE**

On behalf of the region, NEEA scans the market for emerging energy efficiency opportunities and conducts lab and field testing to verify product performance and energy savings. The following is a list of promising emerging technologies, service or practices, which NEEA identified through its scanning process and will continue to investigate in 2017:

* **Ductless heat pump integrated with a domestic hot water tank (residential):** Combines a ductless heat pump and heat pump water heater into one appliance. Looking at technologies applicable to both zonal and whole house applications.
* **Split system heat pump water heater (residential):** Inverter-driven heat pump-based domestic hot water with an outdoor compressor unit, and indoor storage tank.
* **Highly-efficient heat pump water heater (residential):** NEEA will continue to scan for highly-efficient heat pump water heaters that meet the highest efficiency tiers of the Advanced Water Heater Specification. As new products are tested in the lab and field they will be added to the qualified products list.
* **Window attachments (residential):** Interior or exterior window attachments with a low-e coating to improve U-value and heat gain in homes.
* **V/ HAC – Ventilation separated from heating and cooling (commercial/ industrial):** Systems approach to HVAC where ventilation control and delivery is separated from building heating and cooling.
* **Extended motor products (commercial/ industrial):** Advancing integrated motor systems with optimized performance leveraging a test method and labeling system.
* **Compressed air nozzle – Air saver unit (commercial/ industrial):** Add-on product to compressed air systems that reduces air consumption by interrupting air flow through engineered air nozzles.

Opportunities that demonstrate energy savings, are commercially available, and have market transformation potential will be selected for further investigation.

**CREATING MARKET CONDITIONS FOR ENERGY EFFICIENCY (ELECTRIC)**

NEEA works across all four Northwest states to influence entire markets by identifying barriers (or opportunities) to efficiency and removing those barriers through strategic market interventions. This market influence is enabled by the region having a united voice “upstream” in the market with national and international organizations.

**Regional Market Strategies**

To maximize long-term regional efficiency efforts, NEEA is facilitating the development of regional strategic market plans in four high-priority strategic markets: Residential New Construction, Residential Consumer Products, Commercial New Construction, and Commercial and Industrial Lighting.­­

In the first two years of the Business Plan, NEEA facilitated the development of long-term regional strategic market plans for the commercial lighting and consumer products market. In 2017, NEEA’s focus will be on achieving even greater efficiency and regional collaboration as a result of continued plan implementation and increased shared ownership of the regional strategic market plans. It will also focus on expanded regional platforms to support multiple programs, increase volume of efficiency products and to expand regional data collection and analytics.

**Residential Sector**

In 2017, NEEA’s activities in the residential sector will be focused on two strategic markets: consumer products and new construction. Both of these markets represent long-term, leveraged opportunities for market transformation with significant energy savings and strong links to building codes and appliance standards.

**Consumer Products Strategic Market**

NEEA’s work within the Consumer Products Market leverages national manufacturer, retailer and distributor relationships to influence manufacturing practices, increase market share of efficient products, and increase voluntary specification and federal efficiency standards. Focus areas in 2017 include:

* Leveraging the retail platform to support NEEA and utility programs and pilots and strengthening relationships with key market partners; and
* Identifying barriers and opportunities for online retail and developing a strategy to influence the sale of energy efficient products online.

NEEA’s portfolio currently includes four market transformation programs in the consumer products market.

* **Heat Pump Water Heaters**: In 2017, NEEA will focus on growing supply chain and unit sales, partnering with new manufacturers to support quality replacements and capturing the emergency replacement market. Program goals for 2017 include sales of more than 14,000 units and supporting the development of over 100 regional utility programs.
* **Ductless Heat Pumps:** In 2017, NEEA’s Ductless Heat Pump program will have four focus areas: lowering installed costs; supporting utility programs through increased unit energy saving and cost-effectiveness; creating consumer education tools; and, and exploring new market segment opportunities. 2017 program goals include a 20% increase in sales for zonal and 15% increase for electric forced-air homes over 2016.
* **Super-Efficient Dryers:** In2017, NEEA’s Super-Efficient Dryers program will focus on making heat pump products available through regional big box retailers and supporting utility programs and the ENERGY STAR Most Efficiency dryer category. Program goals for 2017 include two multi-family pilot projects, two in-store promotion events, and supporting the development of at least five regional utility programs.
* **Retail Product Portfolio:** NEEA’s Retail Products Portfolio (RPP) program uses mid-stream incentives to influence retail product purchasing practices – and ultimately drive manufacturing and standards – for a portfolio of energy-efficient products sold through the retail channel. In 2017, NEEA will focus on expanding retailer participation, streamlining the product selection process and solidifying the measurement and evaluation process.

