



Quarterly Performance Report » Q4 2018

A Note from the Executive Director

The fourth quarter of 2018 concluded a busy and productive year for the alliance. Highlights from 2018 include two new electric market transformation programs, Extended Motor Products and High Performance HVAC, a great deal of momentum in NEEA's target markets and the approval of the alliance's 2020-2024 Strategic and Business Plans. The new Business Plan has a five-year electric budget of \$159.4M and a natural gas budget of \$18.9M, with flexibility to add additional investment opportunities in the future. This is the first alliance plan that combines market transformation activities for both electric and natural gas efficiency.

In December, the alliance presented its fourth annual Leadership in Energy Efficiency awards. These awards recognize individuals and teams for their significant contributions to advancing energy efficiency in the Northwest across three categories of work: Innovation; Collaboration; and Tom Eckman Leadership in Energy Efficiency Lifetime Achievement. On behalf of NEEA staff and the NEEA Board, I would like to congratulate all the winners and nominees.

Market Transformation Highlights (see pages 4-5 for more detail):

- Secured commitments from six major manufacturers, representing 90% of the Canada and the U.S. residential HVAC market, to participate in a collaborative process to refine the product roadmap for air source heat pump technology
- Signed a development agreement with a major manufacturer to produce the first gas heat pump water heater
- Concluded intervention in the low-watt fluorescent lamp market with >50% regional market share (vs. 10-13% nationally)

A handwritten signature in black ink, reading "Susan E. Stratton". The signature is fluid and cursive, with the first name being the most prominent.

Susan E. Stratton
Executive Director



Electric Quarterly Performance Scorecard

		Target	Forecast/ Actual	Status Q1/Q2	
STRATEGIC GOALS <i>(Updated quarterly)</i>	Goal 1: Fill the Energy Efficiency Pipeline	Scanning Portfolio Health (aMW)	1400	1340	
		Pipeline Health (aMW)	1000	1190	
		Program Advancement (aMW)	175	200	
	Goal 2: Create Market Conditions for Efficiency	Annual Program Milestones On-Track	90%	74% (pg. 3)	

		Target	Forecast	Status Q1/ Q2	
CO-CREATED ENERGY SAVINGS (aMW) <i>(Updated in Q1 and Q3)</i>	Current Business Plan Investments (2015-19)	1-yr Forecast (2018)	15	15 (pg. 3)	
		5-yr Forecast (2015-2019)	75	60-70	
		10-yr Forecast (2015-2024)	180	180-210	
	All Investments (1997-today)	1-yr Forecast (2018)	34	38	
		5-yr Forecast (2015-2019)	150	190-210	
= 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)	\$8.7	\$9.6	\$9.7	
		Annual Expenses (\$M)	\$34.6	\$32.6	\$32.8	
		Business Admin Expenses (%)	<13%	11.6%	11.8%	
	Staffing	Employee Retention % (12-month)	>90%	N/A	93%	
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

- Pipeline Metrics:** Scanning portfolio is slightly below target (5%) but remains very healthy. 2019 regional scanning priorities are commercial and residential HVAC and water heating.
- Annual Program Milestones:** Overall, NEEA's electric portfolio achieved 74% percent of program milestones in 2018, see page 3 for more information.
- Energy Savings from Current Investments (2015-2019):** NEEA updates its savings estimates twice a year, in Q1 and Q3. Based on the Q3 2018 estimate, NEEA's 5-year savings forecast for current investments is 60-70 aMW (7% below target). NEEA staff will update its savings estimate next in Q1, 2019.

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.*
- Program Advancement - 20-year aMW potential of opportunities expected to move from program development into market development during this business cycle (2015-2019).*
- Co-Created Energy Savings - Energy savings that the region and local programs achieve by working together.*
- Business Administration Expenses - Percent of total budget dedicated to business administration and executive cost centers.*

ⁱ Excludes Special Funds and Natural Gas Funds

ⁱⁱ Current investments (2015-2019)



