



FY23-24 EE EVALUATION STRATEGY

December 1, 2022



Agenda

01 Evaluation Basics

02 Evaluation Strategy Development

03 Overview of BPA Portfolio

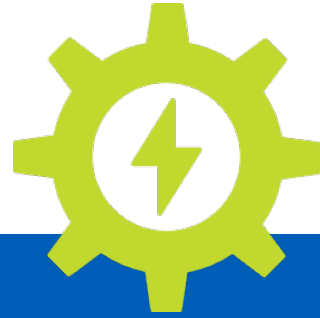
04 Impact Evaluation Strategy

05 Process Evaluation Strategy

06 Next Steps

01

Evaluation Basics



Evaluation provides an independent assessment of performance and improvement opportunities for BPA's energy efficiency measures and programs

Evaluation Objectives



Reduce **risk**, help ensure reliability of energy savings and financial stewardship



Provide a **valuable feedback loop** for programs and encourage continuous improvement

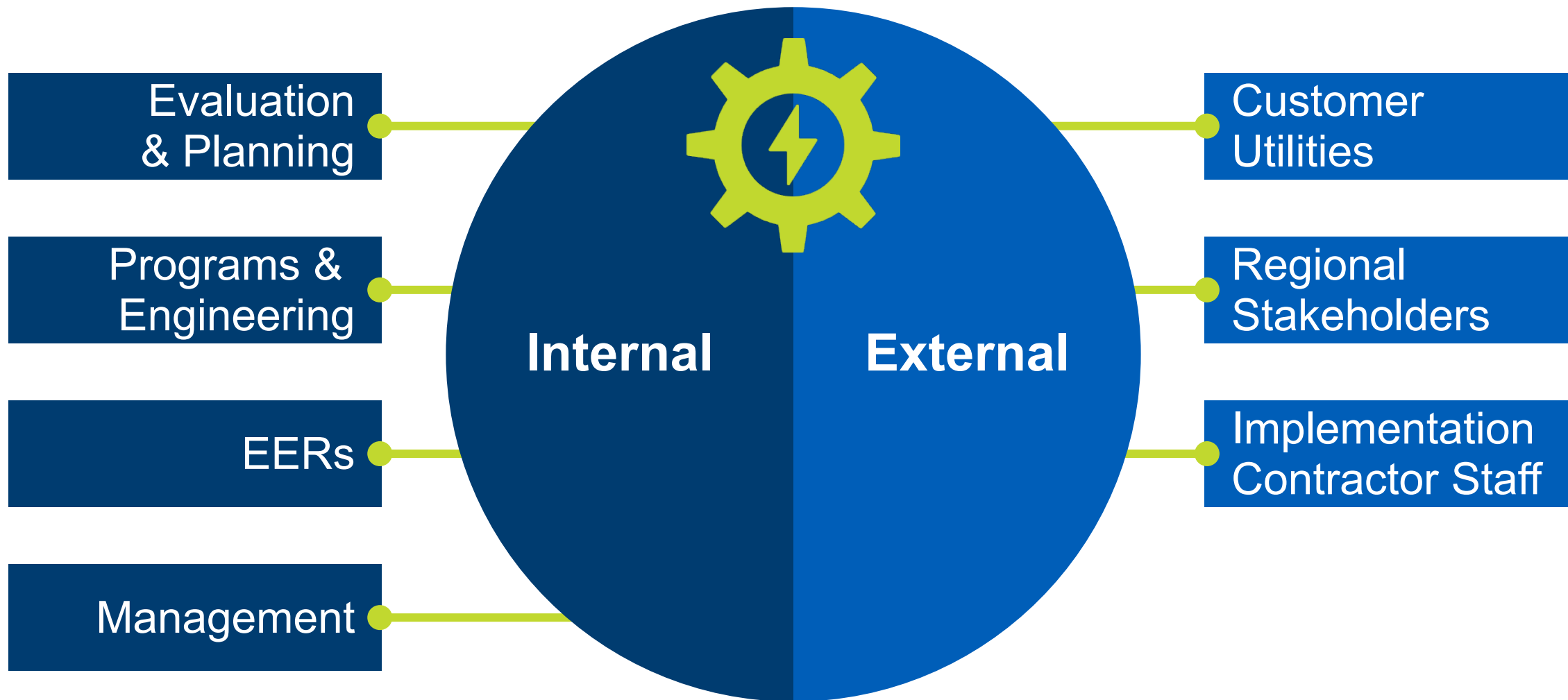


Provide **transparency** and accountability to stakeholders



Collaborate effectively with BPA staff, utilities, regional stakeholders

Evaluation Stakeholders



Key Evaluation Types



IMPACT

Estimate energy savings achieved and cost-effectiveness



PROCESS

Seek to understand how an offering is working, and why

02

Evaluation Strategy Development

Teams

BPA Core Team

Hanna Lee

Planning and Evaluation

Melissa Podeszwa

Energy Efficiency Rep

Michele Francisco

Marketing

Bonneville
POWER ADMINISTRATION



Contractor Team



Lauren Gage