**Residential New Construction Strategic Market**

This market includes the supply chain that plans, builds, sells and inspects new residential single-family, manufactured, and low-rise multi-family structures. NEEA’s portfolio currently includes two market transformation programs in this strategic market.

* **Efficient New Homes:** In 2017, NEEA will continue to develop and support performance-based utility programs, support builder participation in Home Certification programs, and develop training and support for code changes. Program goals include achieving RTF approval for the Standard Modelling Protocol NEEA is developing, supporting five or more utility programs and establishing data-sharing agreements for Home Certifications.
* **Manufactured Homes:** One of NEEA’s newest programs, Manufactured Homes was launched in May, 2016. The goal of this program is to leverage the Northwest Energy Efficient Manufactured Housing Program (NEEM) to ensure a voluntary above-code manufacturing specification exists after the upcoming HUD code change, allowing for future energy savings to be captured by the region. In 2017, NEEA’s goals include establishing a new NEEM 2.0 specification, and supporting utility programs to shift incentives to the new specification.

**Commercial Sector**

In 2017, NEEA’s activities in the commercial sector will be focused in its two strategic markets: Lighting and New Construction.

**Commercial/ Industrial Lighting Strategic Market**

NEEA’s work within the Commercial/Industrial Lighting Strategic Market includes leveraging relationships with manufacturers, distributors and other industry groups to accelerate the adoption of highly-efficient commercial lighting products and operating practices. Focus areas in 2017 include:

* **Lighting Platform:** To support regional commercial lighting efficiency efforts, NEEA will develop and provide utilities with a platform of resources in 2017. These resources will include a sales database made available to the region for business decision-making, a pool of participating distributors built through the Reduced Wattage Replacement Lamp program, and support for regional coordination and collaboration.
* **Retail and Office Strategy:** NEEA staff will identify market transformation interventions that lend themselves best to accelerating LED and controls adoption in office and retail spaces.

NEEA’s portfolio currently includes four market transformation programs in the commercial lighting market:

* **Reduced Wattage Replacement Lamps:** The goal of the Reduced Wattage Replacement Lamps program is to influence the stocking and promotion of reduced-wattage (28W and 25W) T8 lamps in the lighting maintenance market. In 2017, NEEA will focus on enrolling non-traditional channels, bundling program offerings with funder programs in a mid-stream regional platform and continuing to provide outreach and incentives to drive sales. Program goals include capturing 50% of regional distributor market share for T8 lamps.
* **Luminaire Level Lighting Controls:** NEEA and its partners will develop best practices for luminaire level lighting controls, with the goal of having the technology installed as a standard industry practice in commercial office lighting. In 2017, the program will focus on conducting market research and launching demonstration projects with at least two utilities.
* **Top Tier Trade Ally Advanced Training *(optional)*:** This is an optional program per NEEA’s business plan, which Pacific Power has opted to fund. The Top Tier Trade Ally Advanced Training program accelerates the market adoption of advanced lighting retrofit practices by connecting contractors with training resources and utility programs. In 2017, NEEA will continue to work with utility partners to offer NXT Level 1 training, with a goal of at least 60 people trained. Contingent upon the success of NXT level 1, NEEA will also develop and pilot the second module in the training series, NXT Level 2.
* **Commercial Lighting Infrastructure:** To influence the market to adopt more efficient lighting technology, NEEA provides and maintains a set of tools and resources to support utility lighting programs, including the NW Lighting Network and Online Basics Lighting Training. NEEA will also continue to represent the region in the Design Lights Consortium.

**Commercial New Construction Strategic Market**

This market includes the community of businesses that develop, plan, design, build and commission new commercial buildings.

