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June 4, 2024

### **MEMORANDUM**

**TO: Council Members**

**FROM: Jennifer Light, Power Division Director**

**SUBJECT: Summary of Comments on Ninth Plan Issue Paper and Proposed Next Steps**

### **BACKGROUND:**

**Presenter:** Jennifer Light

**Summary:** In March, the Council released an issue paper on Preparation for the Ninth Plan for public comment. At this meeting, staff will walk through the comments received and then outline staff's recommended next steps based on commenter feedback and additional discussion between division staff and Power Committee members. Staff is seeking Council member feedback on the proposed next steps.

**Relevance:** One of the Council's primary responsibilities under the Northwest Power Act is to develop a regional conservation and electric power plan. The Council adopted its current power plan in February 2022 (the 2021 Power Plan) and is now starting to prepare for its next power plan. These early discussions with the Council provide useful information as the division prepares models and data for the upcoming plan.

**Workplan:** B. Preparation of Tools and Data for the Ninth Power Plan

**Background:** The Council's power division is starting to prepare for its next power plan, the ninth power plan. In this preparation phase, staff is working on scoping

out the likely analytical questions to be explored, which will inform data gathering, input development, and model set-up. Staff is seeking early direction on the scope of the upcoming plan in order to streamline the analysis to support timely delivery of a final power plan.

To assist in this scoping, the Council released an issue paper on Preparation for the Ninth Plan for public comment at its March meeting. The issue paper provides a high-level overview of the power provisions of the Northwest Power Act and power plan development process. It then delves into early thinking on proposed scoping for the “starting point” of power plan and potential scenario modeling. As described in the issue paper, the “starting point” is a common set of assumptions that the Council develops from which it can then explore various areas of uncertainty. The starting point strives to reflect the known elements of the existing system and resource options at the start of analysis. The scenario analysis then provides space for the Council to explore uncertainties and risk areas facing the power system. The Council will use information from all the scenario modeling and other analysis to inform the power plan’s recommendations to Bonneville and the region.

The Council received comments from 13 organizations and 8 individuals. Collectively, these comments represent a wide range of perspectives, including utilities, tribes, advocacy groups on a range of issues, technical experts, and other individuals that regularly engage with the Council. The commenters responded to specific scope questions identified in the issue paper, provided thoughts on the proposed starting point and scenarios, and shared other insights. Staff has reviewed all the comments received and spent time discussing potential scope paths. At this point, staff has a recommendation on next steps and timelines for finalizing the scope of the proposed scenarios and is seeking Council member feedback on this recommended scope.

# Summary of Comments on Ninth Plan Issue Paper and Next Steps

Jennifer Light

June 11, 2024



Northwest **Power** and  
Conservation Council

# Presentation Overview

- Brief overview power plan timeline and process
- Description of comments received
- Discussion of comments on power plan scoping
  - Starting point for analysis
  - Scenario modeling
- Summary and next steps

# Ninth Power Plan Rough Timeline

Today

Late 2026/Early 2027

F&W Program Preparation and Official Process

Ninth Plan Preparation

Ninth Plan Development

- Plan Preparation: Will continue into early 2025
  - Scoping out analytical questions and methodologies
  - Starting to prepare load forecasts, resource options, and model testing and development
- Plan Development: Will start early 2025, seeking completion by late 2026
  - Finalizing scope, load forecasts, resource options, and model updates
  - Conduct and discuss needs assessment, market assessment, and scenario modeling
  - Develop recommendations and prepare draft power plan materials
  - Run public comment process, hold public hearings, and finalize the plan