Electric Portfolio Scorecard

Co-Created Savings, Current Investments

Market Transformation Program	2018 aMW forecast	% of total 2018 aMW forecast	Annual program milestones on track (Q3/Q4)	1-yr aMW forecast* status (Q3/Q4)	5-yr aMW forecast* status (Q3/Q4)
Standards not associated with programs	3.8	25%			
Codes not associated with programs	3.0	20%			
Ductless Heat Pumps	2.6	17%			
Next Step Homes/ Efficient Homes	2.2	14%			
Heat Pump Water Heaters	1.5	10%			
Super-Efficient Dryers	1.1	7%			
Reduced Wattage Lamp Replacement	0.6	4%			
Retail Product Portfolio	0.4	3%			
Certified Refrigeration Energy Specialist	0.1	1%			
Luminaire Level Lighting Controls	0.0	0%			
Building Operator Certification	0.0	0%			
Manufactured Homes	0.0	0%		N/A	N/A
Commercial Code Enhancement	0.0	0%		N/A	N/A
Extended Motor Products	0.0	0%		N/A	N/A
High Performance HVAC	0.0	0%		N/A	N/A
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	15.3	100%			

Need to Know

- NEEA updates its savings estimates twice a year, in Q1 and Q3. The next savings update will be published in NEEA's Q1 2019 quarterly report.
- In 2018, NEEA's electric portfolio met 74% percent of total annual program milestones - down from 79% in Q3 and just below the organization's 75% threshold for yellow status.
- Between Q3 and Q4, three programs had individual market progress indicators that were delayed, changed, or cancelled, but the overall health for each of those programs did not change.
- Detailed information about individual programs and market progress indicators is available in the Q4 Market Execution Report, which is available at: neea.org/events (click 'read more' under the March 7 board meeting entry).

Energy Savings: = More than 20% below target = Within 20% of target = Within 1% of target or better
 Annual Program Milestones On-track: = <75% = 75-90% = 90-100%



Electric Quarterly Highlights

STRATEGIC GOAL 1 » Fill the Energy Efficiency Pipeline



Mapping the future of residential HVAC: Convened a coalition of more than 25 U.S. and Canadian stakeholders to review current understanding of Air Source Heat Pumps (ASHP) and begin defining features that are important to utilities. Several participants expressed interested in continued collaboration to develop a 5-12 year road map for manufactures to consider in future product development. Six major manufacturers have expressed interest in working with the coalition to develop this product road map.



Filling the Pipeline: Regional Emerging Technology Advisory Committee (RETAC) identified residential & commercial HVAC and water heating as research and development priorities for the region. In 2019, NEEA staff will develop product application and research maps for products currently under investigation with the goal of identifying gaps and opportunities.



For the latest information about alliance emerging technology activities, see NEEA's quarterly Emerging Technology report, available at: neea.org/our-work/emerging-technologies

STRATEGIC GOAL 2 » Create Market Conditions for Efficiency



Advancing energy efficiency best practices in the commercial real estate market: Prepared energy efficiency opportunity assessments for almost 35 Puget Sound area commercial buildings through the City of Seattle's Tune-up Accelerator program. Generated with the alliance's Spark tool, these customized reports estimate total project costs and financial benefits of an integrated package of efficiency measures.



Influencing Progressively Effective Energy Codes: Demonstrated the Total System Performance Ratio (TSPR) HVAC modeling tool for Washington Stakeholders. Proposed by the alliance's Commercial Code Enhancement program, TSPR is currently under consideration for adoption into the 2018 WA Commercial Code. TSPR provides a methodology to model whole-system efficiency for commercial HVAC systems, which would level the playing field for efficient technologies, promote more efficient design approaches and help buildings save more energy. Washington utilities have expressed interest in using the TSPR tool to offer commercial HVAC system-level incentives and have provided feedback on additional developments needed for utility programs.

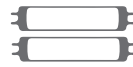


Electric Quarterly Highlights Continued:

STRATEGIC GOAL 2 Continued » Create Market Conditions for Efficiency



Collaborating to advance regional energy efficiency priorities: Facilitated the development of an RTF (Regional Technical Forum)-approved Smart Thermostat research plan at the direction of the Consumer Products Regional Strategy Steering Committee. The plan will explore barriers, opportunities and next steps for Smart Thermostats and keep the current interim RTF measure from expiring in 2019. Funding for this collaborative effort will come from interested utilities across the region.



Winding down low watt lamp market intervention: Concluded market development activities through the Reduced Wattage Lamp Replacement program. Between 2015-2018, the program increased Northwest market share of low-watt fluorescent lamps from between 10-15 percent to over 50 percent (national market share is 10-13 percent). Going forward, the distributor platform will continue to supply commercial lighting data and support for other efficiency programs.



