



Quarterly Performance Report » Q3 2017

A Note from the Executive Director

The third quarter of 2017 marked the mid-point of NEEA's current five year Business Cycle. The organization is on track to meet many of its five year goals, however the size and complexity of the current portfolio present a challenge, as does diminishing energy savings from previous investments. Both of these themes were top of mind as NEEA kicked off its 2018 operations planning process in Q3. From July through October, NEEA staff worked with funders to plan 2018 activities finding efficiencies and synergies in the portfolio and targeting resources to meet NEEA's Business Plan goals. The resulting draft 2018 Operations Plan will be presented to the NEEA Board for approval in December.

In Q3, NEEA's Board and staff completed a major strategic planning milestone - the draft strategic direction for NEEA's 2020-2024 Strategic Plan. NEEA's Board sponsored regional outreach in October and will focus next on defining success metrics and boundary conditions. The 2020-2024 Strategic Plan will provide a road map for the alliance post 2019 and form the basis of NEEA's next 5-year business plan.

Q3 Market Transformation Highlights:

- 90% of program milestones are on-track and NEEA is forecasting to meet its 2017 energy savings targets
- Sales of heat pump water heaters continue to grow, increasing 56% over the same time in 2016 (see pg. 3 for forecast status)
- Low watt lamp market penetration climbed to a record 38% in Q3, up from 27% in Q2

A handwritten signature in black ink that reads "Susan E. Stratton".

Susan E. Stratton
Executive Director



Electric Quarterly Performance Scorecard

		Target	Forecast/ Actual	Status Q2/ Q3		
STRATEGIC GOALS <i>(Updated quarterly)</i>	Goal 1: Fill the Energy Efficiency Pipeline	Scanning portfolio health (aMW)	1400	1344		
		Pipeline health (aMW)	1000	975		
		Program advancement (aMW)	175	200		
	Goal 2: Create Market Conditions for Efficiency	Program milestones on-track	90%	90% (pg. 3)		
		Target	Forecast	Status Q2/ Q3		
CO-CREATED ENERGY SAVINGS (aMW) <i>(Updated in Q1 and Q3)</i>	Current Business Plan Investments (2015-19)	1-yr Forecast (2017)	10	13 (pg. 3)		
		5-yr Forecast (2015-2019)	75	60-65		
		10-yr Forecast (2015-2024)	180	150-160		
	All Investments (1997-today)	1-yr Forecast (2017)	35	37		
		5-yr Forecast (2015-2019)	150	170-180		
	● = Within 20% of target ● = Within 1% of target or better ● = More than 20% below target					
		Budget	Forecast	Actual ⁱ	Status Q1/Q2	
COST-EFFECTIVENESS FINANCE AND OPERATIONS <i>(Updated quarterly)</i>	Cost-Effectiveness	Levelized Total Resource Cost ⁱⁱ (\$/kWh)	\$0.035	\$0.029	N/A	
	Finance	Current Quarter Expenses (\$M)	\$8.9	\$9.1	\$8.1	
		Annual Expenses (\$M)	\$35.3	\$33.9	\$24.8	
		Business Admin Expenses (%)	<13%	10.8%	11.0%	
	Staffing	Employee Retention % (12-month)	>90%	N/A	90%	
Finance: ● = Within 5% of target; ● = 5-10% above or below target; ● = More than 10% above or below target Employee Retention: ● = At target or better; ● = Within 10% of target; ● = More than 10% below target						

Need to Know

● **Scanning Portfolio Health and Pipeline Health:** Pipeline metrics remained slightly (<5%) below target in Q3. To ensure a steady stream of future savings, NEEA staff will continue to work with the Regional Emerging Technology Advisory Committee to identify new scanning opportunities.

● **Co-Created Energy Savings from Current Investments:** Five and ten year forecasts were reduced from Q1, primarily due to fewer than anticipated savings from the Reduced Wattage Lamp Replacement Program (details on pg. 3). In 2018, NEEA will focus on targeting resources to improve the portfolio's long-term forecast.

● **Current Quarter Expenses:** Q3 investments were 89% of forecasted expenses due to some increased efficiencies coupled with deferred or delayed project costs.

● **Annual Expenses:** YTD electric investment is 93% of the approved 2017 Operations Plan budget. Full year forecast is 96% of budget (details on pg. 6).

Definitions:

Scanning portfolio health - 20-year aMW potential of opportunities NEEA is investigating.

Pipeline health - 20-year aMW potential of opportunities for which NEEA is developing programs.

Co-Created Energy Savings - Energy savings that the region and local programs achieve by working together.

Business Administration Expenses - % of total budget dedicated to business administration. Does not include program administration expenses.

