



Impact Evaluation of FY2015 Residential Lighting UES Measures

Bonneville
POWER ADMINISTRATION



Background

In 2016, BPA began impact evaluations of the largest slices of the Unit Energy Savings (UES) portfolio— residential lighting, HVAC and envelope measures. Residential lighting is the largest portion, accounting for nearly half of residential UES savings. Retail measures were the majority of the lighting savings (>80%), while by-request measures accounted for 8% of the savings.



Evaluation Approach

Because the measures have the RTF proven status, the impact evaluation minimized effort by conducting delivery verification using existing project documentation. This method assumes that the per-unit savings is reliable and verifies that the quantities and reporting are accurate. While reviewing the project documentation, the evaluation either verified the savings, revised the measure to a different UES, or assigned zero savings if documentation was missing.

Findings

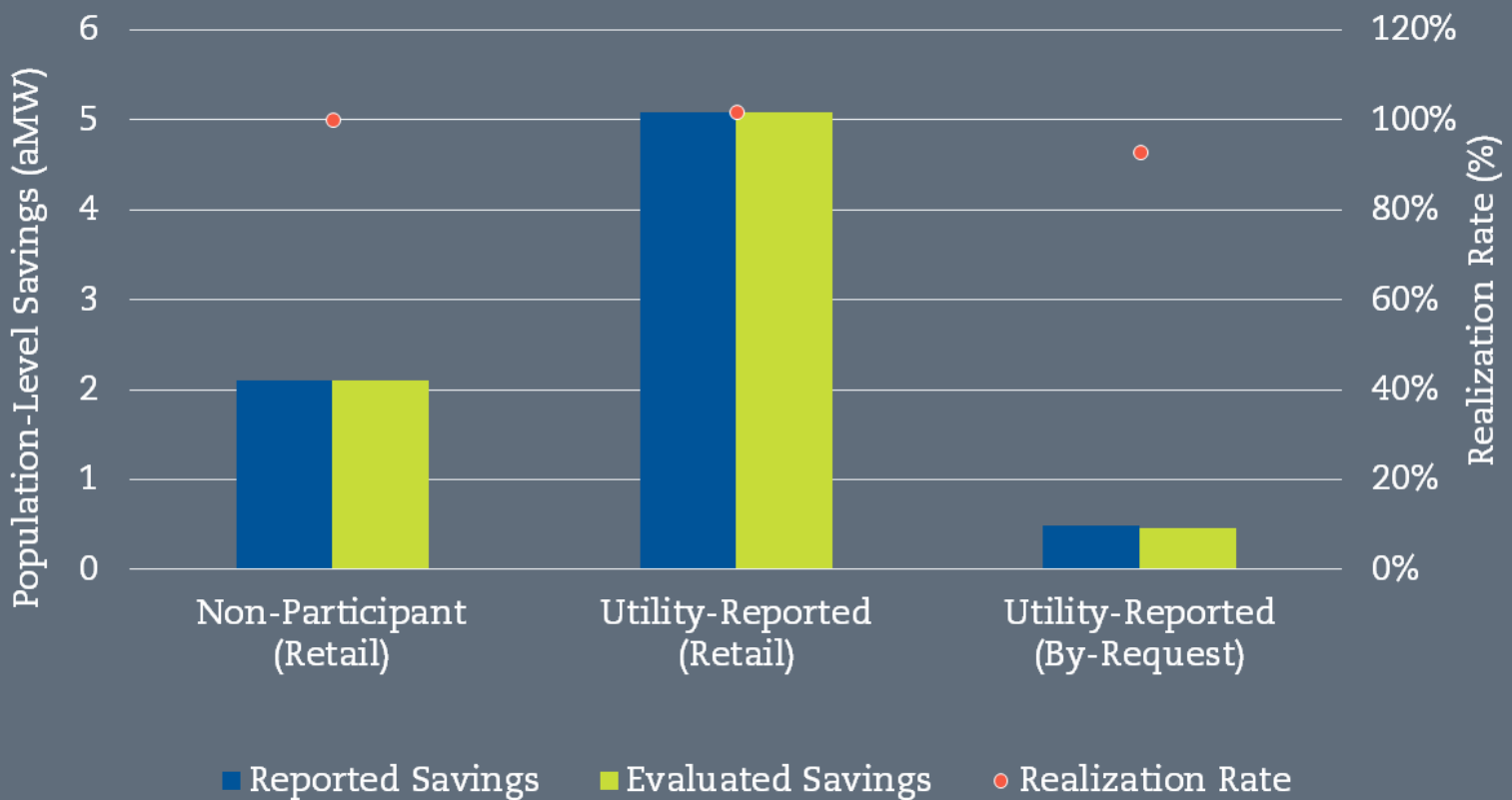
Due to thorough project documentation, the evaluation was able to verify the reported savings in nearly all cases. Utility-reported retail measures had a realization rate of 1.0 and utility-reported by-request measures had a realization rate of 0.92. Non-participant retail savings had a realization rate of 1.0.

$$\frac{\text{Evaluation Savings}}{\text{Reported Savings}} = \text{Realization rate}$$

Realization rates greater than 1 mean that we found **more savings** than was reported

Realization rates less than 1 mean **fewer savings** were found




Nearly all reported savings accounted for in project documentation!



Residential Lighting Measures are very cost-effective

The overall cost-effectiveness of the residential lighting measures are 5.6.

Recommendations for continued improvement

-  Create unique Reference Numbers for Simple Steps and outside program measures to distinguish savings
-  Improve accuracy of By-Request reporting by using documentation that maps reported projects to bulk invoices
-  Add 'Installation Location' to data collection forms for Direct Install lighting measures to allow for documentation review



For plans and reports, visit www.bpa.gov/goto/evaluation