

2019

Q1

Key Assumptions Summary Report

Updated: 3.6.19

IMPORTANT UPDATES:



What's New!

This is the Q1 2019 Key Assumptions report for NEEA's portfolio of Market Transformation Initiatives. This Q1 report contains assumption updates for several of NEEA's programs in preparation for annual reporting. NEEA staff will finalize savings numbers by the end of March and will have an annual report update by the April Cost Effectiveness and Evaluation Advisory Committee (CEAC) meeting.

What are Key Assumptions, Exactly?

To estimate savings and cost effectiveness for NEEA initiatives, the Market Planning team gathers and analyzes data to arrive at assumptions for key inputs to those calculations. At the highest level, these key assumptions include per-unit savings rates and incremental costs, measure life, market size, and tracked units, among others. Each assumption may be driven by additional lower-level assumptions such as hours of use, baseline market share, or climate zone weighting. When NEEA staff changes these assumptions - perhaps due to better information or a changing market - savings and cost effectiveness estimates are impacted, and communicating assumption changes gives context to those changing estimates.

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2017 REGIONAL STAKEHOLDER REPORTS

- **NEEA Baseline Report:** [https://neeanet.neea.org/sites/emp/Official%20Regional%20Savings%20Library/2017%20Annual%20Report%20\(NEEA%20Baseline\).xlsx](https://neeanet.neea.org/sites/emp/Official%20Regional%20Savings%20Library/2017%20Annual%20Report%20(NEEA%20Baseline).xlsx)
- **7th Power Plan Report:** [https://neeanet.neea.org/sites/emp/Official%20Regional%20Savings%20Library/2017%20Annual%20Report%20\(7th%20Power%20Plan%20Baseline\).xlsx](https://neeanet.neea.org/sites/emp/Official%20Regional%20Savings%20Library/2017%20Annual%20Report%20(7th%20Power%20Plan%20Baseline).xlsx)



Questions about this report may be addressed to:

Stephanie Rider
Sr. Manager, Market Planning
srider@neea.org



Residential

INITIATIVE

HIGHLIGHTS

Clothes Washers	
Ductless Heat Pumps	
Efficient Homes	
Heat Pump Water Heaters	✓
Residential Lighting	✓
Residential New Construction/Next Step Homes	✓
Retail Product Portfolio	✓
Super-Efficient Dryers	✓



Commercial

Building Operator Certification Expansion	
Commercial Real Estate	
Commissioning Buildings	
Desktop Power Supplies	✓
Luminaire Level Lighting Controls	
Other ENERGY STAR Products	✓
Reduced Wattage Lamp Replacement	
Strategic Energy Management	



Codes & Standards

Commercial Codes	
Multifamily Codes	✓
Standards	✓



Industrial/Agricultural

No key assumption updates this quarter.

Certified Refrigeration Energy Specialist (CRES)	
Drive Power	



Residential

KEY ASSUMPTION HIGHLIGHTS

Heat Pump Water Heaters (HPWH)

NEEA staff utilized findings from the Market Progress and Evaluation Report (MPER 3) and distributor data to refine the treatment of HPWHs into new construction homes versus existing homes. New construction measures are now tracked separately and receive a lower savings rate than existing construction replacements. The methodology was reviewed by Ecotope in Q1, 2019.

Market Planning Analyst: Greg Kaleka
gkaleka@neea.org

Residential Lighting

For 2018 market data estimates, NEEA staff is working with a new firm APEX Analytics who bring a refined approach to the analysis. Staff is still utilizing a combination shelf surveys and purchased sales data however the shelf sample has been restricted to just those store types that are not covered by the sales data. In addition staff is conducting in-store interviews to help understand the shelf stocking to sales relationship for the various lamp technologies. The surveys were completed in February with high response rates on the interviews. Preliminary analysis results will be available in late March.

Market Planning Analyst: Ryan Brown
rbrown@neea.org



Residential

KEY ASSUMPTION HIGHLIGHTS

Retail Products Portfolio (RPP)

NEEA has five primary updates for the Retail Products Portfolio:

-Track Units (Clothes Washers, Freezers and Refrigerators): NEEA staff estimates tracked units for white goods by multiplying a market share estimate by an estimate of total regional sales. The market share estimate comes from the Retail Products Portfolio Platform. The total regional sales have historically come from the Association of Home Appliance Manufacturers (AHAM). AHAM no longer reports shipments by state. As a result, NEEA staff is using the 2017 shipments as a proxy for 2018. Staff will review this assumption during the March Cost Effectiveness and Evaluation Advisory Committee (CEAC) meeting.

-HVAC Interaction (Refrigerators and Freezers): NEEA staff updated the HVAC interaction factors based on newer estimates by the Regional Technical Forum.

-Climate Zone Designations (Room Air Conditioners): NEEA staff updated Cooling Degree Days (CDD) based on newer estimates by the Regional Technical Forum. NEEA staff also switched from using AHAM data to weight the CDD by climate zone to using Household estimate provided by the Regional Technical Forum (January 2019). The number of sales within a cooling zone comes from retail sales collected through the Platform.