ⁱ Excludes Special Funds and Natural Gas Funds

ⁱⁱ Current investments (2015-2019)



Electric Portfolio Scorecard

Co-Created Savings, Current Investments

Program	2017 aMW forecast	% of total 2017 aMW forecast	Annual program milestones on track (Q2/Q3)	1-yr aMW forecast* status (Q2/Q3)	5-yr aMW forecast* status (Q2/Q3)
Standards not associated with programs	3.6	28%			
Ductless Heat Pumps	2.8	22%			
Heat Pump Water Heaters	2.1	16%			
Codes not associated with programs	0.9	7%			
Retail Product Portfolio	0.9	7%			
Next Step Homes	0.8	6%			
Reduced Wattage Lamp Replacement	0.7	5%			
Super-Efficient Dryers	0.5	4%			
Certified Refrigeration Energy Specialist	0.4	3%			
Efficient Homes (retired in 2016)	0.3	2%	N/A		
Building Operator Certification	0.0	0%			
Luminaire Level Lighting Controls	0.0	0%			
Manufactured Homes	N/A	N/A		N/A	N/A
Commercial Code Enhancement	N/A	N/A		N/A	N/A
Commercial Window Attachments	N/A	N/A		N/A	N/A
Top-Tier Trade Ally Advanced Training	N/A	N/A		N/A	N/A
Commercial Real Estate	N/A	N/A		N/A	N/A
Industrial Technical Training	N/A	N/A		N/A	N/A
Strategic Energy Management	N/A	N/A		N/A	N/A
TOTAL	13.0	100%			

● = More than 20% below target ● = Within 20% of target ● = Within 1% of target or better

Need to Know

- NEEA is on-track to meet its annual (2017) energy savings targets.
- NEEA's **5-year forecast** has been reduced approximately 10% from Q1, primarily due to:
 - **Reduced Wattage Lamp Replacement:** Forecast was reduced 50% (or 3.6 aMW) due to continued growth in TLED sales, which is eroding the market for low watt fluorescent lamps.
 - **Standards not associated with programs:** Forecast was reduced 17% (or 3.3 aMW) based on new data from the rooftop units model.
 - **Heat Pump Water Heaters:** Forecast was reduced 11% (or 1.2 aMW) to better align with market expectations. This doesn't reflect a trend in the market, which is growing steadily, but rather an adjustment to the forecast model.
- 90% of annual program milestones are on-track in Q3. More information is available in NEEA's 'Market Execution Report', which is available in the December 5 Board Packet found at neea.org/get-involved/calendar.

*Status indicates current energy savings forecast v. target; NEEA updates its savings forecast in Q1 and Q3



Electric Quarterly Highlights

STRATEGIC GOAL 1 » Fill the Energy Efficiency Pipeline



Filling the pipeline –

Added Advanced Occupancy Sensors to NEEA's Emerging Technology Pipeline. NEEA is supporting ARPA-e (the Advanced Research Projects Agency-energy), a DOE project tasked with driving innovation in energy science and technology, to develop a test method and evaluate the next generation of building occupancy sensors. The objective of the ARPA-e sensor program is to reduce HVAC energy use by 30 percent.



Testing new technologies -

Completed data collection for two of eight dedicated outdoor air supply (DOAS) pilots. Results show this technology, which separates ventilation control from building heating and cooling, reduces whole building energy use by 55-60 percent. NEEA is planning to launch a DOAS Market Transformation program early next year, pending approval by the Regional Portfolio Advisory Committee.



Validating energy savings -

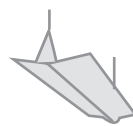
Completed evaluation of the Bullitt Center's energy efficiency meter, confirming that it does indeed accurately quantify energy efficiency savings. Results will be used to inform Seattle City Light's power purchase agreement and, more broadly, demonstrate important progress toward whole-building assessment tools.

STRATEGIC GOAL 2 » Create Market Conditions for Efficiency



Gaining market share for low watt lamps -

Achieved 38% market penetration among participating distributors in the Reduced Wattage Lamp Replacement program – up from 27% in Q2. Despite a shrinking market overall, low watt lamps continue to capture market share thanks to program efforts to shift distributor stocking and sales practices. Data and market intelligence gathered from the program are now being leveraged to support funder mid-stream programs and deliver actionable insights beyond this market.



Increasing the number of qualified luminaire level lighting control products -

Worked with manufacturers to support and influence adoption of the newest Design Lights Consortium specification for advanced lighting controls. In Q3, eight manufacturers re-qualified 12 systems, for a total of 10 qualifying manufacturers and 14 systems. This represents impressive market adoption, as the version 2 specification was only released in Q2, 2017.



