2020-2021 Energy Efficiency Implementation Planning

September 2018
Today’s Discussion

1. EE Program Implementation

2. EE as a BPA Resource

3. 2020-21 Implementation Planning
EE Program Design is a Reflection of Objectives

**Illustrative designs – optimized for single objective**

1. Acquisition program funnels funding to lowest-acquisition cost measures and utilities

2. BPA funds acquisition program regardless of beneficiary (BPA system or other)

3. Acquisition program would allow non-cost effective portfolio for consumer satisfaction

**BPA’s current program design – seeks balance across objectives**

- Power Resource
- Customer Service
- Public Benefit

- EE acquisition budgets spread proportionally across BPA customers
- Achieve EE at scale to deliver against least-cost, least-risk power plan
- Special rules for low-income measures assist broader application

BPA funds acquisition program regardless of beneficiary (BPA system or other)
Balancing Objectives for Energy Efficiency

- Consumer Benefit
- Retail Utility Benefit
- BPA Benefit
- Societal Benefit
Current BPA EE Program Implementation

Our current portfolio is customer-service focused

1. **Equity based allocation** of acquisition funding: TOCA

2. **Broadest possible mix of measures** and incentives to ensure local ability to deploy program

3. **No differentiation** of measure support or BPA payment based on value to BPA system
Programmatic Savings Achievements

- In 2016, 58% of the goal was achieved, while in 2017, 74% was achieved.
- The 2016 EE Action Plan achieved 59% in both 2018 and 2019.
- In 2020, 51% was achieved, and in 2021, 51% was achieved.


This results in fewer programmatic savings needed in 2020 and 2021 to meet the EE Action Plan goal.
Current BPA EE Goal Setting

7th Power Plan
- Outlines regional EE savings targets
- BPA assumes Public Power share of region goal (42%)

BPA EE Action Plan
- Roadmap to deliver on BPA portion of regional goal
- Savings and costs, sector delivery strategies, etc.

Implementation
- Programmatic savings + market transformation savings + momentum savings
- Implement sector delivery strategies
BPA EE Goal Setting: 2020 and Beyond

Focus 2028

- Commitment to review of how BPA determines EE goal
- Process closed out in **October 2016**

BPA Conservation Potential Assessment

- What achievable EE is available to meet BPA’s system needs (2020-2039)?
- Finalized **August 2018**

BPA Resource Program

- Uses input from EE CPA to model economic potential of EE
BPA Strategic Plan (2018-2023)

- Increased focus on EE that supports BPA’s evolving power and transmission needs
- Published January 2018

BPA Resource Program

- Forecasts BPA’s load obligations and existing resources and determines system needs
- Resources = EE, DR, wind, solar, natural gas, etc.
Where Does EE Fit In As a BPA Resource?
BPA Resource Planning

**NEEDS**
 Begins with a forecast of BPA load obligations and existing resources and then determines needs

**SOLUTIONS**
 Identifies and evaluates potential solutions to meeting the needs

**STRATEGIES**
 Outlines potential strategies for meeting those needs
Optimization Model: BPA’s Future Power Needs

Options for meeting needs

- Natural Gas
- Solar
- Wind
- EE & DR
- Market Limits
What Are BPA’s Needs From EE?

**HOW MUCH**
EE to acquire to meet our system needs

**TYPE**
of EE most suited to meet system needs
How EE helps meet our energy needs
How EE helps meet our energy needs
How EE helps meet our energy needs

- Market Purchases
- Market Sales

Chart showing energy consumption trends from September to August, with categories such as Electronics, Other, Water Heat, Industrial, Lighting, HVAC, and need.
2018 finding: EE remains an important part of the BPA resource mix

- **EE, DR and Market Purchases**: BPA can continue to meet its obligations with a mix of EE, DR and market purchases.
- **Least Cost Contributor**: EE is a significant component of a least-cost acquisition portfolio.
- **Not All Savings Are Equal**: Some energy efficiency provides a greater contribution to our needs.
But...the type and amount of EE requested is a little different

2017 Savings Achievements

- Lighting: 56%
- Other: 21%
- HVAC: 11%
- Industrial: 9%

Ideal EE Portfolio

- Lighting: 27%
- HVAC: 25%
- Industrial: 19%
- Electronics: 14%
- Other: 10%
Updated EE Program Principles

- Acquire savings that meet BPA’s resource needs
- Maintain customer equity
- Align with BPA Strategic Plan goals
- Maintain program stability
2020-21 EE Success Metrics

- **Savings**
  - 74-101 aMW of EE

- **Budget and costs**
  - $134M in EEI
  - Hold Program costs level

- **Align with resource need**
  - Deliver desired measures

- **Program stability**
  - Avoid significant swings over short horizons
Where Do We Go From Here?
2020-21 EE Goal Implementation Planning: What is it?

- **Identify**
  Measures & Programs
  
  What are the measures and program that support this goal? Which do not?

- **Assess**
  Costs, Resources, Impacts
  
  What will it take to achieve this savings? How much can we get?
Portfolio Scenarios

Multiple scenarios and what-ifs, e.g.:

What if we delivered more desirable residential weatherization at a higher payment level?

What if we delivered as much of the Resource Program findings as feasible?

Mine data & assess for:
- Budget busters
- Tradeoffs
- Unintended consequences
- Opportunities to optimize
Implementation Planning Phases

- 7th Power Plan measure bundles
- Cost-effective EE; best-fit load shapes
- Milestone: June IRP workshop  
  **Spring 2018**

- Sector working sessions & data analysis
- Measure review; costs; alignment with RP
- Milestone: Present scenario(s) to EE Management  
  **Aug. 2018**

- Scenario planning
- Program design outlines
- Milestone: Present scenario for decision  
  **Sept. – Oct. 2018**

- Utility discussions prior to finalizing IM plans  
  **Winter 2018**
Analysis & Initial Results
EE Program Themes

**Rate of change** between 2018-2019 and 2020-2021 IM savings delivery & portfolio mix is relatively small

Residential **lighting savings** is biggest driver of drop in savings between IMs (and it was already forecast)

Residential sector in a **transition period** as it seeks to replace lighting with more HVAC and weatherization (that align with BPA system needs)

All sectors are providing **beneficial EE**, and will continue to do so **within the boundaries** of program implementation budgets and EEI
Commercial

Continue Trade Ally Network; diversify and achieve focus on HVAC

Review payment structures (lighting, HVAC)
Industrial

Continue EnergySmart Industrial; increase Strategic Energy Management savings?

Continue Green Motors through 2021
Agriculture

Continue current trajectory; adapt to reality without Scientific Irrigation Scheduling (SIS)

Focus on marketing and outreach
Residential

Transitional period to a more weatherization-heavy and diversified HVAC future

HVAC strategy in place; time will tell how new measures stand up
Next steps

Wrap up analysis & program design scenarios

Continue to solicit feedback on program plans

Minimize April 2019 changes to enable focus on 2020-21 IM planning
Thank you!