Justin Spencer

Joe Van Clock

Caitie Nelson



Steve Grover

Tami Rasmussen

Ted Helvoigt

Kayla Kirksey

Ingo Bensch

Sarah Monohon



Mike Baker

Santiago Rodríguez-Anderson

Evaluation Planning Process

BPA updates its evaluation strategy approximately every 2 years to stay current with portfolio and market changes.



Evaluation Guidance

BPA Policies and Procedures

- Impact Evaluation:
 - BPA's defined, approved approach to impact evaluation
 - Focus on savings reliability and cost effectiveness
 - Evaluate bulk of portfolio savings over a 4-year period
- Process Evaluation:
 - Focuses on providing information to support programs
 - No defined coverage or timing requirements

Implementation Manual

- Includes BPA's access to project, documentation and billing data for evaluation and oversight purposes

Considerations for Prioritization



SIZE

Large programs, savings, and/or spending



FUTURE GROWTH

New programs and future growth areas



RISK

Uncertainty or changes in team, market, technology, etc.



VALUE-ADD

Information gathering for BPA programs, engineering & momentum team



UNCOVERED

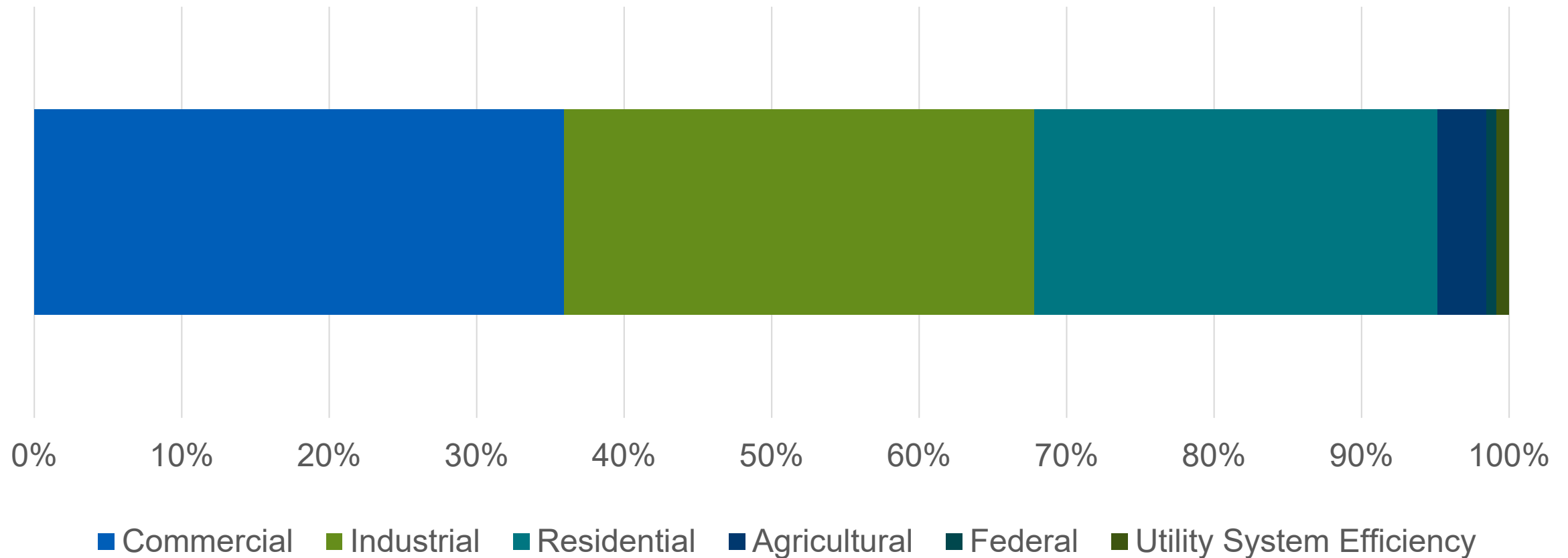
Not covered by previous evals or other research (e.g., engineering, NEEA, RTF)