# Ninth Power Plan Rough Timeline

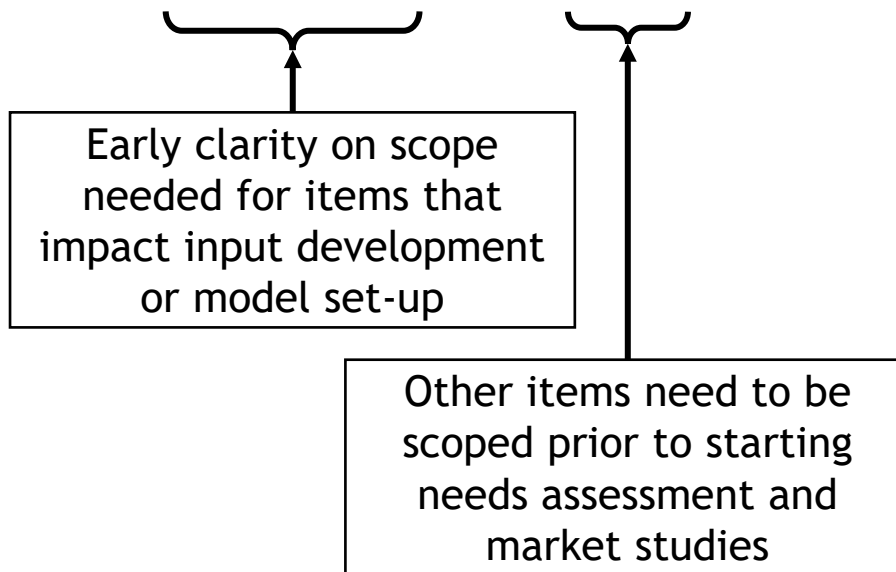
Today

Late 2026/Early 2027

F&W Program Preparation and Official Process

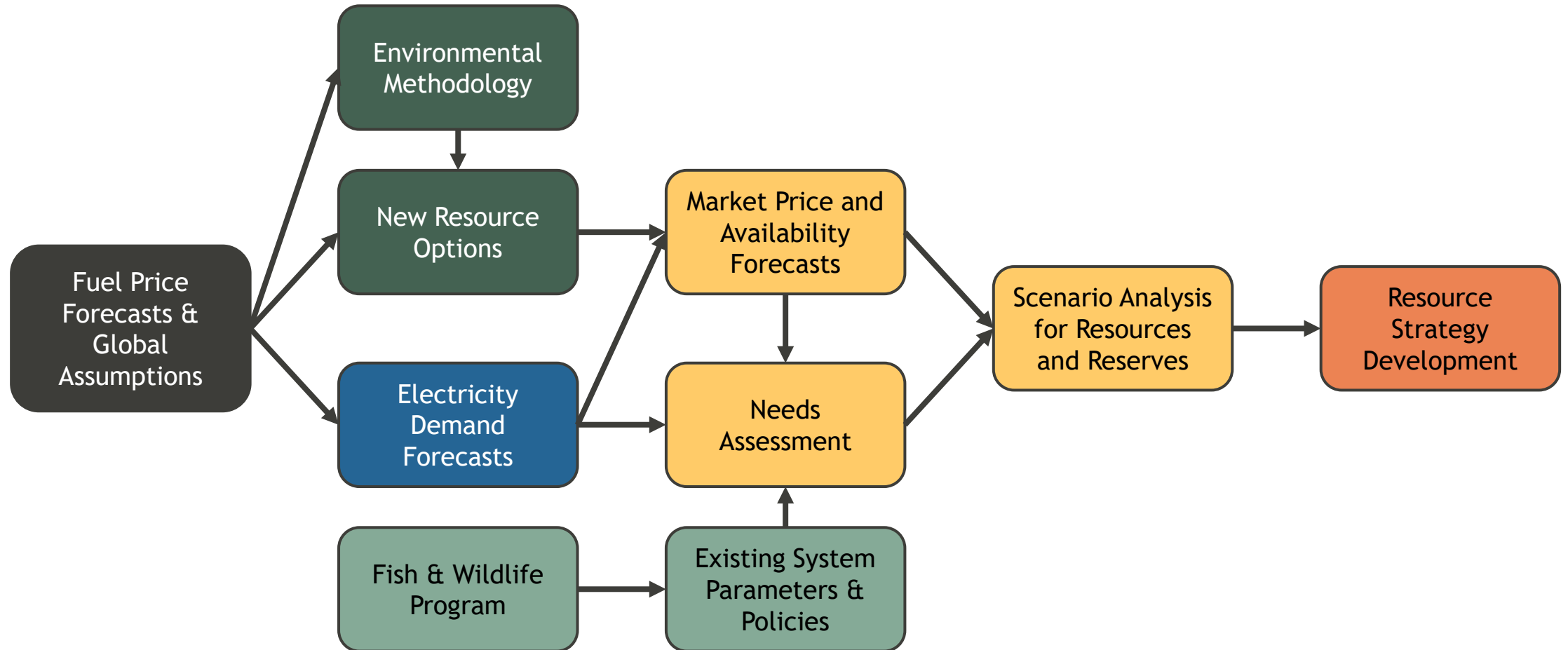
Ninth Plan Preparation

Ninth Plan Development



We will need to be flexible, to shift scope or timing if needed.

