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May 7, 2024

### **MEMORANDUM**

**TO: Power Committee**

**FROM: Jennifer Light, Director of Power Planning**

**SUBJECT: Update on Bonneville's 2024 Resource Program and Resource Acquisition Process**

### **BACKGROUND:**

**Presenter:** Ryan Egerdahl, Manager of Long Term Power Planning, BPA  
Eric Federovitch, Manager Long Term power Sales and Purchases, BPA

**Summary:** Bonneville is working on its upcoming Resource Program, aiming to complete the work in the fall of this year. Bonneville's resource program is an analysis of potential system needs and resources available to meet those needs. Ryan Egerdahl will join the Power Committee to provide an update on the work.

As Bonneville continues to work with its customers and the region on the Provider of Choice contracts, it is also planning for potential resource acquisition beyond conservation. Eric Federovitch will provide an overview on their resource acquisition process, including how it connects the Bonneville's obligations under the Northwest Power Act.

**Relevance:** The Resource Program is an analysis by Bonneville of its potential system needs and the resources available to meet those needs. The Resource Program is informational and not a decision-making process, nor a decision document, but the results do inform Bonneville's resource acquisition strategies.

The upcoming Resource Program is anticipated to be completed this fall. This is expected to provide direct information into Bonneville's post-2028 contract negotiations. Based on post-2028 discussions to date, there is an expectation that Bonneville may need to acquire resources beyond conservation. This Resource Program will provide some insight to customers around potential resources that may need to be acquired under future contracts.

Under the Act, Bonneville's resource acquisition decisions are to be consistent with the Council's power plan. Therefore, the ultimate interest of the Council is to ensure that any potential resource decisions by Bonneville are consistent with the Council's power plan. Staff is working closely with the Bonneville team, both on the Resource Program development process and on an updated 6c policy.

Background: As noted above, Bonneville's resource acquisition is to be consistent with the Council's plan under the Northwest Power Act. The current plan, the Council's 2021 Power Plan, provides specific recommendations to Bonneville. The recommendations around resource acquisitions include:

- Acquire between 270 and 360 aMW of cost-effective energy efficiency by the end of 2027, of which at least 243 aMW must be from programmatic savings, and at least 865 aMW by 2041
- Work to enable and encourage its customer utilities to pursue low-cost and high value demand response, including time-of-use rates and demand voltage regulation
- Look to mid-term and long-term market resources for additional energy when needs are beyond those met by the recommended energy efficiency and demand response resources
- Compare market products, both in price and capacity, to renewable power purchase agreements to ensure that the lowest-cost product that suffices to meet any need is identified.

More Info: Bonneville's Resource Program webpage: <https://www.bpa.gov/energy-and-services/power/resource-planning>

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

# BPA 2024 Resource Program & Acquisition Process

Power Committee  
May 14<sup>th</sup> 2024



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B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

## Agenda for Today

1. 2024 Resource Program status update
  - Ryan Egerdahl - Manager, Long Term Power Planning
2. BPA Power Resource Acquisition Process
  - Eric Federovitch, Manager - Long Term Sales and Purchases

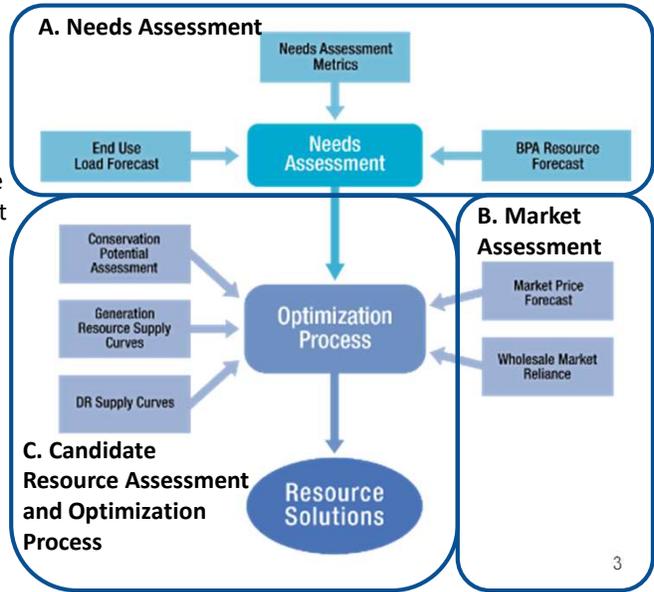
*Questions encouraged throughout session*