* **Commercial Code Enhancement (formerly Commercial New Construction)**: In 2016, NEEA launched a new initiative in the commercial new construction market. The goal of the Commercial Code Enhancement program is to increase the region’s ability to propose, adopt, and implement more efficient commercial building energy codes. In 2017, NEEA will develop an action plan to advance code in Washington State, and complete a technology assessment as a first step to building support for advanced technologies.
* **Integrated Design Labs**: In 2017, NEEA-supported Integrated Design Lab Network will continue innovating and supporting new projects and major building renewal projects. NEEA will also support development of tools needed to advance integrated design, construction and operation of low-energy consumption buildings.

**Commercial Buildings (other strategic market)**

* **Commercial Real Estate/Existing Building Renewal *(optional)*:** This is an optional program per NEEA’s business plan, which Pacific Power has opted to fund. In 2017, the program will focus on enabling engagement with decision makers (e.g. building owners and executives), and launching an online Navigator tool.
* **Commercial Window Attachments (formerly Secondary Window Glazing):** In 2016, NEEA launched a program to accelerate the market adoption of interior secondary window glazing for commercial buildings. Commercial window attachments are super-insulating interior windows that can be installed without replacing the existing windows at 50% the cost of new windows. In 2017, the program will focus on supporting AERC (Attachment Efficiency Rating Council) certifications, launching two utility pilots, and establishing a market baseline and energy savings rate for this product.

**Industrial Sector**

In the 2015-2019 Business Plan, NEEA’s industrial sector activities focus on supporting local utility efforts by providing regional resources (e.g. tools and training, etc.) and delivering a few market transformation initiatives in areas where NEEA’s regional leverage is advantageous.

* **Certified Refrigeration Energy Specialist (CRES):** NEEA has partnered with RETA (the national Refrigerating Engineers & Technicians Association) to develop, launch and promote an energy efficiency certification. The CRES certification increases industrial facility energy efficiency and provides a competitive advantage to refrigeration engineers across the region. In 2017, the program will focus on increasing the number of certificants and supporting ANSI accreditation for the certification.
* **Commercial and Industrial Strategic Energy Management (SEM):** NEEA’s commercial and industrial Strategic Energy Management infrastructure program provides a holistic and integrated set of tools that support utilities and the market in building market capability, awareness and demand for SEM. In 2017, the program will continue to facilitate regional collaboration on SEM challenges and opportunities and provide standardized tools and resources though the online SEM hub (launching in 2016).
* **Industrial Technical Training *(optional)***: This is an optional program, which Pacific Power has opted to fund during NEEA’s 2015-2019 business cycle. In 2017, NEEA will continue its Industrial Technical Training program, which provides coordinated training on key industrial energy efficiency concepts to support industrial energy efficiency programs and build market capacity to facilitate implementation of Strategic Energy Management.

**Codes and Standards**

In 2017, NEEA will continue to support Northwest states in adopting and implementing increasingly efficiency energy codes and work to positively influence the federal standards-setting process.

* **Codes:** In 2017, NEEA will develop a new code change communication process to support improved communication between utilities and code developers. Program staff will begin working on Washington State 2019 code change development and continue the commercial code evaluation already underway in Oregon and Washington. The program will also provide support for market transformation programs (i.e. Commercial Code Enhancement, Next Step Homes), product testing (e.g. variable speed heat pumps), and field trials (dedicated outside air supply/ heat recovery ventilation).
* **Standards:** In 2017, NEEA staff will continue to provide input into the development and rollout of regional standards, and ensure the collective voice of the Northwest is represented in national standards rulemakings. Likely standards processes in which NEEA staff will be involved include: room air conditioners, clothes dryers, refrigerators, dish washers, air compressors, fans, fluorescent lamp ballasts, and small motors.

**NATURAL GAS MARKET TRANSFORMATION**

In 2015, NEEA’s Board of Directors approved its first Natural Gas Market Transformation Business Plan for 2015-2019. The goal of the plan, which was developed collaboratively with NEEA’s gas utility funders and others, is to accelerate the development and market adoption of efficient natural gas products, services, and practices, resulting in improved consumer choice and increased efficiency of natural gas use in the Northwest.