03

Overview of BPA Portfolio

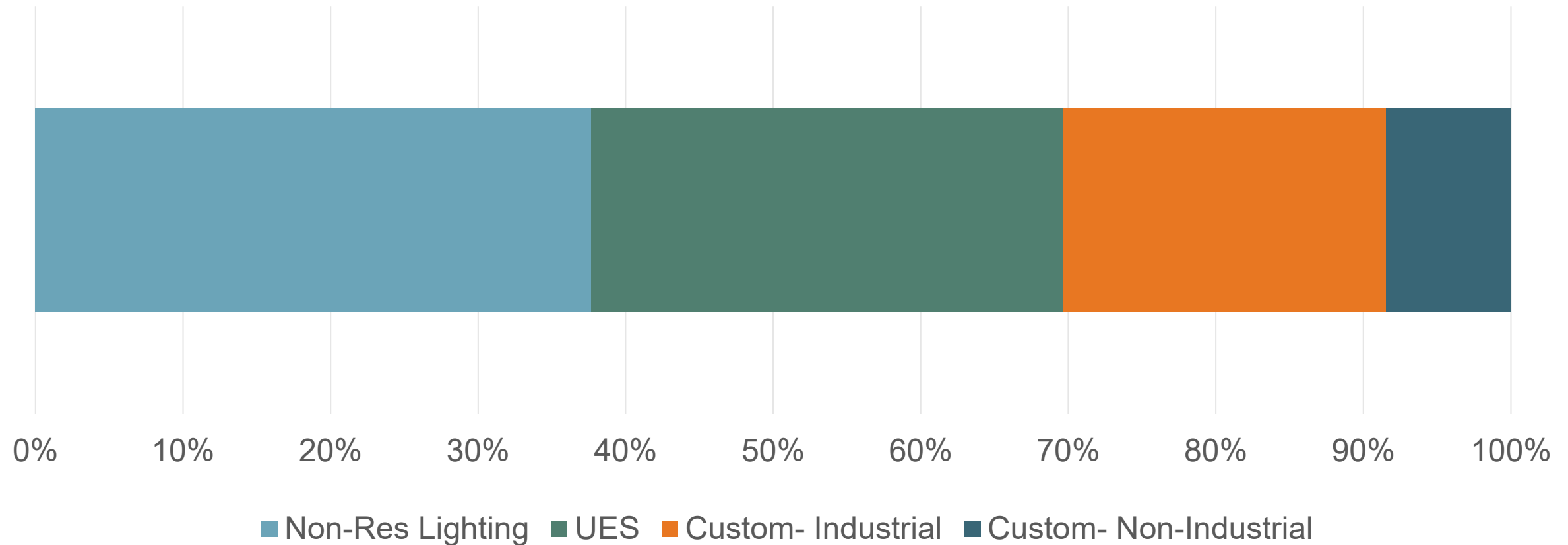
2020-2021 Portfolio Savings: By Sector

Commercial, industrial and residential savings are similar in size.