-NEEA Baseline Review: Apex Analytics reviewed NEEA staff's short-term baseline assumptions. The result was some adjustments to NEEA's baseline market share forecast by making the forecasts map closer to historical trends and knowledge about the products. The baseline analysis supports program design and the calculation of Net Market Effects. The report will be available in June.

-New Data: NEEA staff re-estimates prior year savings rates and efficiency mixes with each update based on new sales data and additional retailers being added to the mix. NEEA staff added a new retailer to its portfolio in 2018. This resulted in additional 2017 data. NEEA staff also back-casted the 2015-2016 sales based on the effects of adding the retailer. The backing method was reviewed by the Regional Technical Forum Market Analysis Subcommittee.

Market Planning Analyst: Christina Steinhoff
csteinhoff@neea.org



Residential

KEY ASSUMPTION HIGHLIGHTS

Residential New Construction/Next Step Homes (NSH)

NEEA staff updated the code compliance estimates for Montana and Idaho using results from PNNL's Idaho and Montana Residential Energy Code Field studies. The results of the study allow NEEA staff to base compliance on energy performance as opposed to whether a home fully complied with all code components. To do this, PNNL conducted simulations using a Monte Carlo selection process. The process generated an EUI estimate for 1,500 pseudo homes per climate zone. Idaho's compliance increased from 90% to 97% while Montana's increased from 61% to 95%. NEEA will review this update with the CEAC (Cost Effectiveness and Evaluation Advisory Committee) during the March meeting.

Market Planning Analysts: Greg Kaleka & Christina Steinhoff
gkaleka@neea.org & csteinhoff@neea.org

Super-Efficient Dryers

NEEA staff estimates energy star units by multiplying a market share estimate by an estimate of total regional sales. The market share estimate comes from the Retail Products Portfolio Platform. The total regional sales have historically come from the Association of Home Appliance Manufacturers (AHAM). AHAM no longer reports shipments by state. As a result, NEEA staff is using the 2017 shipments as a proxy for 2018. NEEA staff will review this assumption during the March CEAC meeting.

Market Planning Analyst: Greg Kaleka
gkaleka@neea.org



Commercial

KEY ASSUMPTION HIGHLIGHTS

Desktop Power Supplies

Two primary updates have been made to the Desktop Power Supplies program:

- The baseline approach for ENERGY STAR Version 6 commercial desktop computers was evaluated by Apex Analytics, LLC. The market share of ENERGY STAR Version 5-compliant desktop computers in 2008 (the year before that specification went into effect) was used as the baseline for ENERGY STAR Version 6. This update results in a net positive number of units, and as such, NEEA staff will be reporting savings for the program.
- The savings rate used to calculate net market savings for ENERGY STAR Version 6 was prepared by Xergy Consulting (the Northwest Power and Conservation Council (NWPCC) 7th Power Plan product workbooks remain the source for Power Plan-related savings rates). Unit (computer shipment) figures were compiled by International Data Corporation (IDC). Both Xergy and IDC have been the sources for their respective data in previous years.

Market Planning Analyst: Greg Kaleka
gkaleka@neea.org

Other Energy Star Products

NEEA staff's contributions during the ENERGY STAR Version 6 specification development were evaluated by Apex Analytics, LLC. The evaluator determined the comments submitted by NEEA staff to the EPA during the process, as well as historical support of the 80 PLUS program, helped to form the final version of the specification, and subsequently influenced the commercial laptop, residential desktop, and residential laptop markets. Measures for these three products have been created and 7th Power Plan savings will be reported under the new category "Other ENERGY STAR Products". NEEA staff will use the 7th Power Plan savings rates provided by the NWPCC to calculate savings. A net market effects baseline has not yet been evaluated. As a result, NEEA staff will not be reporting Net Market Effects at this time.

Market Planning Analyst: Ryan Brown
rbrown@neea.org



Codes & Standards

KEY ASSUMPTION HIGHLIGHTS

Multifamily Codes

See [Residential New Construction/Next Step Homes](#) update above.

Market Planning Analyst: Kathryn Bae
kbae@neea.org

Standards

NEEA staff is reporting Net Market Effects and Remaining Savings for two new standards in 2018. These are the 2014 and subsequent 2017 final rules for Walk-in Coolers and Freezers, and second, the 2017 federal standard for Commercial Unitary Air Conditioners. NEEA staff worked with TRC to evaluate the level of involvement of NEEA staff and other energy efficiency organizations in the Department of Energy (DOE) rulemaking process for each standard. Both standards are above the 7th Power Plan baseline.

Market Planning Analysts: Greg Kaleka & Christina Steinhoff
gkaleka@neea.org & csteinhoff@neea.org



Christina Steinhoff

Principal Planning Analyst
csteinhoff@neea.org



Greg Kaleka

Planning Analyst
gkaleka@neea.org



Kathryn Bae

Sr. Planning Analyst
kbae@neea.org



Katie Nichols

Planning Analyst
knichols@neea.org



Kyle Billeci

Planning Analyst
kbilleci@neea.org



Ryan Brown

Sr. Planning Analyst
rbrown@neea.org

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