Newsletter / September 8

Q3 2026: Emerging Technology

Highlights

The Q3 2026 Emerging Technology Newsletter showcases the product management team's impactful work supporting the emerging technology program at NEEA, including:

- Locating new field test sites to study Luminaire Level Lighting Controls (LLLC) integration with HVAC control in small commercial buildings that lack a central building automation system. These field studies will help refine savings estimates and begin developing the technology as a load flexibility resource. System modeling will be conducted in parallel to help analyze technical potential of this emerging technology.
- Working with NEEA's partners on the Hot Water Innovation Prize, utilities and other stakeholders to explore demonstrations and other market development opportunities.
    - Midea Wins Innovation Prize to Expand Access to Efficient Water Heating.
- Continuing research on digital display technology with a focus on commercial displays and monitors. This new phase of work will launch into a technology landscape assessment, examine key product features and include integrated system testing. This effort will help develop guidance on policy and test methodology for this product segment.
- Conducting field studies on:
    - Integrated dual fuel residential water heaters to assess user experience
    - Residential tri-mode heat pump to understand the current capability of controls
    - Gas high-efficiency dedicated outdoor air system to study system performance

NEEA staff scan for emerging technologies for all sectors and end uses. Please let us know if you have a product or research idea—we would love to hear from you by submitting your energy-efficient idea on our website or contacting any NEEA product managers with questions or suggestions on the organization's emerging technology work.

NEEA's emerging technology team also has several interesting Product Councils scheduled and is always looking for more topic ideas and presenters. Information on upcoming Product Councils is available on neea.org.

RECENT AND UPCOMING PRODUCT COUNCILS

- *July 14, 2026 – HVAC Thermal Storage for Enhanced Heating & Cooling*
- *July 28, 2026 – Financing Market Transformation*
- *August 11, 2026 – Commercial Secondary Windows – A Solution for Existing Buildings*
- *September 22, 2026 – Lab Test Findings – Navien Residential Dual-Fuel Water Heater*
- *September 29, 2026 – A Design Tool for Early Carbon Assessment in Small-Scale Residential Buildings (DARA)*

To view recordings from any past session, visit our Materials Library. To register for an upcoming session, visit our Event Calendar

Table of Contents

Building Envelope

Secondary Window Research and Field Study — Neil Grigsby

DESCRIPTION

Product: Secondary windows, retrofit products comprising one or more panes of material such as glass, polymer or acrylic (with or without Low-E coatings) that are mounted in a frame attached either to the interior or exterior of existing windows without replacing the primary glass or frame. These products save energy through increased insulation and lowered window air leakage.

Project: This project aims to compile an inventory of manufacturers that offer secondary windows and to test manufacturer products for condensation mitigation. Selected field test sites comprise multiple office spaces. Three manufacturers' products will be tested.

Fuel Type: Electric + Natural Gas

Project Status	*Air tightness testing of existing windows at sites is being conducted late August 2026. Installation dates are set for September for most of the secondary windows. Installation of vacuum insulated glazing (VIG) secondary windows to follow.*		
Project Objectives	*Primarily funded by the CEC, this multi-year, co-funded project implemented by GTI Energy seeks to:* • *Advance high-performance window technologies by addressing the retrofit technical and cost challenges such as cost, weight, existing window incompatibilities and durability.* • *Demonstrate increased energy performance with a U-Factor ≤ 0.13, Solar Heat Gain Coefficient (SHGC) ≤ 0.20, Visual Transmittance (VT) > 0.42, to decrease HVAC energy consumption by at least 15% compared to current HVAC energy use with existing single-pane windows.* • *Reduce installation costs compared to code-compliant full replacement windows.* • *Accelerate high-performance window adoption in the retrofit market through direct partnerships with manufacturers, suppliers and others.*		
Readiness Levels	***Product**: 4*	***Commercial/Market**: 5*	***Program**: 4*

Building Envelope

Advanced Prefabricated Zero Carbon Homes Field Study — *Neil Grigsby*

DESCRIPTION

Product: Prefabricated net-zero homes that meet California Title 24 Building Energy Efficiency Standards including efficient heat pumps for HVAC, heat pump water heaters and photovoltaic (PV) energy generation with energy storage.

Project: Co-funded with California Energy Commission (CEC) and implemented by GTI Energy the project (EPC-23-018) will aim to develop manufactured homes that can achieve net-zero carbon operation. The project will design, build, commission and verify energy performance of pilot homes.

Fuel Type: Electric

Project Status	*Contractor GTI Energy is still awaiting CEC to approve site selection for work to resume. A new prefabrication home building company has been selected to provide test homes.*		
Project Objectives	*Perform techno-economic analysis using as-built advanced home costs within this project as well as scaled future costs assuming broad adoption of energy efficiency and demand response technologies.*		
Readiness Levels	***Product**: 2*	***Commercial/Market**: 2*	***Program**: 1*

Consumer Products

TVs, Monitors and Commercial Display Testing Development — *Wendy Preiser*

DESCRIPTION

Product: Ongoing efficiency improvements in 4K ultra-high-definition televisions with various forms of advanced display settings, standby mode and other new technologies.

Project: NEEA developed and influenced improved testing methods that recognized escalating standby power usage and better evaluated dimming levels on non-uniform displays that consumers often adjusted post-purchase. To date, NEEA's efforts have resulted in an updated ENERGY STAR® TV specification Version 9, an industry standard test method based on the NEEA approach (ANSI/CTA-2037-D), U.S. adoption of ANSI/CTA-2037-D, the development of a U.S./Canada TV Industry Voluntary Agreement, and the potential 2026 adoption of the NEEA approach in several important International Electrotechnical Commission energy efficiency test methods (e.g. TVs, Standby and Network Standby) that are prominent in Europe.

Building upon its efforts to improve the efficiency of TVs, and because international standards bundle the products, NEEA has identified an opportunity to improve the efficiency of monitors and commercial displays. Most displays and monitors are similar in design and construction to TVs but currently lack regulations.

