Open Q Proposal

Program/Measure Name: Home Energy Review Measured Savings Program
Date: 6/2/25

1. **Brief description of program or measure(s) proposed for Open Q consideration:**
    - Overall Summary
      Provide a high-level summary of the proposed measure or program you are planning to implement and report to BPA.
        - For many years, C Public Utilities has offered free, in-home Home Energy Reviews (HER) in which a utility Energy Counselor conducts an onsite home inspection, electricity consumption analysis and a comprehensive review of the home's energy efficiency levels and usage patterns. During the HER, the utility energy counselor provides the occupants with a variety of suggestions on ways to reduce their electric consumption by implementing low and no cost solutions, installing energy efficiency measures, and ways to curb inefficient behaviors. HERs are typically scheduled by request or offered by utility staff based on a customer's needs and/or interests. As found in an analysis in a sample of 27 homes, HERs often result in a significant reduction of electric consumption that is not reported through other utility energy savings programs. This proposal seeks to quantify, and report metered electric savings that occur due to HER influenced changes by comparing one year of weather normalized meter data before the HER to one year of weather normalized meter data after the HER using the tool BPA provided.
    - Describe the baseline conditions for the program/measure
      What is the inefficient condition the measure or program will change? This represents the starting place from which you propose to measure savings.
        - The baseline condition of the home will be the observed state of the home at the time of the HER. The consumption baseline will be the weather normalized monthly meter data from 12 months prior to the month the HER occurred.
    - Described the proposed energy efficient measure/program
      How will the measure or program change the baseline conditions? What will it do to create energy savings?
        - Savings from HERs can be generated in a variety of ways, but mainly due to education on inefficient consumption patterns that can be altered by behavior changes, identifying and correcting inefficient space and water heating equipment usage habits, or by identifying equipment malfunction leading to unnecessary electric consumption. Customers may also choose to install energy efficiency measures either through a contractor on our network (those customers are removed from this program), a contractor who is not on our network or DIY based on recommendations made during the HER.
    - What are the implementation criteria or requirements of the measure/program?
      What implementation rules will your proposed measure/program require? Are there any specific criteria you plan to impose?
        - In order to qualify, customers must participate in an in-home HER done by utility staff and have at least 12 months of meter data following the HER. In order to avoid double counting of electric energy savings reported through

other utility energy savings programs, and to provide a rigorous analysis, C Public Utilities' will remove customers from this program that:

- Installed a Unit Energy Savings (UES) measure reported to BPA within the 12-month baseline period
- Installed a Unit Energy Savings (UES) measure reported to BPA within the 12-month post HER analysis period
- Participate in the C Public Utilities' Opower Home Energy Report program
- Did not have continuous metered electric usage during the full 25-month analysis period
- Indicated during the HER to our staff that they had a significant change in the household or equipment usage prior to the visit that could cause the baseline to be inconsistent
- Live in multifamily housing
- Pre versus post electric savings was under 500 kWh/year
- Are not on a residential rate schedule

2. **Please provide the following values and an outline of how you estimated or calculated them (if submitting technical files to show calculations, you can say "see [filename]"):**
   - Measure Savings
     What savings do you estimate for this proposed measure / program per installation and how did you estimate them?
     - C Public Utilities staff analyzed pre and post HER meter data from a sample of 27 typical homes in [ ] County that met applicable screening criteria. Four homes had electric savings of less than 500 kWh/year and were removed from the analysis since this is the initial proposed threshold for participation. We will continue to monitor this threshold as the program evolves. Five homes had consumption increase and were removed from the analysis. Eighteen homes had savings greater than 500 kWh that ranged from 6% to 35%, or on average 3,900 kWh/year per home. The large range of savings observed from a HER is a result of the HERs being completed on all home types regardless of age, size, occupancy, and fuel type. Due to this, only site-specific savings will be reported through the program. A rolling analysis will be performed monthly and the associated savings will be reported to BPA.
   - Measure Incremental Cost
     How much does the measure/program cost compared to the baseline? For example, if you are proposing to install a more efficient technology, how much more does it cost than an inefficient alternative?
     - The incremental cost will vary significantly. Savings generated by low to no cost behavioral changes will have little to no incremental cost. Savings generated by non-reported efficiency measures will have unique incremental costs. Examples could be HVAC or other equipment tune ups, DIY measures, non-reported energy efficiency upgrades to equipment or the building shell, or appliance upgrades. Utility administrative time will be incurred while performing the HER and doing follow up analysis. Discussion is ongoing

regarding incentive payments to participants but this will be impacted by any potential Willingness to Pay from BPA.

- Measure Life
  How long do you think the measure will last after it is installed? How long before it would typically be replaced or deactivated?
    - Due to the behavioral nature of the program, savings will only be reported for qualifying homes for the first year following the HER. Persistence of savings beyond this first year are unknown and are not being included in the proposal at this time. Additional analysis will be done to check for persistence of savings for more than one year but less than four years to see if opportunities exist to report savings beyond the first year.
- Market Potential
  How much total savings do you think this program can achieve and how did you estimate this figure?
    - Based on our current volume of HERs and an estimate that 20% of them will be viable candidates after initial screening, the estimated annual potential is 500,000 kWh/year or more.

3. **What method will be used to verify the savings post-installation?**
   Approval requires verification of estimated savings within two years of approval. This can be done through evaluation or onsite verification. What is your proposed means of verifying savings?

    - Weather normalized pre and post monthly meter data for each unique site will be used for reported electric savings, based on a tool provided by BPA. For homes that saved in excess of 10,000 kWh/year, a manual review and customer follow-up will take place before reporting savings to check for anomalies. Additional verification in the form of surveys or site visits on a sample of homes could be done by an evaluator to determine if electric savings were generated by sources other than the program identified or discussed during the HER. An example would be a notable reduction in occupants or occupation of the home after the HER.
4. **Will you be collecting any data from the installation sites?**
    - Would you be willing to share that data with BPA for further measure development?
      Yes, aggregated HER data, such as building attributes and notable HER recommendations or actions taken during the HER can be shared with BPA along with meter data used for the analysis.

<u>For Reference</u>: Payment Rate Table from Section 5.1 of the Implementation Manual (Custom Programs Payment Rate):

PROJECT TYPE	MEASURE LIFE (YEARS)	SECTOR	PAYMENT RATE ($/KWH)
Nonresidential Lighting	All	Agricultural Commercial Industrial	$0.13
New or Retrofit Construction, Major Renovation (Excluding Nonresidential Lighting)	1	All	$0.025
	2-3	Agricultural Commercial Industrial Residential	$0.06
	4-19	Agricultural Commercial Industrial Residential Utility Distribution	$0.33
		Whole Building New Construction * Commercial Industrial	$0.35
	20+	Agricultural Commercial Industrial Residential Utility Distribution	$0.38
New Construction	45+	Residential	$0.45