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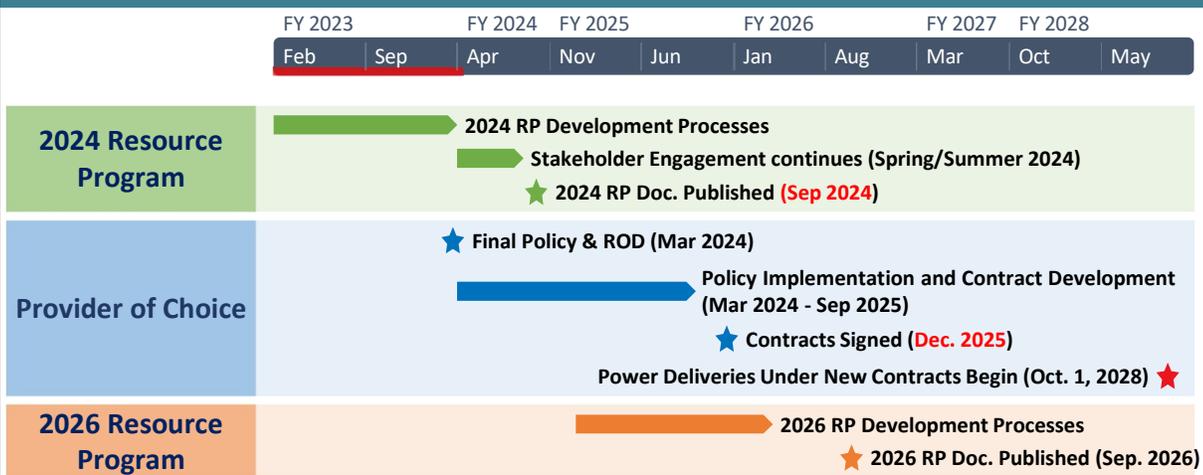
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# Resource Program Process

- A. The **Needs Assessment** measures the federal system’s expected generating resource capabilities to meet projected load obligations
- B. The **Market Assessment** simulates the evolution of power markets in the Western Interconnect to generate a long-term forecast of Mid-Columbia prices and market availability under a variety of generation, load, and economic conditions
- C. The **Candidate Resource Assessment and Optimization Process** explores how the varying costs, performance, and availability of candidate demand-and-supply-side resources (including conservation, demand response, market purchases, and generating resources) as well as wholesale market reliance can be used to provide a least-cost resource strategy for meeting identified needs



# Resource Program and Provider of Choice



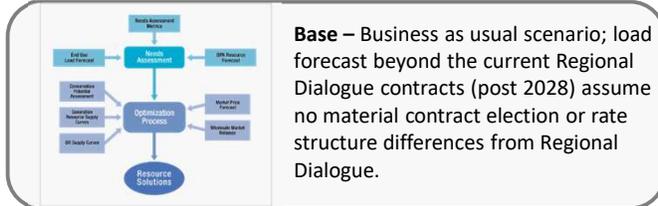
**Key Takeaways**

1. 2024 Resource Program concludes *before* PoC Contracts are executed
2. PoC contract election to occur at mid-point of 2026 Resource Program development

