

Memorandum



May 5, 2016

TO: Dan Johnson, Director of Energy Efficiency, Avista Utilities

FROM: Christina Steinhoff, Planning Analyst

CC: Stephanie Rider, Senior Manager, NEEA Planning

SUBJECT: Final 2014-2015 Biennial Savings (Avista Utilities Washington Share)

This memo provides Avista Washington its 2014-2015 savings estimate for programs associated with NEEA's work. The report compares these results with biennial targets set in September 2013.

The Appendix documents the methodology and the attached spreadsheet (*2015 Annual Savings Report Avista WA 20160505*) provides more detail.

Please contact Christina Steinhoff at 503.688.5427 with any questions about this report.

2014-2015 Final Savings Estimate

NEEA estimates Avista Utilities' annual electric energy savings are 3.47 aMW for 2014-2015. The estimates are above the Northwest Power and Conservation Council's 6th Power Plan baseline and a proxy baseline for 2015.¹ To avoid double counting, the savings exclude an estimate of savings the Energy Trust of Oregon, Bonneville Power Administration and local utilities claim through their programs. NEEA allocates the savings using funder shares (see Appendix).

The savings estimate is above the target set in 2013.

¹ The Washington Investor-owned Utilities chose a 2014 baseline because they were anticipating the adoption of the 7th Power Plan in 2015 and because it aligned with their planning timeline. The plan's baseline would have been 2014; but the Council did not complete the 7th Power Plan until 2016.

Table 1: Final 2014-2015 Savings Estimate (aMW)

	Biennial Savings (2014-2015)		
	Current	Target	Variance
Total	3.47	3.31	0.17
Residential	2.36	2.75	(0.39)
Commercial	1.10	0.53	0.57
Industrial	0.02	0.03	(0.01)
Agriculture	0.00	0.00	(0.00)

Notes: These are first-year, site-based savings.

Sources of Variance

NEEA met its goal largely because it was able to measure energy savings from standards it worked on. This includes approximately 0.65 aMW of savings from the Battery Chargers and Fluorescent Lamp Ballasts. In 2015, NEEA was able to evaluate its involvement in the rulemaking process.² NEEA also had good performances from its Televisions, Building Operator Certification, Desktop Power Supplies and Commissioning programs, which accounted for more than half of the savings.

Residential Lighting (CFLs) fell short of its targets because of a shift in the market toward LED and halogen bulbs. The CFL forecast was based on 2012 data. The federal government was phasing in a standard for general purpose lighting. NEEA was forecasting that the region would primarily use CFLs to meet the standards. About a third of all bulb sales would be general purpose CFLs. Instead, the region has been using halogen and LED bulbs to meet the standard and CFL sales are on the decline.

Ductless Heat Pumps also missed its target. NEEA assumed that local utility programs would claim fewer installs. NEEA forecasted that local programs would comprise approximately 37% of the ductless heat pump installations from 2014-2015. Instead, Bonneville, the Energy Trust of Oregon and the utilities incented more than 80% of the installations. Because the savings NEEA reports subtracts out savings claimed through local programs, the increase in rebates decreased the remaining savings.

Table 2 shows the variances by program.

² Cadmus. Feb. 26, 2016. Assessment of NEEA Influence on 2010 Small Electric Motors Standard.

TRC. Feb. 29, 2016. NEEA Impact Assessment for Fluorescent Lamp Ballast Standard.

TRC. Dec. 15, 2015. Battery Charger Standard Evaluation for NEEA's Non-Adoptive States.

D&R International. 2014. NEEA Standards Evaluation Report: Logic Model Review and Savings Estimates of Battery Charger Standards in Oregon.