Convening the region to advance energy-efficient building practices: Hosted the 7th annual Home Efficiency Forum conference in Boise ID, which brings together Northwest building professionals to advance energy-efficient building practices in residential new construction. Participants included almost 100 Northwest building experts and funder representatives.



Targeting single-head ductless heat pump installations: Executed a regional engagement plan targeted at HVAC installers to communicate the market opportunity for single-head ductless heat pump systems - the configuration that delivers the most cost-effective energy savings. Installers have significant influence over consumer purchasing decisions, but don't always prioritize 1:1 displacement options. To further support consumer awareness, program staff generated and provided alliance funders with address lists of homes likely to be suitable for single-head DHP installations and customizable direct mail and digital files for them to leverage.



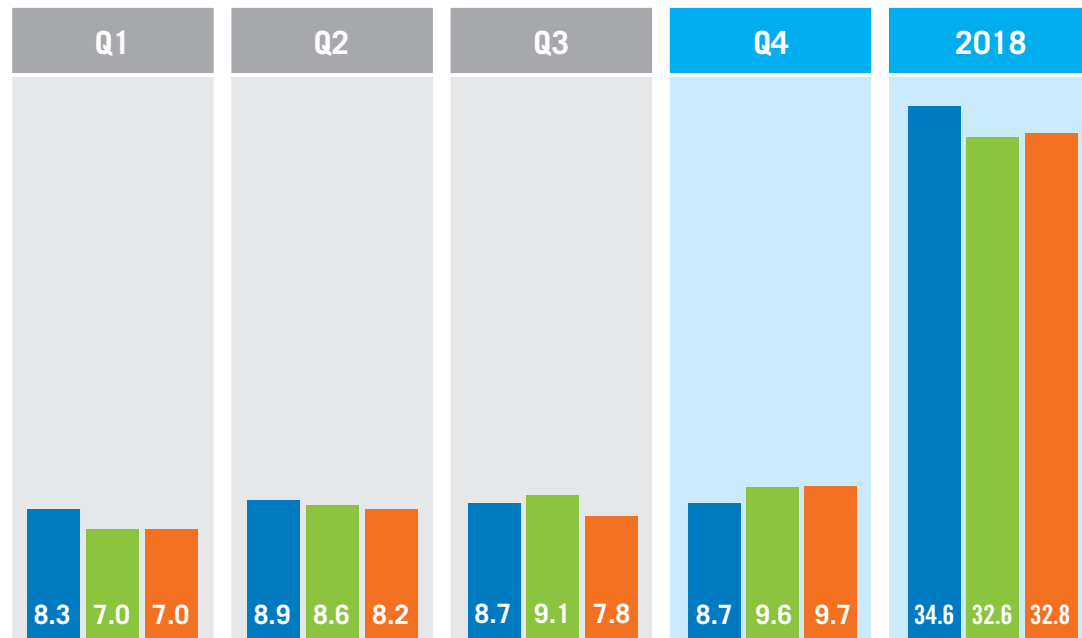
2020-2024 Business and Strategic Planning: Presented final draft 2020-2024 Business and Strategic plans for NEEA's Board of Directors for approval. Both plans passed unanimously. Both plans are available at neea.org/plans. In 2019, NEEA staff will work individually with each funding organization on agreements.



Need to Know: Electric Investment

2018 Electric Investment = \$32.8 Million

Annual electric investment was 95% of the approved 2018 Operations Plan budget. Lower than budgeted expenses in commercial lighting (luminaire level lighting controls), consumer products (ductless heat pumps, super-efficient dryers) and the Commercial Building Stock Assessment were offset by higher heat pump water heater distributor incentives.