# Planning Framework

## Scenarios

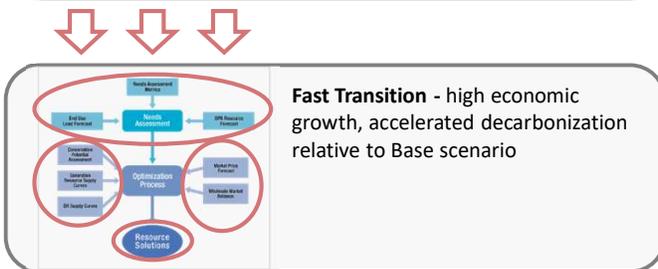
Scenarios are comprised of a set of inputs that are consistently developed for a future outlook



## Sensitivities

Changes to individual input assumptions (or smaller subsets of input assumptions) within a given scenario

- Provide BPA decision-makers with additional options to address key strategic interests (PoC / Carbon Vision, etc)
- Evaluate solution sensitivity to specific assumptions
- Assess solution robustness



# BPA Planned Sensitivities

### BPA Loads and Resources

- NR (New Resource) Load Service
- Above-RHWM Load Service
- B2H Delay
- Tier 1 System Size

### Market and Candidate Resources

- Wholesale market price
- Wholesale market availability
- Supply side resource costs
- UCT vs TRC Costs for EE/DR Measures

### Resource Solutions

- Study Horizon
- Incremental needs vs economics
- Carbon price adder

# Stakeholder Suggested Sensitivities

## BPA Loads

- More extreme weather events/peakier loads
- All Priority Firm contracts are Load Following

## BPA Resources

- FCRPS capability loss
- FCRPS balancing reserves
- FCRPS shaping and flattening services

## Carbon Policy

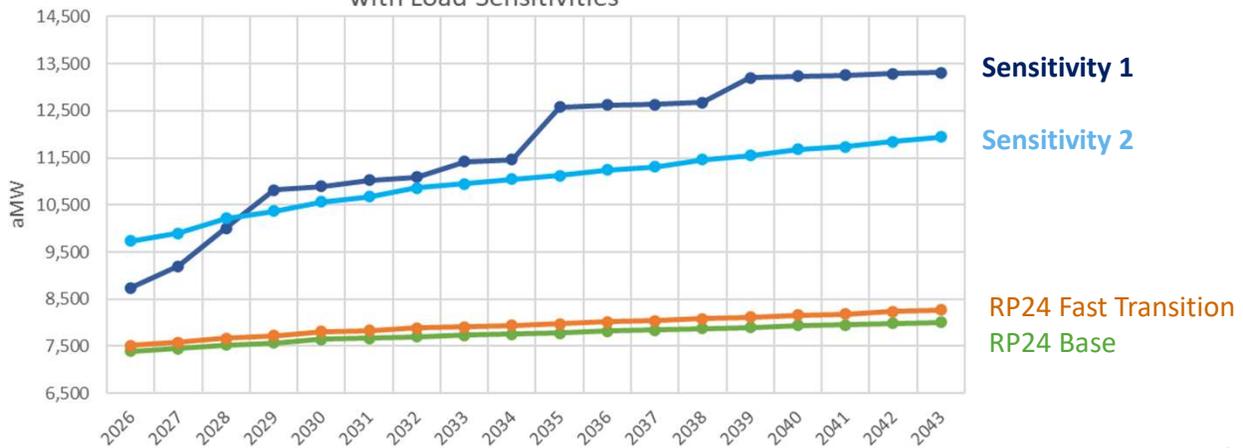
- 100% carbon free BPA power sales

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# BPA Load Service Uncertainty (sample only)

BPA Preference Customer Obligations with Load Sensitivities



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## Needs Assessment Metrics

- **Annual Energy**
  - Evaluates the annual energy surplus/deficit under P10 by month-critical water conditions
- **P10 Heavy Load Hour (HLH)**
  - Evaluates the 10<sup>th</sup> percentile (P10) surplus/deficit over heavy load hours by month, given variability in hydro generation
- **P10 Superpeak**
  - Evaluates the P10 surplus/deficit over the six peak load hours per weekday by month, given variability in hydro generation
- **18-Hour Capacity**
  - Evaluates the ability to meet the six peak load hours per day over three-day extreme weather events assuming median water conditions.