2020-2021 Portfolio Savings: By Measure Type

Lighting calculators are the largest single share of the portfolio, followed by UES and Industrial Custom Projects.



BPA Programs and Similar Offerings

**3rd Party
Programs**

**Similar Measures/
Offerings**



Residential

Comfort Ready Homes
PTCS

Envelope
HVAC
Low-Income
Multifamily
New Construction
Weatherization



Non-Residential

Energy Smart Industrial
Trade Ally Network

Custom Projects
ESRP
Federal
Irrigation
Lighting Calculators
Utility Distribution

04

Impact Evaluation Strategy

Evaluation Cadence

Evaluate bulk of portfolio savings over a 4-year period

| | 2023 | 2024 | 2025 | 2026 |
|--------------------------------|------|------|------|------|
| Non-Res Lighting | ✓ | | | |
| Custom – Non-Industrial | | ✓ | | |
| UES Delivery Verification | | | ✓ | |
| Custom – Industrial | | | | ✓ |

Overview of FY23-24 Impact Evaluation Priorities



Non-Res Lighting

Engineering assessment
of lighting projects



Custom - Non-Industrial

Engineering evaluation of
custom projects
(Commercial, Ag, etc)








Focused Studies

Res HVAC
Com DHP
Res Behavior

Non-Res Lighting

|  Purpose |  Value |  Expected Timing |  Sample |  Eval Methods |
|--|--|--|--|--|
| <p>Assess savings from non-residential lighting using as-installed and operating characteristics</p> | <p>Large savings (~37% of portfolio) with future potential, recent market changes, stale previous evaluation (FY12-13 savings)</p> | <p>FY23</p> | <p><120 projects, FY 2022 completions, Option 1 and 2 utilities. May include lighting controls research</p> | <ul style="list-style-type: none"> • Project Documents • Customer Surveys • Site Visits • Engineering Modeling |

Custom - Non-Industrial

|  Purpose |  Value |  Expected Timing |  Sample |  Eval Methods |
|--|--|---|--|--|
| <p>Assess savings from on the non-industrial custom portfolio (i.e., commercial, agricultural, Federal, and residential)</p> | <p>Complete evaluation of remaining portions of the custom portfolio; represents 8% of portfolio</p> | <p>FY24</p> | <p>FY 2023 completions, including Option 1 and 2 utilities, sample TBD</p> | <ul style="list-style-type: none"> • Project Documents • Customer Surveys • Site Visits • Engineering Modeling |

Focused Studies

| Study | Rationale | Likely Activities |
|-----------------------|--|-------------------------------------|
| Res HVAC | Res HVAC savings are important to the region and some applications of HVAC have savings risks (i.e., VSHP and ASHP in HZ2-3). Smart thermostats have not been evaluated for BPA's customer base. | Billing analysis Customer survey |
| Commercial DHP | Commercial DHP is the largest non-res BPAQ measure and is growing. The number of projects is now large enough to support billing analysis of real-world savings. | Billing analysis Customer survey |
| Res Behavior | BPA "deemed" behavioral HERs and the savings have been large. Want to confirm or inform real-world savings by BPA customer achievements. Will reduce of over- or under-reporting savings. | Billing analysis Customer survey |

05

Process Evaluation Strategy

Process Evaluation Approach

Questions Process Evaluation Helps Answer

- What was intended?
- How is it working?
- How do we improve?
- What is possible?

Overview of FY23-24 Process Evaluation Priorities



Low Income Program

Process evaluation to inform low-income offerings

FY23



Comfort Ready Homes

Evaluation to understand new program, including successes and opportunities for improvement

FY24

06

Next Steps

Individual projects will have internal and external rollout

Utility and End-User Contact Principles



Utilities are notified of end-users in evaluation prior to start and provided with clear information on samples, timelines, and requirements.



BPA provides opportunities for utilities to understand the details of the evaluation plan and data request.



Utilities have reasonable timeline to collect project and billing data.



BPA provides notice to utilities prior to end-user contact, including phone surveys and site visits.



Questions?