Budget Forecast Actual

\$Millions

YTD Key Budget Variances:

+	-
<ul style="list-style-type: none"> \$1,025K - Heat Pump Water Heater distributor incentives 	<ul style="list-style-type: none"> (\$688K) - Super Efficient Dryers cancelled pilot and research
	<ul style="list-style-type: none"> (\$407K) - Commercial Building Stock Assessment change in timeline
	<ul style="list-style-type: none"> (\$338K) - Ductless Heat Pump strategy shift
	<ul style="list-style-type: none"> (\$291K) - Luminaire Level Lighting Controls research accomplished more efficiently

YTD Electric Expense Detail:



60% (\$19.8M)

Total Direct Program Expenses



34% (\$11.0M)

Total Salaries and Benefits



6% (\$2.0M)

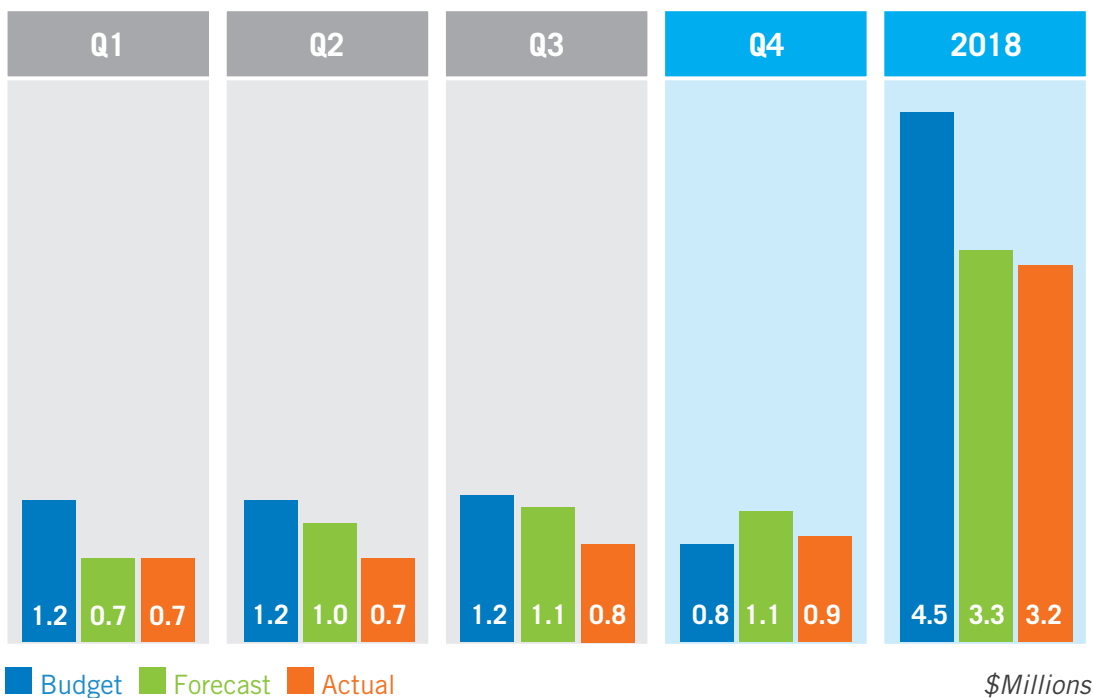
Total General and Administrative



Need to Know: Natural Gas Investment

YTD Natural Gas Investment = \$3.2 Million

Annual natural gas investment was 71% of the approved 2018 Operations Plan budget. Variance is due to product launch delays (combination space and water heating units and ENERGY STAR non-plugin gas water heaters), decreased lab and field testing (dryers) and staff vacancies.



YTD Key Budget Variances:

+	-
	• (\$482K) - Non-plugin ENERGY STAR gas water heater delayed
	• (\$354K) - Combi Unit product delays
	• (\$219K) - Staff vacancies

Quarterly Natural Gas Highlights:



Efficient Gas Water Heaters -

- Initiated project with a major water heater manufacturer to accelerate the development of a gas heat pump water heater, a major milestone towards having a commercialized product. Testing of the prototype is expected to be complete by Q2, 2019.
- Researched options to reduce cost and installation barriers for gas heat pump water heaters once commercially available. Findings will be shared with water heater manufacturers to inform product enhancements.



Combination Space and Water Heating Systems -

Launched project with Rheem and SaltX (a natural gas heat pump technology provider) to accelerate development of a natural gas combination space and water heating unit. Proof-of-concept prototype expected to be complete in early 2019.

YTD Natural Gas Expense Detail:



51% (\$1.6M)
Total Direct Program Expenses



24% (\$0.75M)
Total Salaries and Benefits



25% (\$0.80M)
Total General and Administrative

TOGETHER We Are Transforming the Northwest



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