# Power Plan Elements and Analytical Flow



# Modeling Enhancements for Ninth Plan

Enhanced modeling suite will allow the Council to better reflect existing dynamics in power system with more geographic and time granularity

## Geographic Granularity

- Understand impacts of load growth unique to specific areas
- Explore transmission constraints and trade-offs between transmission development timelines and resources

## Hourly Timescale

- Enhanced understanding of weather conditions
- Analyze effects of end-use demand profiles, particularly at peak times
- Provide cost and risk of proposed portfolios' hourly operations



# Starting Point and Scenario Modeling

- Council plans under uncertainty
- Starting point provides a common set of assumptions from which future risk and uncertainty can be explored using scenarios
- Proposed starting point will reflect the known elements of the existing system and resource options at time of analysis, while also representing uncertainty of loads, market prices, hydro availability, etc.
- Scenarios will be used to assess additional uncertainties
- Council will use information from all modeling, and other related analysis, to ultimately develop recommendations for the region



# **Comments Received on Ninth Plan Issue Paper**

# Comments Received

- Issue paper released in March that outlines early thinking around the ninth plan
- Intended to **start** conversation with the region, as there is much more to come
- Council received comments from 13 organizations and 8 individuals, bringing a range of perspectives:
  - Utilities and utility organizations
  - Tribes
  - State agencies
  - Advocacy groups
  - Technical experts



Organizations: Cascade Policy Institute, Chelan PUD, CRITFC, NWECC, NW RiverPartners, OPALCO, ODOE, PPC, PSE, Renewable NW, Tacoma Power, WA Commerce, and WPUDA.  
Individuals: Bill Bakke, Bob Davis, Bryce Yonker, Heather Nicholson, James Adcock, Jim Robbins, Rick Williams, and Ted Light.

# Organizing Comments

## Focus for Today:

- **Scoping Analysis:** Related to early scoping questions
  - Developing the power plan Starting Point
  - Potential scenario analysis

## Comments Informing Future Work:

- **Approach to Bonneville:** Related to assessment of Bonneville resource needs
- **Technical Considerations:** Related to technical decisions staff will be working on in coming months
- **Policy Considerations:** Related to potential recommendations and guidance the Council might provide in the final plan

# Approach to Bonneville

- **Issue Paper:** Rather than developing a specific scenario focused on Bonneville, this plan will leverage the whole range of analysis to inform recommendations. Updated modeling suite will provide more specific insights than in past plans.
- **Comments:**
  - Support for this approach (NWECC)
  - Recognition of the importance for close coordination with Bonneville throughout plan development (PPC, Tacoma)
- **Next Steps:** Staff will continue with the approach outlined above and are committed to working closely with Bonneville throughout plan development.

# Technical Considerations

- Several commenters\* provided input on specific aspects of the analysis that staff will begin work on in the coming months:
  - Continue discussions to enhance model understanding and increase confidence
  - Considerations for load forecast and resource option development
  - Proposed updates for consideration in methodologies including climate change and extreme weather
  - Identification of specific policies to include in the analysis
- **Next Steps:** Not necessary to finalize now as these all relate to assumptions and data that will be developing in the coming year with advisory committee engagement

\* Chelan PUD, CRITFC, RiverPartners, ODOE, OPALCO, PPC, PSE, Renewable NW, WPUDA, Light, Robbins, Yonker

# Policy Considerations

- Several commenters\* provided perspective on recommendations or other considerations for finalizing the ninth plan:
  - Specific recommendations on selection of new resource options and amounts, including how to value different resources
  - Potential policy recommendations to Bonneville, utilities, states, corporations, etc.
  - Recommendations for fish and wildlife
- **Next Steps:** Too early to identify specific policy recommendations, as these will be informed through all the analysis in the coming years. Staff are confident the current proposed scope will provide enough information to members to support informed policy recommendations.

\* CRITFC, RiverPartners, NWECC, ODOE, OPALCO, PSE, WPUA, Bakke, Robbins, and Yonker.

# Comments on Starting Point



# Starting Point

“Starting Point” is a common set of assumptions used across the analysis intended to represent the known elements of the existing system and resource options, from which uncertainty and risk can be explored through scenarios.