Fuel Type: Electric

Project Status	*Published a comprehensive report linked below. Now planning an additional publication by Q4 exploring the impact of AI and Machine Learning features on TV and Display energy use. A "proof of concept" study was added to evaluate whether a camera-based Signal -to-Light Mapping (STLM) normalization method is feasible within the TV test method which would strengthen confidence in real-world energy use performance.*		
Project Objectives	• *Influence adoption of key aspects of the NEEA test method and approach internationally.* • *Support ongoing discussions of on-mode power levels backed by TV test data within the TV Voluntary Agreement.* • *Achieve ENERGY STAR adoption of NEEA-developed test procedure and methodology for monitors and displays, with buy-in by industry stakeholders including major manufacturers and energy efficiency advocates.* • *Succeed in having the new test procedure inform an update to the Department of Energy federal energy test standard.*		
Readiness Levels	***Product**: 4*	***Commercial/Market**: 5*	***Program**: 4*
Link to Reports	*Recommendations for Adapting the TV Policy Approach for Computer Monitors and Digital Signage Displays - Northwest Energy Efficiency Alliance (NEEA)*		

Consumer Products

Residential Laundry Field Study — *Wendy Preiser*

DESCRIPTION

Product: Quantified and analyzed data reflecting energy usage by installed base case residential clothes washers and dryers.

Project: This study focuses on quantifying usage data on a large sample of installed residential appliances for washing and drying clothes to build an understanding of the current base case. A user diary and metered data were collected on water usage, load sizes, textile mix, washer and dryer cycles selected, how efficiently washers remove water from the load and how efficiently clothes were dried. The research leverages NEEA's Residential Building Stock Assessment (RBSA) by selecting a statistically representative sample of RBSA participant households and studying their laundry use patterns and equipment energy use.

Fuel Type: Electric + Natural Gas

Project Status	*The study is completed and the final report is linked below on neea.org.*		
Project Objectives	*Gain insights that will allow updates to energy savings opportunities, inform current ENERGY STAR specification development, inform future Department of Energy rulemakings and facilitate collaboration with other partners to replicate the study in their territories.*		
Readiness Levels	***Product**: 5*	***Commercial/Market**: 5*	***Program**: 5*
Link to Reports	Residential Laundry Field Study		

Consumer Products

Combo Washer-Heat Pump Dryer Testing — *Wendy Preiser*

DESCRIPTION

Product: A combination all-in-one washer-dryer is a residential laundry appliance that cleans and dries clothes in a single tumble-type drum. Three manufacturers have introduced models in the U.S. market that feature heat pump technology in a combo unit. Heat pump dryers tend to be 40%–60% more efficient than electric resistance dryers.

Stand-alone heat pump dryers have experienced limited consumer adoption despite a decade of market intervention efforts due to longer cycle times, more involved lint management and higher pricing. Combo washer-dryers are among the first heat pump dryer technologies to gain consumer acceptance in the United States. These units offer advantages including convenience, 120V connection and ventless drying. These features also make them suitable for residences that may not be able to accommodate traditional laundry pairs. Dryers are the second-highest energy-consuming home appliance. NEEA is exploring whether these new laundry machines share usability concerns that affect broader adoption of heat pump dryer technology and long-term consumer satisfaction.

Project:
This project seeks to better understand potential consumer dissatisfaction that could impede adoption of market-available heat pump combinations and, where applicable, heat pump dryers. Findings from this investigation will help develop strategies to address those barriers.

Fuel Type: Electric + Natural Gas

Project Status	*Strong consumer adoption of all-in-one units continues. Research was rescoped to understand potential post-purchase dissatisfiers impacting long-term advances in heat pump dryer technology. Lab testing on two of three units is complete.*		
Project Objectives	*Test equipment to understand actual performance and energy consumption compared to Department of Energy and ENERGY STAR estimates, examining if:* • *Cycle times fall within reasonable expectations* • *Usage instructions are clear* • *Maintenance/cleaning instructions are clear and reasonable* • *Lint accumulation impacts performance and energy use over time* • *Connectivity impacts cycle time and energy use performance*		
Readiness Levels	***Product**: 4*	***Commercial/Market**: 5*	***Program**: 5*

Consumer Products

Residential Refrigerator Test Procedure Exploration — *Wendy Preiser*

DESCRIPTION

Product: Refrigerators currently consume more energy than other common home appliances. Refrigerators are evolving to include variable speed compressors, advanced adaptive controls and distributed cooling technologies that can deliver relatively inexpensive energy savings. These newer features are not evident with current refrigerator test procedures. During the 2020–2021 ENERGY STAR Emerging Technology Award period, an alternate test procedure was used to qualify residential refrigerator products. This approach revealed that units with adaptive controls and variable compressors can deliver savings of 27% above baseline efficiency by adjusting energy use based on cooling demand. Models released after the conclusion of the Emerging Technology Award period are tested at one ambient temperature (90°F), per the Department of Energy (DOE) test method, which means similar savings go unrecognized.

Project:

NEEA is conducting lab research to identify and develop a more effective testing approach. This new test procedure will be used to identify top-selling high-efficiency models that could demonstrate regional energy savings in the near term. A new refrigerator testing methodology will also help promote other features that are being incorporated into new high-efficiency models entering the market. This project will work through multiple phases to develop the new testing methodologies, test newer models that contain these innovative features to show increased savings with these units and lastly build repeatability of these model tests to grow credibility of the test procedure for eventual adoption by the DOE.

Fuel Type: Electric

Project Status	*Phase 1 testing to evaluate alternate test method recommendations continues through Q3 2026. Development of a model sampling plan for Phase 2 testing has begun.*		
Project Objectives	• *Advance refrigerator savings opportunities by supporting energy-efficient technologies, leveraging data for future comments on test procedures and ENERGY STAR specifications.* • *Develop a plan to influence test procedure updates that reflect energy savings of advanced inverter compressors and other advanced technologies.* • *Identify an alternative refrigerator test procedure that has a similar level of burden to the current Department of Energy approach but is more representative of real-world use, revealing the benefits of new technology.*		
Readiness Levels	***Product**: 3*	***Commercial/Market**: 3*	***Program**: 2*

HVAC

Low-Load Efficient Heat Pump Investigation — *Christopher Dymond*

DESCRIPTION

Product: Variable speed heat pumps (VSHPs) are designed to be highly efficient when running under low loads. Some heat pumps are 40%–50% more efficient than single-speed systems under low load conditions, which account for over 60% of the operating hours of a properly sized system in the Northwest.

Project: Activities included lab testing, field testing, product teardowns, modeling, database evaluation and manufacturer interviews. The report will summarize research activities.