Table 2: aMW Energy Savings

Avista Utilities

Sector	Initiative	2014-2015 Savings		
		Current	Target	Variance
Agriculture	AM400 Data Logger	0.00	0.00	(0.00)
Commercial	Building Operator Certification	0.01	0.05	(0.03)
Commercial	Building Operator Certification Expansion	0.17	0.06	0.11
Commercial	Other Codes (Commercial)	0.17	0.07	0.10
Commercial	Commissioning Buildings	0.23	0.11	0.12
Commercial	Commercial Real Estate	0.05	-	0.05
Commercial	Desktop Power Supplies	0.28	0.23	0.05
Commercial	Existing Building Renewal	0.00	-	0.00
Commercial	Healthcare	0.00	0.00	(0.00)
Commercial	Other Non-Residential Standards	0.14	-	0.14
Commercial	Reduced Wattage Lamp Replacement	0.02	-	0.02
Industrial	Drive Power	0.00	0.01	(0.01)
Industrial	Food Processors	0.00	0.01	(0.01)
Industrial	MagnaDrive Innovative Industrial Speed Control	0.00	0.00	(0.00)
Industrial	Certified Refrigeration Energy Specialist (CRES)	0.01	-	0.01
Residential	Clothes Washers	0.12	0.07	0.05
Residential	Dishwashers	0.01	0.01	0.00
Residential	Ductless Heat Pumps	0.07	0.22	(0.16)
Residential	Efficient Homes	0.09	0.15	(0.05)
Residential	Heat Pump Water Heaters	0.01	0.02	(0.00)
Residential	Other Codes (Multifamily)	0.01	0.01	0.00
Residential	Other Residential Standards	0.51	0.06	0.45
Residential	Residential New Construction/Next Step Homes	0.00	-	0.00
Residential	Retail Product Portfolio	0.01	-	0.01
Residential	Refrigerators	0.05	0.03	0.02
Residential	Residential Lighting	0.15	0.90	(0.75)
Residential	Super-Efficient Dryers	0.02	-	0.02
Residential	Televisions	1.30	1.29	0.02
All Sectors	Total	3.47	3.31	0.17

Notes: These are first-year, site-based savings.

Appendix

Allocation Methodology

NEEA allocates the regional savings using funder shares. The shares vary based on the funding cycle. Savings from previous investments receive the previous funder share. Savings from current investments receive the current funder share. Table 3 shows the funder shares.

Table 3: Avista Washington's Funder Share

Funder Share

Avista Washington

Current	4.03%
2010-2014	3.89%
Previous (pre 2010 investments)	2.77%

Note: Avista's Washington funding share is 70% of its total NEEA funding share (Idaho plus Washington).

Baseline

This report uses the NWPCC's 6th Power Plan baseline for the 2014 savings forecast and a proxy 7th Power Plan baseline for the 2015 savings estimate.

- **6th Power Plan Baseline:** NEEA aligned components of its initiatives with measures in the Power Plan to establish a baseline from which to count savings. NEEA reviewed the alignment with the Council to assure the savings count toward Power Plan targets.
- **7th Power Plan Proxy Baseline:** NEEA used 2014 as the baseline for the 2015 savings based on the assumption that the Council would have a 7th Power Plan ready by 2015. The plan's baseline would have been 2014. To align with the 7th Power Plan, NEEA created proxy baselines for each measure in its portfolio using three steps.
 1. NEEA reviewed the market adoption forecast of each product and behavior. Savings from measures that would achieve its potential by the baseline period (2014) could not count toward the target. For example, in July 2013, NEEA forecasted that the market share for ENERGY STAR 4.1 televisions would be 100% in 2014; therefore, the measure became a part of the baseline.
 2. In 2013, NEEA replaced its savings rates with the Regional Technical Forum (RTF) savings rates where available. The target used the baseline set at the latest date in order to align closest to the baseline year (2014). For example, the RTF savings rate for refrigerators was lower than NEEA's savings rate because the RTF set its baseline later. NEEA used the RTF savings rate in this scenario.
 3. NEEA calibrated the savings rate baseline with the 2014 forecast available when it set the target. For example, if NEEA forecasted a 70% market share in 2014 and the savings rate used a 10% baseline market share, NEEA would add the 60% market adoption to the baseline. Essentially, NEEA would only count 2015 savings from market adoption above 70%.

To compare the actual savings against the target, NEEA froze the baseline assumptions. For example, if the baseline market share was 50 percent, NEEA would continue to assume 50 percent of the total sales were baseline even if actual 2014 data provided a different value.

Technical Assumptions

This report uses the technical assumptions available at the time NEEA created the targets. To compare the actual savings against the target, NEEA did not update the technical assumptions. For example, NEEA continued to use 3,500 kWh/DHP in its savings estimate despite the RTF's approval of a new rate. However, NEEA updated the savings rate if it was weighted based on the configuration of the data collected. For example, NEEA updated the television's savings rate based on the screen-size mix of the televisions sales it collected; but NEEA did not update the technical assumption regarding the average hours on per day.

New Savings Stream

NEEA did not have enough data in 2013 to forecast savings for some programs. This report adds those savings streams by aligning with the 6th Power Plan baseline for the 2014 estimate and using a 2014 baseline for the 2015 savings estimate. These new saving streams include:

- 2014
 - Reduce Wattage Lamp Replacement
 - RETA Operator Certification
 - Commercial Real Estate
- 2015
 - Reduce Wattage Lamp Replacement
 - Retail Products Portfolio
 - Super-Efficient Dryers
 - Commercial Real Estate
 - Certified Refrigeration Energy Specialist
 - Clothes Washers
 - Next Step Homes

More detail about the savings assumptions are available upon request.