*Note: the starting point itself still captures uncertainty through a range of loads, market prices, hydro conditions, etc.*

## Issue Paper:

Existing policies

Existing system  
resources and  
transmission

Commercially  
available new  
resource options

Climate change  
informed loads  
and resources

# Starting Point Comments – Policies and Goals

## Comments:

### Policies and Regulations

- Important to assume these are met throughout analysis (CRITFC, OPALCO)
- Policies may be repealed and therefore the Council should use more realistic assumptions (Cascade Policy Institute)

### Goals (Jurisdictional, Utility, & Corp.)

- Important to assume these are met throughout the analysis (CRITFC, OPALCO)
- For non-binding goals, assume some progress, but not full compliance (Tacoma)
- Corporate goals specifically should be a lower priority, potentially only assuming some compliance (PPC, Tacoma, Renewable NW)

**Staff Recommendation:** Continue to assume all existing policies, regulations and goals are met

- Still analyzing corporate goals, but these are likely fully covered by other policies
- Power Committee discussed potentially using scenario analysis to explore flexibility in goals

# Starting Point Comments – Other Elements

## Comments:

Existing System	New Resource Options	Climate Change and Extreme Weather
<ul style="list-style-type: none"><li>• Questions around representing aging infrastructure and operational outages (Yonker, WPU DA)</li><li>• Importance of representing markets (OPALCO, Yonker)</li><li>• Policy comment on whether the region should establish an RTO (OPALCO)</li></ul>	<ul style="list-style-type: none"><li>• Be conservative in treatment of emerging resources in starting point (Tacoma)</li><li>• Suggestions for the modeling of transmission options provided (PPC, Renewable NW, Tacoma)</li><li>• Technical comments on new resource and transmission options</li></ul>	<ul style="list-style-type: none"><li>• Suggested potential enhancements to climate change data leveraging utility insights (PSE, Renewable NW, Tacoma)</li><li>• Importance of capturing extreme weather in starting point (WPU DA)</li><li>• Importance of capturing wildfire impacts on system (OPALCO, WA Commerce, WPU DA)</li></ul>

**Staff Recommendation:** No changes needed to the proposed starting point to address these comments. Many aspects are already included, and others will be discussed with advisory committees in the coming months.

# Comments on Scenarios

# Scenarios

## Likely Pursuing

*(continue scoping with recommendation in Q4 2024)*

Resource and  
Transmission Risk

Extreme Weather

Operational  
Flexibility  
(Non-Hydro  
Resources)

## Other Process Dependent

*(continue scoping with recommendation in Q2 2025)*

Operational  
Flexibility  
(Hydro Resources)

Changing Fish  
Operations

Changing Treaty  
Operations

## Not Recommending

*(risks to be explored across other scenarios)*

West-Wide  
Decarbonization




Data Centers

## Undetermined

*(assessing others' efforts and considering value/risk)*

Lower Snake River  
Dam Generation  
Loss

**Legend**

-  Issue paper identified scenario
-  Commenter proposed scenario
-  Priorities for scenario analysis

# New Resource and Transmission Risk

Resource and  
Transmission Risk

**Issue Paper:** Expansive scenario assessing risk and uncertainty related to availability and cost of new resources and transmission. Anticipated to have multiple sensitives to explore a range of uncertainty, and issue paper sought feedback on priority questions.

## Comments:

- Even when not directly reflecting on this scenario, comments received suggest this scenario is a priority
- Multiple commenters recommended including conservative/pessimistic sensitives (OPALCO, Tacoma, WPUDA)
- One suggested an accelerated transmission development timeline to understand importance of transmission to resource decisions (WA Commerce)

# New Transmission and Resource Risk

Resource and  
Transmission Risk

**Staff Recommendation:** Define a concrete set of sensitivities. Begin scoping this summer, seeking to refine by end of 2024.

- Potential uncertainties include:
  - Cost and/or availability of commercially available resources
  - Emerging resource options and potential timelines and price points for availability
    - Consider exploring pessimistic/challenged future with no or limited emerging technologies
    - Consider sensitivity with more accelerated technology innovation trajectory
  - Timelines for new transmission projects
  - Cost of compliance with existing laws/regulations and potential relaxation of goals
- Not possible to run every iteration of each resource costing more or less combined with different availability assumptions, therefore work will be needed to focus on a priority set of questions

# Other Likely Scenarios: More Scoping Needed

## Extreme Weather

- **Issue Paper:** Council will assess a potential scenario further stressing system with extreme weather
- **Comments:**
  - Highlighted importance of extreme weather testing and provided suggestions for Council's approach (NWECC, PSE, Renewable NW, Tacoma, WA Commerce)

## Operational Flexibility (Non-Hydro)

- **Commenter Proposed:** Explore impacts of designating specific resources to support flexibility
- **Comments:**
  - Expressed interest in this scenario and provided suggestions for approach (PSE, Renewable NW, WA Commerce)
  - One cautioned that economic realities do not support prioritizing specific resources for flexibility (WPUA)

**Staff Recommendations:** Continue to scope these scenarios, developing a recommendation by end of 2024.

- Extreme Weather: Must first develop starting point to appropriately scope this scenario
- Operational Flexibility: Need time to think through value and modeling approach more



# Hydropower Availability and Operations

**Issue Paper:** Modeling shows potential hydro system flexibility to support renewable integration. This scenario would explore trade-offs between leveraging and limiting that flexibility.