Fuel Type: Electric

Project Status	*All phases of this investigation are complete, and the summary report is now included in the link below.*		
Project Objectives	*Core project objectives are to determine the incremental costs of VSHPs compared to baseline and to determine why some VSHPs exhibit significantly better part-load (low-load) operating performance compared to others.* • *Phase 1 of the project reviewed existing publicly available data.* • *Phase 2 included conducting a virtual teardown of equipment to compare a dozen different heat pumps based on technical service manuals.* • *Phase 3 consisted of lab testing several variable speed heat pumps to validate and understand how heat pumps operate under part-load conditions.* • *Phase 4 included performing a physical teardown of subcomponents to provide insight into component differences, manufacturing costs and components that enable low-load efficiency.*		
Readiness Levels	***Product**: 4*	***Commercial/Market**: 3*	***Program**: 3*
Link to Report and Presentations	• Preliminary findings presented at the Product Council on April 2, 2024. • Summary presentation given at the Product Council on March 25, 2025. • *Low-Load Efficient Heat Pump Investigation: 2020 – 2025 Summary Report*		

HVAC

Dual-Fuel Residential Heat Pump Modeling — *Noe Contreras*

DESCRIPTION

Product: Gas and electric systems can be combined in multiple ways to provide residential space conditioning. Different combinations and control schemes will lead to different operating costs, energy use and emissions. The focus for this work is a forced-air gas furnace or hydronic furnace combined with an air-source heat pump with integrated controls to determine the best conditions for operating each heating source.

Project: This project is an exploratory analysis to identify dual-fuel systems with lower operating costs, reduced energy use and reduced emissions in the Northwest.

Fuel Type: Electric + Natural Gas

Project Status	*GTI Energy modeled residential dual-fuel HVAC systems across Northwest-relevant climate zones to evaluate the impacts of equipment type, sizing and control strategies on energy use, costs and emissions. The study found that properly designed dual-fuel systems can reduce operating costs and GHG emissions compared to gas-only systems, with performance highly dependent on heat pump sizing and fuel-switching controls. Results generally favored maximizing heat pump runtime through lower switchover temperatures and showed that smart controls responding to utility rates and grid conditions can provide additional benefits. Overall, GTI concluded that dual-fuel HVAC offers a practical pathway to balance affordability, resilience, decarbonization and grid reliability.*		
Project Objective	*Understand energy and cost savings from centrally ducted dual-fuel systems across various representative applications in the Northwest.*		
Readiness Levels	***Product**: 3*	***Commercial/Market**: 4*	***Program**: 1*
Link to Report	*Expected Q4 2026*		

HVAC

Dual-Fuel Residential Heat Pump Field Study — *Noe Contreras*

DESCRIPTION

Product: Unlike a conventional dual-fuel system that pairs a heat pump with a gas furnace, the iFlow configuration combines a tankless water heater, hydronic air handler and centrally ducted heat pump to provide both domestic hot water and space heating. The design offers greater flexibility than traditional dual-fuel systems. Potential benefits include reduced gas consumption, avoidance of electric resistance backup, warmer supply air temperatures and support for load flexibility by shifting away from electric heating during grid-constrained periods. These advantages are particularly relevant in the Northwest as heat pump adoption and winter peak demand continue to grow.

Project: This field study evaluates the dual-fuel HVAC system in 13 homes, then collects operational data, utility bills and homeowner feedback to evaluate performance, costs, comfort, emissions and load flexibility impacts.

Fuel Type: Electric + Natural Gas

Project Status	*The project focus has moved into final analysis, reporting and administrative closeout. Report is expected in late Q3 or first part of Q4 2026. .*		
Project Objective	*Understand the efficiency of residential dual-fuel systems, which combine highly efficient gas water and space heating with an electric heat pump. By using an integrated controller, these systems can enhance fuel flexibility and dynamically manage energy use, offering both energy cost savings and grid flexibility during times of peak demand. The report sought to answer four key questions:* *Does the dual-fuel combination system save energy, cost and emissions?* *How does performance vary by operating mode and outdoor temperature?* *Can technology provide meaningful demand flexibility without negatively affecting customers?* *Is technology practical and market-ready for broader deployment in the Northwest?*		
Readiness Levels	***Product**: 3*	***Commercial/Market**: 4*	***Program**: 1*

HVAC

Cold Climate Room Heat Pump Field Testing — *Christopher Dymond*

DESCRIPTION

Product: Room heat pumps are installed in a sash window and are plugged into a standard 15-amp, 120-volt AC outlet. Cold climate versions are defined as Type 4 by the Environmental Protection Agency test method, meaning they feature active defrost capabilities, can operate in temperatures below 5°F and maintain substantial heating capacity in cold weather.

Project: Washington State University is leading a field and customer experience study to install 26 cold climate room heat pumps. The project is jointly funded by the Bonneville Power Administration and NEEA, with additional support from Energy Trust of Oregon, Glacier PUD, Puget Sound Energy, Okanogan PUD, Ravalli Coop and Seattle City Light.

Fuel Type: Electric

Project Status	• *Field study data collection period has ended, all data loggers have been retrieved and analysis is nearly complete.* • *Final participant interviews have been completed.* • *Final report is anticipated in Q4 of 2026* • *NEEA Product Council presentation in Q4 of 2026*		
Project Objectives	• *Obtain lab test data collected from manufacturers to characterize heat performance vs. ambient temperature.* • *Conduct field testing to gather real-world operational data (runtime, consumer acceptance, etc.).*		
Readiness Levels	***Product**: 3*	***Commercial/Market**: 3*	***Program**: 2*

HVAC

Tri-Mode Heat Pump Study — *Christopher Dymond*

DESCRIPTION

Product: Residential tri-mode heat pumps use a single outdoor unit to drive indoor space heating, space cooling and domestic water heating. They are integrated systems that can use either refrigerant or water as the distribution fluid coupled to a variable-speed vapor compression heat pump.

Project: Market assessment of the different types of tri-mode heat pumps and products that are currently available, as well as interviews with 10 subject matter experts.

Fuel Type: Electric

Project Status	*The market research survey and interviews with manufacturers are complete. The final report is being edited.* *NEEA Product Council was presented June 29th. Tri-Mode Heat Pumps - Northwest Energy Efficiency Alliance (NEEA)* *Final summary report under review with publication sometime in Q4*		
Project Objectives	• *Conduct a detailed market survey of tri-mode heat pumps available in North America, Asia and Europe.* • *Generate a rough estimate of energy savings potential.* • *Conduct a preliminary evaluation of market barriers for these systems through interviews with subject matter experts.*		
Readiness Levels	***Product**: 2*	***Commercial/Market**: 3*	***Program**: 2*

HVAC

Tri-Mode Heat Pump Demonstration — *Christopher Dymond*

DESCRIPTION

Product: Tri-mode heat pumps use a single outdoor unit to serve indoor space heating, space cooling and domestic water heating needs. They are integrated systems that can use either refrigerant or water as the distribution fluid coupled to a variable-speed vapor compression heat pump.