The plan includes funding for scanning activities, codes and standards, research and evaluation and five market transformation programs:

* Gas-fired heat pump water heaters
* Combination space and water heating systems
* Hearth products
* Super-efficient gas clothes dryers
* Rooftop HVAC

**Natural Gas Portfolio**

* **Gas-fired heat pump water heaters:** NEEA is working to accelerate product development of gas-fired heat pump water heater technology and to create market conditions that accelerate market adoption in order to influence a federal manufacturing standard. In 2016, NEEA completed a successful field trial of a gas-fired heat pump water heater and made refinements to the product based on the results. Program priorities for 2017 include broadened manufacturer engagement, creating a product specification, and scanning for additional technologies.
* **Combination space and water heating systems:** NEEA is creating and leveraging its relationships with key market partners to develop a combination space and water heating system at an efficiency exceeding current high-efficiency furnaces and stand-alone gas water heater technology. In 2016, NEEA launched a controlled field test and prototype testing of a combination system. In 2017, NEEA will complete the field study, evaluate the technology value proposition, and scan for new combination system technologies including a residential internal combustion engine heat pump.
* **Hearth Products:** The goal of this program is to increase the adoption of high-efficiency hearth products by influencing product assortment and manufacturing practices. In 2016, NEEA identified two potential market transformation opportunities for Hearth product and launched research to increase understanding of energy savings opportunities. 2017 program priorities include completing pilot light retrofit work, finalizing the market characterization study, and completing low-capacity product testing.
* **Super-efficient clothes dryers:** The goal of this program is to increase the market adoption of super-efficient, natural gas-powered clothes dryers to influence the enactment of more stringent ENERGY STAR specification and ultimately federal efficiency standards. In 2016, NEEA staff conducting lab testing of efficient dryers and worked with regional stakeholders to identify a market transformation strategy. NEEA’s 2017 priority for efficient clothes dryers is to participate in the federal rulemaking process for gas dryers by influencing the test procedure.
* **Rooftop HVAC:** The goal of this program is to increase market adoption of rooftop HVAC units containing gas-fired heating units in both new and retrofit markets. In 2016, NEEA launched a field study of a rooftop HVAC unit and conducted research to better understand the market opportunity for this product. In 2017, the program will focus on completing the field demonstration project, developing a product specification and engaging the supply chain.

**DELIVERING REGIONAL SERVICES**

On behalf of the alliance, and to support local utility programs and NEEA’s market transformation programs, NEEA provides regional services such as data collection and analysis, program evaluation, regional coordination and more.

**Regional Services**

* **Regional Market Intelligence:** In 2017, NEEA will continue to provide funders and regional stakeholders with timely analysis for better data-based decision making. A core objective for 2017 will be creating a ‘Data Hub’ for staff and funders to create operational efficiencies and share regional insights that will impact market understanding and strategy.
* **Market Research and Evaluation**: NEEA’s Market Research & Evaluation team will continue to work with third-party evaluators to assess its market transformation programs and deliver market characterization and market assessment reports. In addition, NEEA will continue work on two large building stock assessments that began in 2016: the Residential Building Stock Assessment and the Commercial Building Stock Assessment.
* **Market Planning:** NEEA’s Market Planning team manages the forecasting and reporting of savings for both current- and previously-funded initiatives and other value metrics. In 2017, staff will implement a new Annual Reporting approach to standardize the process and expedite funder reports.

**Stakeholder Engagement Opportunities and Advisory Committees**

* **Efficiency Exchange conference**: Co-hosted by NEEA and BPA, Efficiency Exchange is a networking and learning conference for energy efficiency professionals from across the Northwest. The 2017 Efficiency Exchange Conference will be held at the Oregon Convention Center in Portland, Oregon on May 9-10.
* **Conduit (conduitnw.org)**: A partnership between NEEA and BPA, Conduit is an online community that provides information sharing, coordination and collaboration among energy efficiency professionals in the Northwest.
* **Advisory Committees**: In 2017, NEEA will continue to facilitate regional collaboration and solicit regional input through its advisory committees and work groups. Pacific Power is represented of each of NEEA’s advisory committees and most of its work groups.

**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](http://neea.org/home).

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