Operational Flexibility  
(Hydro Resources)

## Comments:

- Scenario is important to include in plan (CRITFC, NWECC)
- If pursued, focus on reduced flexibility as the most realistic path (Tacoma)
- Analyze alternatives to limiting hydro flexibility to address fish needs (RiverPartners)
- Continued interest in increasing understanding of GENESYS (Chelan, CRITFC, PPC)

Changing Fish  
Operations  
(CRITFC, WPUDA)

**Staff Recommendation:** Develop a proposed approach by Q2 of 2025

- Expect recommendations for F&W Program and any updates to Columbia River Treaty operations to inform scenario analysis
- Meanwhile, staff will continue to connect with anyone interested in better understanding GENESYS and work to improve as needed

Changing Treaty  
Operations  
(Chelan, WPUDA, Williams)

# Scenarios Exploring Uncertainty from Different Load Trajectories

## West-Wide Decarbonization

- **Issue Paper:** Resource decisions in region under a west-wide decarbonization policy
- **Comments:**
  - Several commenters provided suggestions for scenario scope, whether power system focused or economy-wide (NWECC, ODOE, Renewable NW, RiverPartners, Tacoma, WA Commerce)
  - One noted potential value but recommended prioritizing existing policies and other risks (PPC)

## Data Center Load Growth

- **Commenter Proposed:** Exploring resource decisions with and without data center growth
- **Comments:**
  - Commenters raised questions around the implications of data center growth for meeting goals (e.g. decarbonization) and understanding how existing imperatives could be met prior to also accounting for this load (Renewable NW, WPUDA)

**Staff Recommendation:** Do not pursue these as stand-alone scenario

- Incorporating broad range of load trajectories in the starting point forecast will better inform the impacts of significant load growth across all scenario
- Also, the existing policies in the starting point already guide significant clean development

# Lower Snake River Dam Breaching Scenario (Commenter Proposed)

## Comments:

- Commenters expressed interest in studying the implications on resource selection of breaching the lower Snake River dams (ODOE, Nicholson)
- Others noted the importance of the lower Snake River dams to the power system (Chelan, RiverPartners, Robbins)

## Considerations:

- Recognize this is an important and sensitive issue in the region with a range of perspectives
- Purpose of the power plan is not to weigh in on the existing system, but rather to develop recommendations for new resource acquisition
- Council uses scenarios to explore areas of risk to inform a robust strategy, and it can (and has) explored the risk associated with the loss of generation of an existing resource
- No decision has been made whether to pursue a loss of generation scenario in this plan

# Summary and Next Steps

# Summary

- Starting Point
  - Continue with approach described in the issue paper
  - Incorporate a broad range of load forecast trajectories, including very high load trajectories to represent electrification from decarbonization policies and data center growth
- Scenarios
  - **New Resource and Transmission Risk** is a high priority scenario, staff will begin scoping this summer refine and approach by end of 2024
  - **Extreme Weather** and **Operational Flexibility** scenarios both require more definition before pursuing, staff will frame out any recommendation by end of 2024
  - **Hydro Operations and Flexibility** is a priority topic and staff will work develop proposed scope by Q2 of 2025
    - This will be informed, in part, by recommendations into the F&W Program amendment process
    - Staff will also track decisions around Columbia River Treaty operations to inform other scenario analysis (if needed)
  - No decision has yet been made on a Loss of Generation Risk scenario

# Some Next Steps and Upcoming Work

- Developing methodologies (now and ongoing refinement)
- Providing primers to Council on approach to resource options (July to September 2024)
- Prepare environmental methodology (now to Q3 2024)
- Working with advisory committees on resource options, load forecast, fuels forecast and more (June to Q2 2025)
- Frame out options for scenarios that will require iterations of load and/or resources (by end of 2024)
  - New Resource and Transmission Risk
  - Extreme Weather
  - Operational Flexibility, Non-Hydro Resources
- Frame out options for scenarios around Operational Flexibility of Hydro Resources (by Q2 2025)
- Continue model testing and development (now to Q2 2025)



# Discussion