The system in this project consists of a single outdoor multi-head split system with three to four indoor ductless heads in which one of the heads is a water heater with a wraparound heat exchanger. This solution is uniquely appropriate for apartment buildings and relatively small new homes. A key benefit of this product subcategory is that the tank and controls are comparatively simple and low cost when compared to fully hydronic based tri-mode systems. The customer also benefits from the ability to place the domestic water tank inside a space without any ventilation needs or impact on interior comfort.

Project: This project is a collaboration with a major U.S. original equipment manufacturer to demonstrate a refrigerant-based distribution system tri-mode heat pump system as a low-cost, simple alternative for small residential buildings (under 2,000 square feet), a configuration common in southern Europe.

Fuel Type: Electric

Project Status	*Early stage, with site identification and field study scope of work under development. Principal investigator has been selected.*		
Project Objectives	• *Demonstrate viability of this product type in new residential and multifamily construction ahead of studying it in retrofit applications.* • *Gather customer and installing contractor experience and identify potential pitfalls and unique market challenges.*		
Readiness Levels	***Product**: 2*	***Commercial/Market**: 3*	***Program**: 2*

HVAC

Duct Loss Meta Study — *Christopher Dymond*

DESCRIPTION

Product: A 2004 study revealed that residential HVAC in the average Northwest home loses more than 30% of heating energy due to duct leakage and conduction heat transfer. Advanced residential duct sealing products and standards of practices save energy by reducing distribution losses. NEEA seeks to determine whether any changes in duct sealing, indoor air quality and ventilation solutions over the past decade warrant further investigation for a potential Market Transformation program.

Project: This project is exploring the current market landscape and evaluating efficient solutions aimed at reducing heating and cooling losses from ductwork. The study will include literature research, product reviews and interviews with subject matter experts.

Fuel Type: Electric + Natural Gas

Project Status	*Review of literature and current technology options was conducted in August 2025. Interviews with subject matter experts completed in Q1 2026. A summary report is expected for Q4 2026.*		
Project Objectives	• *Provide an updated summary of current methods through secondary research and simple analysis.* • *Conduct a comparative analysis of existing methods.*		
Readiness Levels	***Product**: 2-5*	***Commercial/Market**: 2-4*	***Program**: 4*

HVAC

ResHVAC AI and Digital Twins

Christopher Dymond

DESCRIPTION

Product: Current large language model prompts can produce inconsistent results, limiting the reliability of information available to consumers making HVAC purchasing decisions. AI-assisted tools could help consumers select efficient systems suited to their needs.

NEEA is interested in the development of a default and open-source model context protocol that can provide the framework for large-language models (LLMs) to use a variety of available data sources and tools. The premise is that a reduction in transactional friction and improved outcomes can be achieved if LLMs know what resources and data are needed to respond to customer inquiries.

Project: This investigation will explore how LLMs will shift how residential HVAC systems are purchased, how products are selected and how contractors interact with customers. The first phase includes market assessment and development of a minimum requirements document that defines what AI needs to know. The second phase (if approved) will develop a mockup demonstration of a model context protocol which leverages existing data resources from Department of Energy (DOE), AHRI, NEEP, open-source load calculation tools and digital twins of homes to assist with LLM inquiries about what HVAC system is appropriate for a particular home.

Fuel Type: Electric + Natural Gas

Project Status	*The first phase of market assessment and minimum requirements has begun. Market assessment and subject matter interviews have been completed. The second phase focus will be determined by the advisory committee in September, with work on developing a prototype demonstration to begin early Q4 2026.* *Multiple market actors (ACCA, DOE, manufacturers, ACEEE and regional utilities) have expressed interest in the concept and being part of developing an open-source national standard.*		
Project Objectives	• *Provide an updated summary of current market actors and products through secondary research.* • *Define what an LLM needs to aid in accurate HVAC system selection.* • *Develop a prototype that demonstrates capability and reduced transactional friction for programs and contractors.*		
Readiness Levels	***Product**: 1*	***Commercial/Market**: 2*	***Program**: 2*

HVAC

Gas High Efficiency DOAS Energy Savings Modeling

Adam Gage

DESCRIPTION

Product: The gas high efficiency Dedicated Outdoor Air System (DOAS) HVAC system leverages the same system energy saving strategies (e.g., decoupled ventilation and conditioning and a high-efficiency heat recovery ventilator) as electric very high efficiency DOAS but uses a high-efficiency central gas-fired boiler as the heating source rather than electric heat pumps.

Project: This modeling effort investigated the energy use and savings potential in a sample set of Northwest commercial and residential buildings with a series of standard HVAC configurations. The project team included A2 Efficiency and Energy 350.

Fuel Type: Electric + Natural Gas

Project Status	*Modeling is complete and a report documenting findings is available on neea.org (see link below).*		
Project Objectives	• *Evaluate the energy use and savings of gas high efficiency DOAS in new and existing commercial and residential buildings.* • *Identify how climate and building type impact energy savings potential.* • *Understand the gas efficiency savings potential for gas high efficiency DOAS in the Northwest.*		
Readiness Levels	***Product**: 2*	***Commercial/Market**: 3*	***Program**: 2*
Link to Report	*Gas High Efficiency DOAS Energy Savings Analysis - Northwest Energy Efficiency Alliance (NEEA)*		

HVAC

Gas High Efficiency DOAS Field Study

Adam Gage

DESCRIPTION

Product: The gas high efficiency Dedicated Outdoor Air System (DOAS) HVAC system leverages the same system energy saving strategies (e.g., decoupled ventilation and conditioning and a high-efficiency heat recovery ventilator) as electric very high efficiency DOAS but uses a high-efficiency central gas-fired boiler as the heating source rather than electric heat pumps.

Project: The Department of Administrative Services building in Salem, Oregon is a real-world application of a gas high efficiency DOAS. NEEA has installed metering equipment and will observe the HVAC system's performance over a 12-month period (March 2026-February 2027). Findings will be used to refine modeling and inform real-world savings and design best practices.

