**R32: CL&P Persistence for Yr2 Home Energy Report Program Average Users**

**(One-Pager, 5/6/14)**

**Objectives and Outputs:**

The objectives of the persistence evaluation of the HERs program impact are to examine the persistence of the energy savings estimates induced by this behavioral / feedback program. Specific outcomes follow:

* Included – Retention of Year 2 (high and average use customers): Estimate the program-induced persistent savings for all households from the Year 2 treatment groups:
* Optional – Later year retention of Year 1 (high use customers): Compare the results of the persistence findings for the high-use and average-use households, including any sub-groups

# Approach:

This project will rely on a billing analysis (Fall 2014) using robust ordinary least squares (OLS) regression modeling using the same approach used in the Year 1 and Year 2 evaluations. The project will analyze electricity use for all study group households (i.e., both treatment and control group households, studying effects on at least Year 2 (average and high-use) participants. IF the optional “later year retention for Year 1 participants” work is selected, an analysis of these high-use customers will be included. Including Year 1 participants (optional here, because of budget considerations) is valuable because it provides a longer time-pattern of retention of behavioral program savings. By following the Year 1 households (all are high-use) more than two years after they stopped receiving reports, the project will work to determine if there is a limit to persistence and, if so, at what point degradation begins.

The billing analysis will allow a comparison of energy use between the pre-treatment and post-treatment periods, to determine if the persistence samples continued to save energy (and an estimate of how much energy savings occurred) more than a year after they stopped receiving reports. The results of the persistence billing analysis will support generation of a trend line to show the magnitude of savings and the rate of persistence or decline over time as well as any difference in persistence between the high-use and average-use households. If both Year 1 and Year 2 groups are included (and if significant persistent of savings is found), a post-estimation test, likely calculate a Wald statistic, will be used to determine if the savings between persistence groups are significantly different from each other.

To save money, the implementer-supplied control group will be used for the persistence analysis.[[1]](#footnote-1) This allows consistency with the process evaluation results and the previous persistence work (selecting new groups would cost $80K, beyond the budget).

**Budget and Timeline:**

# The budget included in the Three Year Evaluation Plan was $20K. That estimate was provided before the analysis of the Year 2 program was quite finished; working with the data implies that a budget of $25K will be needed for the basic analysis above. If we include the “next year” persistence for Year 1, the budget is $36K. The project is expected to have the following schedule: Data request for participant group August / Sept; Report in October / November 2014.

**Recommendation**: The Year 2 persistence work was requested as part of the Technical meeting on the project (these are more “average use” customers). However, if behavioral programs are to continue to get serious treatment, measurement of the longer persistence factors will be needed (behavioral EULs). This extra $11K would provide very valuable numbers on the pattern in decay and the “measure lifetimes” for behavioral programs. These data are not currently generally available from other sources – ad hoc numbers are most commonly used, and we have the chance to do better.

1. *This is not quite consistent with the recommendation that, in the future, the evaluators be empowered to select their own control groups for independence.* [↑](#footnote-ref-1)