Developing the market for heat pump water heaters -

Provided retail support (i.e. in-store training, custom signage), in 53 Lowes stores across the region to support sales of A. O. Smith products. Regional sales of super-efficient heat pump water heaters topped 8,200 YTD – a 56% increase over the same time in 2016.



Electric Quarterly Highlights

Delivering Regional Value



Leveraging market relationships to support the market for Super-Efficient Dryers - Influenced Whirlpool to seek ENERGY STAR Most Efficient certification for its heat pump products. ENERGY STAR certification enables clear product differentiation and allows funders that want to promote heat pump dryers to leverage the ENERGY STAR qualified products list rather than create their own.



Providing Market Intelligence to support funder programs - Analyzed low income, small business, mobile home, and rural customer program participation data to help funders (Seattle City Light, Puget Sound Energy, Ravalli Electric, NorthWestern Energy and Snohomish PUD) better understand and deliver programs to 'hard-to-reach' markets.



Delivering data to drive decision-making - Kicked off a comprehensive water heater market characterization study, which will inform the region's understanding of both the residential gas and electric water heater market in the Northwest and help inform future market intervention strategies.



Conducting Regional Research - Secured funding for more than 80% of the projected End Use Load Research Project budget. Contract negotiations are underway for the residential phase of the project. A request-for-proposal for the commercial phase of the project will be issued in early 2018.



Convening the Region - Organized the first annual North American Strategic Energy Management (SEM) Summit in conjunction with the 2017 ACEEE Industrial Summer Study. The event, which was attended by 75 people from both the United States and Canada, was a unique opportunity for SEM practitioners to learn from each other and to share best practices.



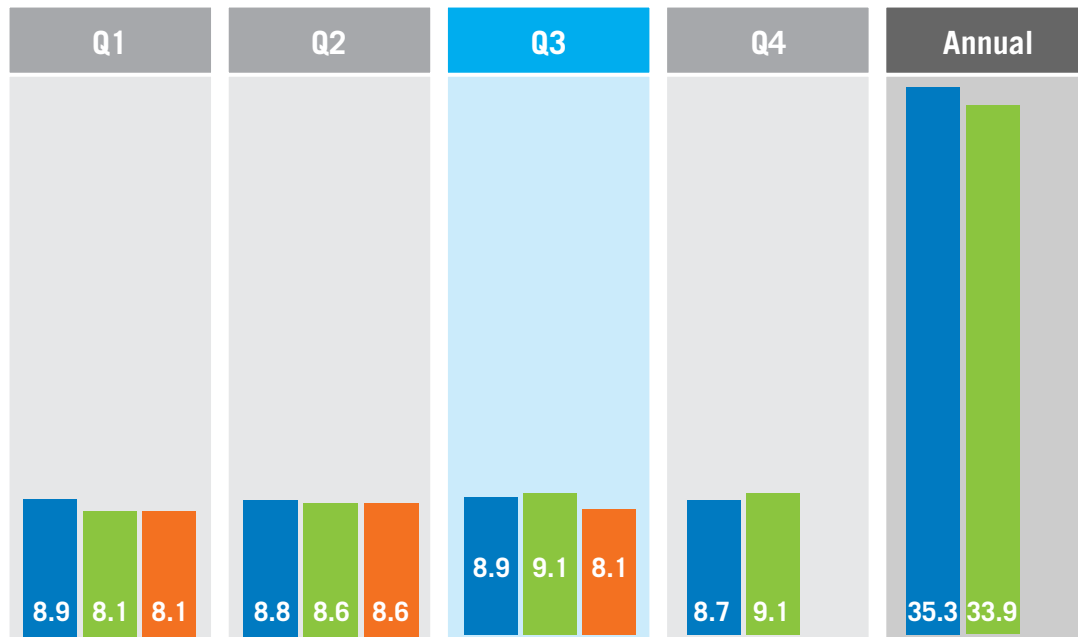
Influencing Progressively Effective Code and Standards - Continued development of the 2018 Washington commercial code, including code proposals related to natural gas products.



Need to Know: Electric Investment

YTD Electric Investment = \$24.8 Million

YTD electric investment is 93% of the approved YTD Operations Plan budget. Budget variances are primarily due to delayed pilots for Luminaire Level Lighting Controls and canceled pilots for Window Attachments and Manufactured Homes as investments were scaled back to focus more narrowly in those areas. Also, a planned marketing activity for Ductless Heat Pumps was canceled to explore other promotional alternatives and incentives for Retail Product Portfolio were lower than expected. This budget underspend was somewhat offset by heat pump water heater sales and manufacturer/ retail incentives, which continued to exceed expectations in Q3. The full year electric forecast is tracking to 96% percent of the approved 2017 Operations Plan budget.