Fuel Type: Electric + Natural Gas

Project Status	*Building energy metering ongoing through February 2027.*		
Project Objectives	• *Evaluate the energy use and savings of gas high efficiency DOAS in a deep office building retrofit independent of NEEA's influence.* • *Validate and inform modeling assumption to better predict savings across building types.* • *Better understand the gas efficiency savings potential for gas high efficiency DOAS in the Northwest.*		
Readiness Levels	***Product**: 2*	***Commercial/Market**: 3*	***Program**: 2*

Lighting

LLLC+HVAC Control System Field Test — *Chris Wolgamott*

DESCRIPTION

Product: Luminaire Level Lighting Controls (LLLC) integration with HVAC system controls (rooftop units with dedicated thermostats) presents a new simplifying system to control HVAC thermostats. With more than 50% of the Northwest building stock comprising buildings that are less than 15,000 square feet and lacking complex building management systems, NEEA is seeking a cost-effective, straightforward way to use occupancy data from the LLLC system to administer temperature setbacks based on who is occupying the space.

Project: This first field test pilot will measure initial real-world savings estimates for this new integrated control system.

Fuel Type: Electric + Natural Gas

Project Status	*Data collection was extended to gain more heating season data and will continue to the end of Q3 2026. The project is getting a lot of interest from multiple extra-regional agencies, including the Department of Energy, Pacific Northwest National Laboratory and DesignLights Consortium. Energy Trust of Oregon is starting a 30-site pilot project with this technology in early Q4 of 2026. NEEA project staff continues working with funders to find additional sites for more field testing. The final report with findings for this pilot is expected by the end of 2026.*		
Project Objectives	• *Determine whether additional HVAC energy savings are possible from more granular sensors included in LLLC lighting fixtures as compared to typical HVAC occupancy sensors.* • *Analyze data using simple thermostats (as a cost-effective way to achieve LLLC + HVAC) and LLLC to help reduce HVAC usage.*		
Readiness Levels	***Product**: 3*	***Commercial/Market**: 3*	***Program**: 3*

Motor-Driven Systems

Fan and Blower Research — Kristen Aramthanapon

DESCRIPTION

Product: Fans and blowers (one horsepower and above) that are rated using the Fan Energy Index (FEI) and not packaged in a mechanical system that already has an efficiency rating like HVAC products. The FEI is accepted as the best metric to characterize an efficient fan at an operating point compared to a "minimally compliant" reference fan under the same conditions.

Project: NEEA is researching market trends and selection criteria that can lead to high FEIs.

Fuel Type: Electric

Project Status	*This project is underway.*		
Project Objective	*Better understand factors and design criteria that can influence fan selection and how they might impact FEI levels.*		
Readiness Levels	***Product**: 5*	***Commercial/Market**: 4*	***Program**: 2*

Motor-Driven Systems

Process Pump Research — Kristen Aramthanapon

DESCRIPTION

Product: ANSI process pumps are an extended motor product (XMP) that meet American Society of Mechanical Engineers (ASME) B73.1 specification and are generally used to pump light, non-viscous fluids. The Pump Efficiency Index (PEI) metric is applicable to ANSI pumps, but the Department of Energy does not require manufacturers to report ANSI pump PEI values to the federal database or comply with regulatory requirements (maximum PEI of 1.00).

Project: NEEA has calculated PEI values for several ANSI process pumps by using their pump curve and will use this information to compare their efficiencies and identify product opportunities.

Fuel Type: Electric

Project Status	*The results of this work are expected to be published by the end of 2026.*		
Project Objective	*Identify energy savings opportunities for pumps that are not classified as clean water pumps.*		
Readiness Levels	***Product**: 5*	***Commercial/Market**: 4*	***Program**: 2*

Motor-Driven Systems

Power Drive System Metric Validation

Kristen Aramthanapon

DESCRIPTION

Product: Power drive systems (PDS) pair variable speed controls with an electric motor, allowing the motor to run at reduced speeds to match the specific needs of the application to reduce energy consumption. The Power Index (PI) is a new metric for rating and comparing the efficiency of different motors and PDS.

Project: NEEA has reviewed available data from various available VFD field studies to assess the range and variability of savings that power drive systems have delivered in these real-world settings.

Fuel Type: Electric

Project Status	*Research is in progress and is expected to be completed by the end of 2026.*		
Project Objective	*Establish a Power Index (PI) metric for variable torque applications that can be used for rating motors and power drive systems.*		
Readiness Levels	***Product**: 5*	***Commercial/Market**: 4*	***Program**: 2*

Water Heating

Commercial Domestic Hot Water Systems Modeling — Chuck Karras

DESCRIPTION

Product: Commercial water heating systems are typically sized using design load estimates with safety margins based on industry heuristics or detailed hot water draw patterns. NEEA is interested in researching the benefits of hybrid gas systems (e.g., gas-fired absorption heat pumps paired with a traditional gas-fired appliance) or dual-fuel systems (e.g., central heat pump water heater paired with a traditional gas-fired appliance).

Project: NEEA commissioned a parametric modeling study to evaluate the performance of various commercial water heating technologies.

Fuel Type: Electric + Natural Gas

Project Status	*This investigation has completed modeling of multiple variables across a range of equipment configurations to present findings on all combinations. The draft final report clearly shows that GHPs (and especially modulating GHPs) provide an efficiency increase compared to baseline gas equipment and an end-user cost benefit compared to similar systems using baseline gas, electric resistance and electric heat pump-based systems.* *Final draft of the report is anticipated to be posted on NEEA's website by the end of Q3 2026.*		
Project Objective	*Understand energy and cost savings from thermally driven heat pumps as replacements for boilers, natural gas-fired storage tanks and tankless systems across various representative applications in the Northwest.*		
Readiness Levels	***Product**: 3*	***Commercial/Market**: 3*	***Program**: 2*

Water Heating

Commercial Domestic Dual Fuel Hot Water System Field Study — Chuck Karras

DESCRIPTION

Product: An efficient dual fuel water heating system that pairs an electric heat pump water heater with traditional gas-fired water heating equipment to deliver central hot water.

Project: NEEA is conducting a field study to assess central water heating technologies across multiple target building types. These field tests take place in a multifamily/transitional housing environment. The project involves installing a central electric heat pump water heater working in conjunction with standard commercial gas-fired water heating equipment.

