



EVALUATING ENERGY EFFICIENCY

Project Updates - Winter 2024



► **FY 2023-2024 Evaluation Strategy**

In 2018, BPA contracted with Evergreen Economics, SBW Consulting, and Apex Analytics to plan and conduct Energy Efficiency impact and process evaluations. The team is currently undertaking evaluation activities, following a planning effort that was conducted for BPA (see: latest evaluation strategy for more information about the evaluation planning effort).

► **Impact Evaluation Activities**

Impact evaluations estimate the energy savings achieved by programs and assess their cost effectiveness, in addition to identifying ways to improve the programs with a focus on increasing savings.

Nonresidential Lighting Impact Evaluation: BPA recently completed an impact evaluation of the nonresidential lighting portfolio to understand savings performance and identify opportunities to improve the reliability of savings. The study included engineering modeling, site visits, and reviewing project files for a statistically representative sample of 38 projects. The sample ensured representativeness for both Option 1 and Option 2 utility projects from 18 utilities with more sample points allocated to larger projects.

Thanks to those utilities for working with BPA and the evaluation team to provide project data and facilitate end user cooperation. The final report is available on BPA's evaluation website.

Residential Air Source Heat Pump and Variable Speed Heat Pump Impact Evaluation: BPA is also conducting an impact evaluation to estimate savings from residential electric forced air furnace conversions to air source heat pumps (ASHPs) and variable speed heat pumps (VSHPs). Residential ducted heat pump conversions continue to be important measures for BPA and its customer utilities. Therefore, to support a better understanding of these conversion savings in the field as well as regional research needs, this evaluation is estimating energy savings for specific measure applications with the Regional Technical Forum's "planning" status (for measures whose savings are considered less reliable) :

- ASHP conversions in heating zones 2 and 3, and
- VSHP conversions in heating 1, 2, and 3, for single family and manufactured homes.



The evaluation team requested billing data from 1,330 sites with recent heat pump conversions across 23 utilities to ensure a representative sample that meets the RTF minimum requirements.

Thanks to the utilities who provided data to help with this important study. The evaluation team recently completed the energy savings analysis and the drivers of savings will inform Residential HVAC program planning. The final report will be released in early 2025.

Non-Industrial Custom and Energy Smart Reserved Power (ESRP) Program Impact Evaluation: A center pivot normally irrigates all the acreage uniformly; However, many fields are not uniform. Some terrain would dictate less water in the low spots and more water in other areas. ZVRI equipped pivots can control the irrigation down to 100 square feet. This results in water and energy savings and improves yield and crop quality in many cases. Your utility may have special incentives and cost sharing opportunities.

Thanks to the utilities working with BPA and the evaluation team to provide project data and facilitate end user cooperation. BPA's evaluation contractor team is almost done collecting end use customer data collection. The final report will be released in mid 2025.

▶ **Process Evaluation Activities**

Process evaluations focus on identifying opportunities to streamline program processes, make participation more convenient and appealing for participants, and allow programs to deliver incentives and support utilities and end-users more effectively and efficiently.

Low-Income Process Evaluation: BPA recently completed an evaluation of its Low-Income Energy Efficiency program to identify opportunities to increase program participation. This evaluation focused on public utility energy efficiency incentives and included a best practices review, stakeholder interviews, and demographic analysis. The best practices review identified findings from other utilities, regions, and states, helping BPA leverage existing protocols to offer low income programs in a more equitable and efficient manner. Interviews with BPA's customer utilities and community action agencies sought to understand barriers to offering and reporting low-income measures and ways to overcome them. Finally, the demographic analysis portion of the research characterized the low-income population in BPA's service territory and offers an opportunities assessment for future program outreach. The final report is available on BPA's evaluation website.

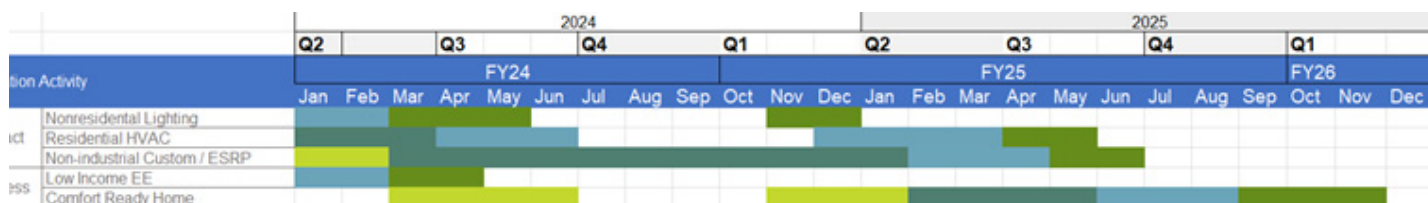
Thanks to the utilities who spoke with the evaluation team to help us better understand the program.



Comfort Ready Home Process Evaluation: BPA is planning an evaluation of its Comfort Ready Home program to assess the effectiveness and identify ways to improve program delivery and satisfaction. The evaluation will include interviews with implementation staff, a comprehensive review of program data, interviews with utilities and contractors, and a characterization of equity within the program.

The evaluation is currently in the planning stages, with utility and contractor interviews planned for early 2025.

BPA Evaluation Schedule



Note: There are gaps in some evaluation activities because BPA paused some evaluations while filling key staff vacancies



Learn more at:
www.bpa.gov/energy-and-services/efficiency/evaluation