What Is this Program?

- For residential, we are talking about Home Energy Report (HER) programs (e.g. Opower, C3 Energy, Simple Energy, Aclara)
- HER programs need to be delivered with the evaluation in mind
  - Involve participant group & control group
  - Need large number of participants to garner statistically significant estimates of savings
Questions

- Are these programs’ savings considered conservation under the Act?
- What are the savings?
- Can they be offered by smaller utilities?

Is It Conservation?

- Does this measure result in a reduction of “utils”? That is, are savings due to customers reducing comfort or utility of their home?
  - Likely in part yes, but not entirely
  - Cadmus white paper demonstrates reduction in savings after program termination, but not to zero
- Persistence of savings implies there is some conservation
What are the Savings?

- From Cadmus white paper
- Numbers are for illustrative purposes only, but represent general trends
- Savings around 1.5-3% of load

What about Overlap with Widgets?

- The HER evaluation accounts for savings from participating in other programs (known)
- But, don’t know if HER participants are investing in widgets and not participating in other programs
- Doesn’t account for up/mid-stream programs
- There is a risk of double counting some portion of savings
What About Small Utilities?

- Savings are small, evaluated from randomized control trials, so need large sample to estimate.
- Depending on weather and demographic differences, need at least 10-15,000 participants in both treatment and control group.
- This number would increase with larger diversity in customer base.
- Would likely require regional coordination (e.g. a BPA-sponsored program).

Proposed Approach

- Assume a 5-year program cycle, with 3 years of engagement, 2-years “off”.
- Use the average savings over the 5-year cycle, three-year savings at 1.5% of load, assuming 20% per year decay post engagement.
- Use cost based on 3-years of investment.
- Include narrative about regional coordination needed to achieve potential.
Applicability

- Approx 50% of population can be participants (need control group)
- Max achievability 85%
- Costs need to be re-invested every 5 years to maintain savings
- Costs have an economy of scale (more participants, less cost); assume 100,000 person program