Fuel Type: Electric + Natural Gas

Project Status	*The test system was installed in Q4 2025. The heat pump model initially installed demonstrated unusually frequent defrost cycling resulting in very poor overall performance. NEEA decided to replace the electric heat pump with a different model for the remainder of the investigation. As of June 2026, newly replaced unit is showing normal operations and data collection from the study is continuing and is expected to conclude and deliver a final report in Q3, 2027.*		
Project Objective	*Build understanding of energy and cost savings from dual fuel commercial water heating systems across various representative applications in the Northwest.*		
Readiness Levels	***Product**: 3*	***Commercial/Market**: 3*	***Program**: 2*

Water Heating

Commercial Domestic Hot Water Gas Hybrid Multifamily Field Study — Chuck Karras

DESCRIPTION

Product: An efficient gas-only commercial water heating system that pairs a gas-fired absorption heat pump (GHP) with traditional gas-fired water heating equipment to deliver central hot water for a commercial application.

Project: NEEA is conducting a field study to assess central water heating technologies across multiple target building types. This field test is taking place in a multifamily housing environment. The project involves a GHP combined with standard commercial gas storage water heating equipment.

Fuel Type: Natural Gas

Project Status	*Project has pivoted to a new GHP manufacturer as the originally planned GHP manufacturer has halted all business operations. The newly selected GHP unit has been acquired/installed, and all plumbing connections have been completed. The equipment has been fully commissioned and started up as of Mid-August. This project will collect data for one year.*		
Project Objective	*Build understanding of energy and cost savings from a hybrid gas-only commercial water heating system across various representative applications in the Northwest.*		
Readiness Levels	***Product**: 3*	***Commercial/Market**: 3*	***Program**: 2*

Water Heating

Commercial Domestic Hot Water Gas Hybrid System Hotel Lab Simulation — Chuck Karras

DESCRIPTION

Product: This research expands the testing of a Gas Absorption Heat Pump to another target building type (hotels). Because identifying volunteer testing locations for this study has been unsuccessful, this effort is being replicated via a lab study that simulates a typical hotel water use profile.

Project: NEEA is conducting a lab study to assess central water heating technologies across multiple target building types. This research is designed to replicate a typical hotel environment and involves a GHP water heater paired with standard commercial gas storage water heating equipment.

Fuel Type: Natural Gas

Project Status	*A vendor has been selected to perform this work through an RFQ and RFP process. The final contract discussions have concluded, and legal contracts are expected to be executed in early September. This effort is expected to begin in Q3 2026.*		
Project Objective	*Understand energy and cost savings from a hybrid gas-only commercial water heating system across various representative applications in the Northwest.*		
Readiness Levels	***Product**: 3*	***Commercial/Market**: 3*	***Program**: 2*

Water Heating

Residential Dual-Fuel Water Heater Lab and Field Testing — Chuck Karras

DESCRIPTION

Product: Residential dual-fuel hot water heater that natively includes both a 120-volt electric heat pump and a gas-fired burner with integrated controls in a single integrated package.

Project: NEEA is an active partner in a lab study conducted by GTI Energy to assess the performance of this new dual fuel residential water heating product. This novel residential product has a similar footprint to typical residential water heaters and can be plugged into a standard outlet. In addition to lab testing, NEEA is commissioning Energy 350 to install this new water heating product at two residences for field testing to show real world performance along with customer feedback. The units will be tested in various operating modes developed by the manufacturer.

Fuel Type: Electric + Natural Gas

Project Status	*Lab Study* *The lab testing has been completed by GTI Energy and the final report from this study has been approved and posted to NEEA's website. The results of this report help validate the company's initial efficiency claims and will be publicly shared in a Product Council meeting on September 22nd.* *Field Studies* *Contracting and participant agreements are being finalized with baseline data collection starting in late August and the new test water heaters to be installed in September.*		
Project Objective	*Identify energy and cost savings from a dual-fuel residential water heater across multiple load profiles, product operation modes, input water temperatures and climates.*		
Readiness Levels	***Product**: 2*	***Commercial/Market**: 1*	***Program**: 1*
Link to Report	*Lab Testing: Dual-Fuel Hybrid Residential Water Heater – Technical and Laboratory Evaluation - Northwest Energy Efficiency Alliance (NEEA)*		

Water Heating

Split-System Heat Pump Water Heater Innovation Prize — Adam Gage

DESCRIPTION

Product: Water heating is one of the largest energy uses in U.S. homes, but affordable and energy-efficient options are not yet available for compact spaces today. Small-capacity split-system heat pump water heaters would solve this problem and extend efficiency benefits to people living in homes and apartments where more modest, small, electric resistance water heaters are commonly found. NEEA estimates these systems can reduce water heating electricity use by up to 60%, saving individual households hundreds of dollars annually while significantly lowering emissions. Split-system heat pump water heaters represent a major market opportunity, with 1 to 2.4 million units in potential annual sales.

Project: The Hot Water Innovation Prize is a national competition designed to hasten the development of affordable and easy-to-install split-system heat pump water heaters for space-constrained installations. The prize is led by the NEEA with support from a national coalition of energy efficiency organizations. The Prize focuses on real-world feasibility and market readiness, rewarding manufacturers for the development of turnkey systems with an indoor tank and an outdoor compressor. This makes high-efficiency water heating possible where today's heat pump water heaters don't fit.

Fuel Type: Electric

Project Status	*Midea was announced as the winner of the Hot Water Innovation Prize at ACEEE's Summer Study on August 3rd. NEEA and its partners are now working with utilities and other stakeholders to explore demonstrations and other market-development opportunities.*		
Project Objectives	• *Measure the performance of product prototypes in a third-party laboratory.* • *Holistically evaluate prototypes' abilities to meet customers' needs. (considering performance, cost, product dimensions, etc.).* • *Name contest winner and facilitate demonstration projects.*		
Readiness Levels	***Product**: 4*	***Commercial/Market**: 2*	***Program**: 2*
Link to Announcement	*Midea Wins Innovation Prize to Expand Access to Efficient Water Heating - Northwest Energy Efficiency Alliance (NEEA)*		

Water Heating

Small Commercial Heat Pump Water Heater Field Study — Adam Gage

DESCRIPTION

Product: Heat pump water heaters (HPWH) used in small commercial applications. A prior market opportunity study by NEEA and the Bonneville Power Administration found that more than 60% of Northwest commercial hot water usage could be met with a simple light commercial HPWH solution. A "light" commercial solution was defined as unitary products up to 120 gallons and similarly sized split-system products where the heat pump and tank are sold together.

Project: NEEA is supporting a larger New Buildings Institute field study of small commercial HPWH applications by bringing six field studies to the Northwest. Performance at each site will be monitored for up to one year. Findings will be published by the end of 2026.