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## Next Steps

- **Public Workshop Schedule (tentative)**
  - June 3<sup>rd</sup>, 2024: Needs Assessment and Market Assessment results
  - August 2024: Resource Solutions for all scenarios and sensitivities
- **Final publication of 2024 Resource Program expected in September 2024**

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# BPA Generating Resource Portfolio

- **31 Federal Hydro Projects**
  - US Army Corps of Engineers (operator)
  - US Bureau of Reclamation (operator)
  - ~ 22,000 MW nameplate capacity
- **Columbia Generating Station**
  - Nuclear power plant near Richland, WA
  - Energy Northwest (operator)
  - ~1,169 MW capacity
- **Other**
  - Small amounts of wind and non-federal hydro



Nuclear Energy: Columbia Generating Station



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# Resource Acquisition Process

Eric Federovitch - Manager, Long Term Sales and Purchases



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## Resource Acquisition Background

Northwest Power & Conservation Council’s Power Plan and BPA Resource Program both influence BPA actions

Conservation and Section 6(b) of the 1980 Northwest Power Act

- BPA Energy Efficiency Action Plan (EEAP)

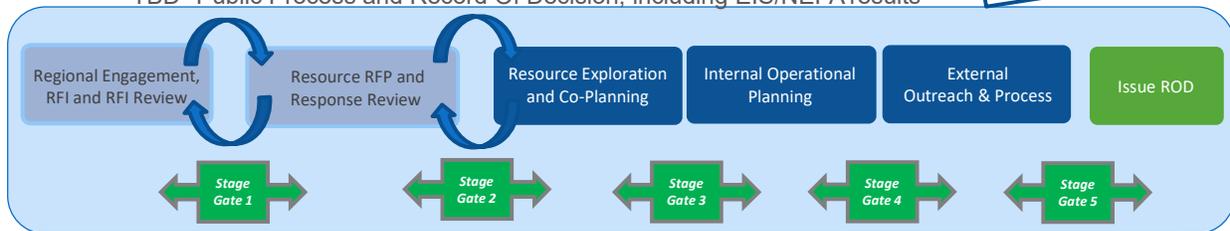
Major resources and Section 6(c) of the 1980 Northwest Power Act

- Section 6(c) prescribes the process BPA must follow to acquire major resources
- “Major resource” means a resource or market purchase with planned capability greater than 50 aMW and acquired for a period of more than 5 years

## Multi-phase, stage-gate approach for resource acquisitions

- Detailed activities and gating criteria under each phase may vary
- In all cases activities would include:
  - Ensuring consistency with both BPA’s Resource Plan and The Council’s most current Power Plan
  - Regional Outreach, Possible Bidders Conference & Counterparty Research
  - Issuance of Request For Information (RFI), followed by Issuance of Request for Proposal (RFP)
  - RFP Response Evaluation & Discussion (includes Regional stakeholder outreach)
  - TBD\* Environmental Review (includes Regional stakeholder outreach)
  - TBD\* Public Process and Record Of Decision, including EIS/NEPA results

Pre-Decisional For Example Purposes Only



\* As determined applicable and/or appropriate on a case by case basis, for the Resource in question

## Acquiring Major Resources – Summary

- BPA and Council staff are reviewing the currently effective Section 6(c) Policy and considering revisions to update the Policy consistent with the NW Power Act
- Provider of Choice process and Resource Programs inform major resource acquisition decisions, but are not the decision making processes
- Planning has been happening for years, but major resource acquisition decisions are not likely to happen until the post-2028 power contracts are signed in December 2025
- BPA is aware of and considering potential approaches to acquire resources on the timeline needed to meet customer obligations post-2028.

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# Questions?

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# Get in Touch

## Resource Program Contacts:

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Eric Federovitch, Manager Long Term Sales and Purchases, [ecfederovitch@bpa.gov](mailto:ecfederovitch@bpa.gov)

## Find Us:

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Web: [Resource Planning \(bpa.gov\)](http://ResourcePlanning(bpa.gov))