Budget Forecast Actual

\$Millions

YTD Key Budget Variances:

+	-
• \$825K - Heat Pump Water Heater incentives	• (\$347K) - Window Attachments canceled pilots
	• (\$320K) - Manufactured Homes fewer pilots
	• (\$229K) - Ductless Heat Pump canceled marketing effort
	• (\$200K) - Luminaire Level Lighting Controls delayed pilots
	• (\$200K) - Retail Product Portfolio fewer incentives

YTD Electric Expense Detail:

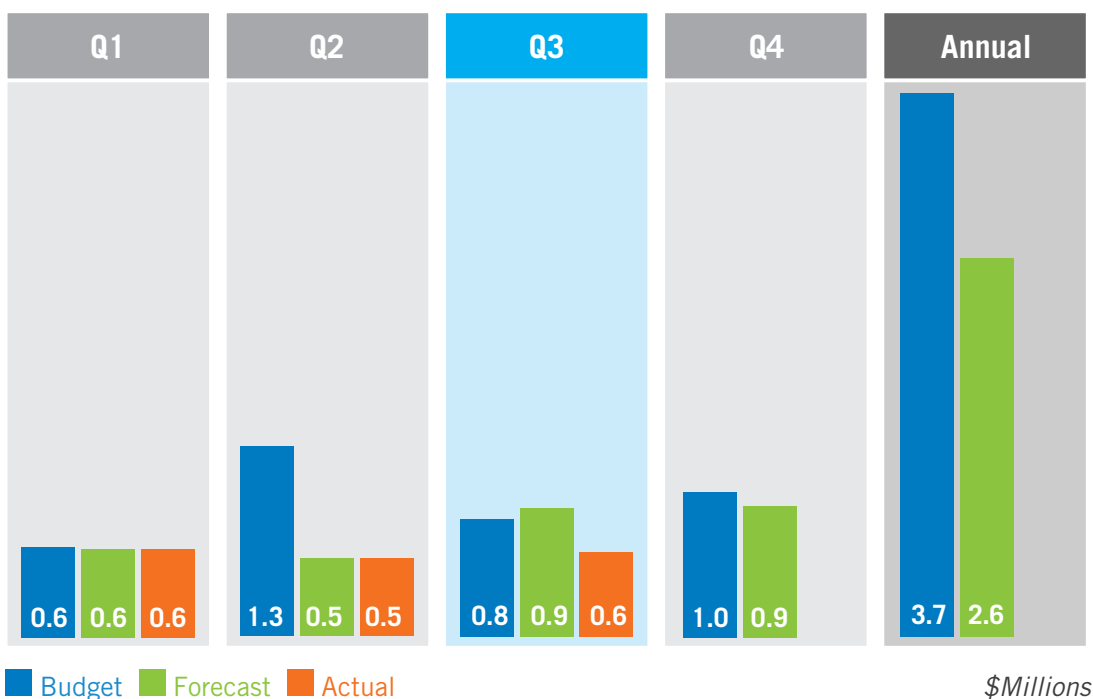
	60% (\$14.9M) Total Direct Program Expenses
	32% (\$8.0M) Total Salaries and Benefits
	8% (\$1.9M) Total General and Administration



Need to Know: Natural Gas Investment

YTD Natural Gas Investment = \$1.7 Million

YTD natural gas investment is 63% of the approved YTD Operations Plan budget. Variance is primarily due to contracting delays for gas heat pump water heaters. However, the recent agreement with Rheem and SaltX is a strong indication that this market is moving forward and NEEA expects to increase its investment in this market in 2018. Full year natural gas expenses are forecast to be 70% of the approved full-year budget.



YTD Key Budget Variances:



• (\$596K) - Gas-fired heat pump water heaters delayed expenses

Quarterly Natural Gas Highlights:



Efficient Gas Water Heaters - Finalized agreement with manufacturers Rheem and SaltX Technology to accelerate development and conduct a market assessment of a residential gas heat pump water heater.



Combi Systems - Concluded field testing of a combination space and water heating unit in partnership with Stone Mountain Technology Inc. Promising test results will be leveraged to encourage additional manufacturers to consider this technology.



Natural Gas Dryers - Identified potential new efficient dryer technology in Europe and kicked off product testing to validate energy savings.

YTD Natural Gas Expense Detail:



47% (\$0.8M)

Total Direct Program Expenses



35% (\$0.6M)

Total Salaries and Benefits



18% (\$0.3M)

Total General and Administration

TOGETHER We Are Transforming the Northwest



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All NEEA quarterly performance reports are available on neea.org.