Fuel Type: Electric

Project Status	*Northwest site recruitment has concluded. The six sites include a restaurant, a school, an office, a multi-use commercial space, a university art studio and a city hall. Performance monitoring is ongoing.*		
Project Objectives	• *Evaluate field performance.* • *Determine associated costs.* • *Collect building owner perspectives.* • *Identify best practices.*		
Readiness Levels	***Product**: 3*	***Commercial/Market**: 4*	***Program**: 2*

End-Use Load Flexibility (Specially Funded)

AHRI-1380 Residential Variable Speed HVAC Connectivity Standard — Eric Olson

DESCRIPTION

Product: Air-Conditioning, Heating, and Refrigeration Institute (AHRI) standard 1380 applies to the communication, infrastructure and system functionality needed to implement energy management strategies for demand-response-ready, variable capacity HVAC systems in residential and small commercial applications. AHRI-1380 establishes standardized communication requirements to enable equipment to participate in utility load flexibility programs, defines the minimum infrastructure and communication pathways needed to facilitate direct communication between HVAC systems and utilities. It also specifies the system functionality including control modes and how the equipment responds to request signals to modulate or restore normal operation.

Project: NEEA is participating in the AHRI unitary equipment standards technical committee. Activities are centered on adding OpenADR 3 and Home Connectivity Alliance communication protocols as well as updating to CTA-2045-B. Committee efforts continue to address how to avoid snapback grid effects when equipment exits events back to normal operation, integrate non-electric auxiliary heating and help clarify lab test procedures.

Fuel Type: Electric

Project Status	*The committee continues to work on revising the standard, clarifying how equipment should respond and react to curtailment requests, report energy and exit events. A draft of the revised standard is anticipated by the end of 2026.*		
Project Objectives	• *Harmonize connectivity standards among several existing standards, including CTA-2045-B, OpenADR 3 and Home Connectivity Alliance.* • *Ensure that equipment supports the needs of utilities with the necessary capabilities to respond to a variety of grid requests while maintaining customer comfort.* • *Establish industry guidelines for product performance to minimize the need for and use of electric resistance auxiliary heating.*		
Readiness Levels	***Product**: 2*	***Commercial/Market**: 2*	***Program**: 1*

End-Use Load Flexibility (Specially Funded)

CSA-Z5050/AHRI-1390 Commercial Smart Grid Interface — *Eric Olson*

DESCRIPTION

Product: Canadian Standards Association Group (CSA Group) standard CSA-Z5050/AHRI-1390 applies to communication, infrastructure and system functionality needed to implement energy management strategies for demand response ready commercial buildings and equipment.

Project: NEEA is participating in the CSA Z5050/AHRI-1390 standards technical committee. The committee seeks to develop this binational standard that defines the communication protocols, data requirements and equipment performance for grid-connected commercial buildings when participating in load flexibility programs.

Fuel Type: Electric

Project Status	*This committee was recently reformed and is working to establish common goals for the U.S. and Canada. AHRI and CSA Group continue to work on aligning needs and goals.*		
Project Objectives	*Develop a binational standard to enable commercial buildings to be grid-connected and participate in utility flexibility programs.*		
Readiness Levels	***Product**: 1*	***Commercial/Market**: 3*	***Program**: 1*

End-Use Load Flexibility (Specially Funded)

AHRI-1300 Performance Rating of Commercial Heat Pump Water Heaters Standard

Adam Gage

DESCRIPTION

Product: The AHRI 1300 standard applies to the communication, infrastructure and system functionality needed to implement energy management strategies for demand response ready and factory-assembled commercial heat pump water heaters (CHPWH). CHPWHs are defined as equipment to provide potable or service hot water using alternate sources of energy, such as air, water and ground (geothermal) by means of electrically driven, mechanical vapor compression refrigerant systems.

Project: NEEA is participating in the AHRI 1300 standards technical committee. Activities are centered on defining a test methodology for CHPWHs and a seasonal metric to represent its overall performance.

Fuel Type: Electric

Project Status	*The technical committee continues to work on revising this standard and uncovering additional opportunities for improvements.*		
Project Objectives	• *Harmonize test methodology with the existing ENERGY STAR methodology and NEEA's Advanced Water Heating Specification.* • *Define a seasonal performance metric for CHPWHs that accounts for performance across a range of operating conditions.*		
Readiness Levels	***Product**: 4*	***Commercial/Market**: 5*	***Program**: 3*

End-Use Load Flexibility (Specially Funded)

Connected Water Heater Study — *Eric Olson*

DESCRIPTION

Product: Residential electric resistance and HPWHs that are EcoPort® certified use the ANSI/CTA-2045 communication protocol to enable grid connectivity directly to the water heater through an EcoPort module.

Project: NEEA's End-Use Load Flexibility project partnered with SkyCentrics to evaluate the deployment and performance of connected residential water heaters across Oregon and Washington. The study examined customer and installer participation, EcoPort connectivity, CTA-2045 compliance, customer satisfaction with load flexibility programs and the overall ability of connected water heaters to shift electrical demand while maintaining customer comfort.

Fuel Type: Electric

Project Status	*The project is complete and the final report has been published.* *End-Use Load Flexibility: Connected Water Heater Study*		
Project Objectives	• *Understand the shiftability of an electric-resistance water heater compared to a heat pump water heater.* • *Document the variations in performance, conformance and compliance seen across different manufacturers and across product lines within a manufacturer.* • *Optimize the dispatch strategies through a Distributed Energy Resource Management System to maximize the grid benefits of shifting energy while maintaining customer comfort.* • *Understand what motivates installers to learn about and promote connected water heater technology.* • *Measure the customer's ability to successfully install the EcoPort module without installer assistance.* • *Identify messaging that resonates with customers to increase their likelihood of enrolling in a connected water heater program.*		
Readiness Levels	***Product**: 4*	***Commercial/Market**: 4*	***Program**: 4*

End-Use Load Flexibility (Specially Funded)

Variable Speed Heat Pump Load Flexibility Modeling — *Eric Olson*

DESCRIPTION

Product: Residential variable speed heat pumps (VSHPs) and cold-climate air-source heat pumps (ccASHPs) in both ductless and ducted form factors that are certified to the AHRI 1380 standard to participate in utility grid flexibility programs by adjusting unit power consumption using variable operation of the heat pump.

Project: Limited data is available for quantifying VSHP capabilities and applicability for participating in utility grid flexibility programs. NEEA's End-Use Load Flexibility project contracted with GTI Energy to perform a technology and market assessment study that included energy modeling of VSHPs and ccASHPs applied to representative home construction in three Northwest climate zones. This work helps understand how these pieces of equipment can participate in grid flexibility programs during temperature extremes.

Fuel Type: Electric

Project Status	*The project is complete, and the final report has been published.* *Variable Speed Heat Pump Load Flexibility Modeling*		
Project Objectives	• *Identify what manufacturers are offering load flexibility capability and what communication protocols they are using.* • *Understand how VSHPs respond to load flexibility requests compared to other types of HVAC equipment.* • *Summarize the existing research available on connected VSHPs and their ability to successfully participate in utility grid flexibility programs.* • *Quantify the load shifting potential, in terms of power and time duration, without impacting occupant comfort in representative housing stock.*		
Readiness Levels	***Product**: 5*	***Commercial/Market**: 5*	***Program**: 3*

Commercial Whole Building Special Project (Specially Funded)

Smart Controllers and Sensors for Small-to-Medium-Size Commercial Buildings

Juan Carlos Blacker

DESCRIPTION

Product: Web-enabled retrofit controllers, wireless sensor packages, connectivity solutions and cloud-based platforms designed to provide building control capabilities for small-to-medium commercial buildings (defined for this study as buildings from 10,000 to 100,000 square feet) that do not have a building management system, building automation system or energy management system. These technologies may provide monitoring, scheduling, fault detection, optimization and demand flexibility capabilities through simplified controls architecture.

Project: The Whole Building project is assessing the emerging ecosystem of smart controls and sensors serving the small-to-medium building market. The research evaluates technology offerings, common and advanced control strategies, user workflows and market adoption barriers. The study also examines energy savings and demand reduction potential, reviews recent industry research and includes interviews with building owners, contractors and service providers to identify opportunities for broader deployment and future product testing.

Fuel Type: Electric + Natural Gas

Project Status	*Research is underway. Technology landscape review, literature assessment and stakeholder interview planning are in progress. Findings will be synthesized into a final assessment and presentation scheduled for completion by the end of 2026.*		
Project Objectives	• *Identify technologies that will engage the hard-to-reach market segment of independent small-to-medium building owners.* • *Assess the current market ecosystem of retrofit controls, sensors, connectivity solutions and cloud platforms.* • *Identify how contractors, building owners and service providers interact with smart controls throughout installation, commissioning and operations.* • *Evaluate energy savings, demand reduction potential and business value propositions for small-to-medium building applications.* • *Develop recommendations to inform future NEEA product testing and market transformation opportunities.*		
Readiness Levels	***Product**: 1*	***Commercial/Market**: 5*	***Program**: 2*

Readiness Level Criteria Definitions

Rating Scale: 1 = Low, 5 = High

PRODUCT PERFORMANCE READINESS

	Level 1: Unvalidated	Level 2: Engineering Validation	Level 3: Lab Validation	Level 4: Limited Field Validation	Level 5: Confirmed
Savings Reliability & Fitness for Use	Manufacturer claims energy savings but not validated by unbiased experts	Concept validated by unbiased expert via technical review and engineering calculations	Independent lab testing validates product features and energy use in typical applications with clear baseline established	Lab and small-scale testing across broader range of applications and systems conditions	Reliable prediction of performance across the range of intended applications; fully evaluable savings via established protocols by regional or national bodies

COMMERCIAL / MARKET READINESS

	Level 1: Pre-Commercial	Level 2: Limited	Level 3: Niche	Level 4: Growing	Level 5: Wide
Supply Chain Maturity & Market Demand	Not commercially available or limited, pre-commercial availability	Commercially available outside of region; Requires special order; Limited market awareness	Commercially available in Northwest from one manufacturer through standard channels; Niche market demand	Commercially available in Northwest from at least two manufacturers; Growing market demand	Commercially available from 2+ manufacturers, well developed supply chain across region; Wide market demand

PROGRAM READINESS

	Level 1: None	Level 2: Exploratory	Level 3: Preliminary Pilots	Level 4: Full-Scale Pilots	Level 5: Ready
Cost Effectiveness Knowledge *(technical and market potential, product cost at scale, non-energy benefits)*	None or very limited	Performance readiness at 2; initial market size calculated (units per year)	Performance readiness at 3; product cost at scale estimated	Performance readiness at 4; product costs at or trending towards at-scale levels; preliminary estimates of non-energy benefits	Performance readiness at 5; CE calculations based on solid estimates or proven values
Market & Program Knowledge	None or very limited	Preliminary research exposes barriers and/or or similarities to other successfully transformed markets warranting further efforts	Market research illuminates barriers and opportunities to intervene; preliminary logic model developed; small-scale pilots	Formal market characterization underway; larger-scale pilots to test program elements and barrier removal	Formal logic model developed; market characterization and large-scale pilots prove out program design and barrier removal
Risk Assessment *(market, program, regulatory)*	No risk assessment	Limited risk assessment	Preliminary risk assessment complete; major categories of risk understood	Well-developed risk assessment; no major unresolved risks	Periodic risk assessment process in place

Contact Us

Submit an energy-efficient idea on our website.

Kristen Aramthanapon
Sr. Product Manager,
Motor Driven Systems
karamthanapon@neea.org

Juan Carlos Blacker
Sr. Product Manager
Whole Building
jcblacker@neea.org

Noe Contreras
Sr. Product Manager, Gas
Products
ncontreras@neea.org

Christopher Dymond
Sr. Product Manager,
Residential HVAC
cdymond@neea.org

Adam Gage
Sr. Product Manager,
Water Heating,
Commercial HVAC
agage@neea.org

Chuck Karras
Sr. Product Manager
Gas Products
mailto:ckarras@neea.org

Lynne Mosley
Sr. Program Coordinator,
Emerging Technologies
lmosley@neea.org

Eric Olson
Sr. Product Manager,
Emerging Technology
eolson@neea.org

Wendy Preiser
Sr. Product Manager,
Consumer Products
wpreiser@neea.org

Neil Grigsby
Sr. Market Transformation
Manager, Water Heating
ngrigsby@neea.org

Mike Smith
Sr. Manager,
Emerging Technology
msmith@neea.org

John Arthur Wilson
Sr. Product Manager,
Emerging Technology
jwilson@neea.org

Chris Wolgamott
Principal Product Manager,
Lighting, Commercial HVAC
cwolgamott@neea.org