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# Northwest Power and Conservation Council

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January 6, 2026

## MEMORANDUM

**TO:** Council Members

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

**SUBJECT:** Power Plan Update

## BACKGROUND:

**Presenter:** Jennifer Light

**Summary:** The Power Division is preparing the Council's Ninth Regional Power Plan. Since this is a long process with many interconnected components, staff plan a standing item at Council meetings to provide members with an update on the status of work to date and highlight the next steps.

At the January meeting, staff will cover a variety of topics as the Council prepares for reviewing results of the scenario modeling. These include:

- **Update on scenario modeling:** Staff will present the final market study results, updates on the needs assessment results, and an update on the timeline for regional resource optimization results.
- **Reminder of legal elements from the Power Act:** In [January of 2025](#), staff presented on the Power Act requirements for power planning. At this meeting, staff will briefly review these requirements in preparation for drafting the power plan.
- **Proposed table of contents and power plan structure:** Staff will walk through the proposed table of contents in order to seek feedback and refine in advance of developing draft materials.

The staff will also cover other status updates to the overall Ninth Power Plan timeline.

**Relevance:** Under the Northwest Power Act, the Council is required to review its power plan no less frequently than once every five years. The Council initiated its review of the power plan in February 2025, with a goal of developing a final power plan by November 2026.

**Workplan:** B. Development of Ninth Power Plan

# Power Plan Update

Jennifer Light

January 13, 2026



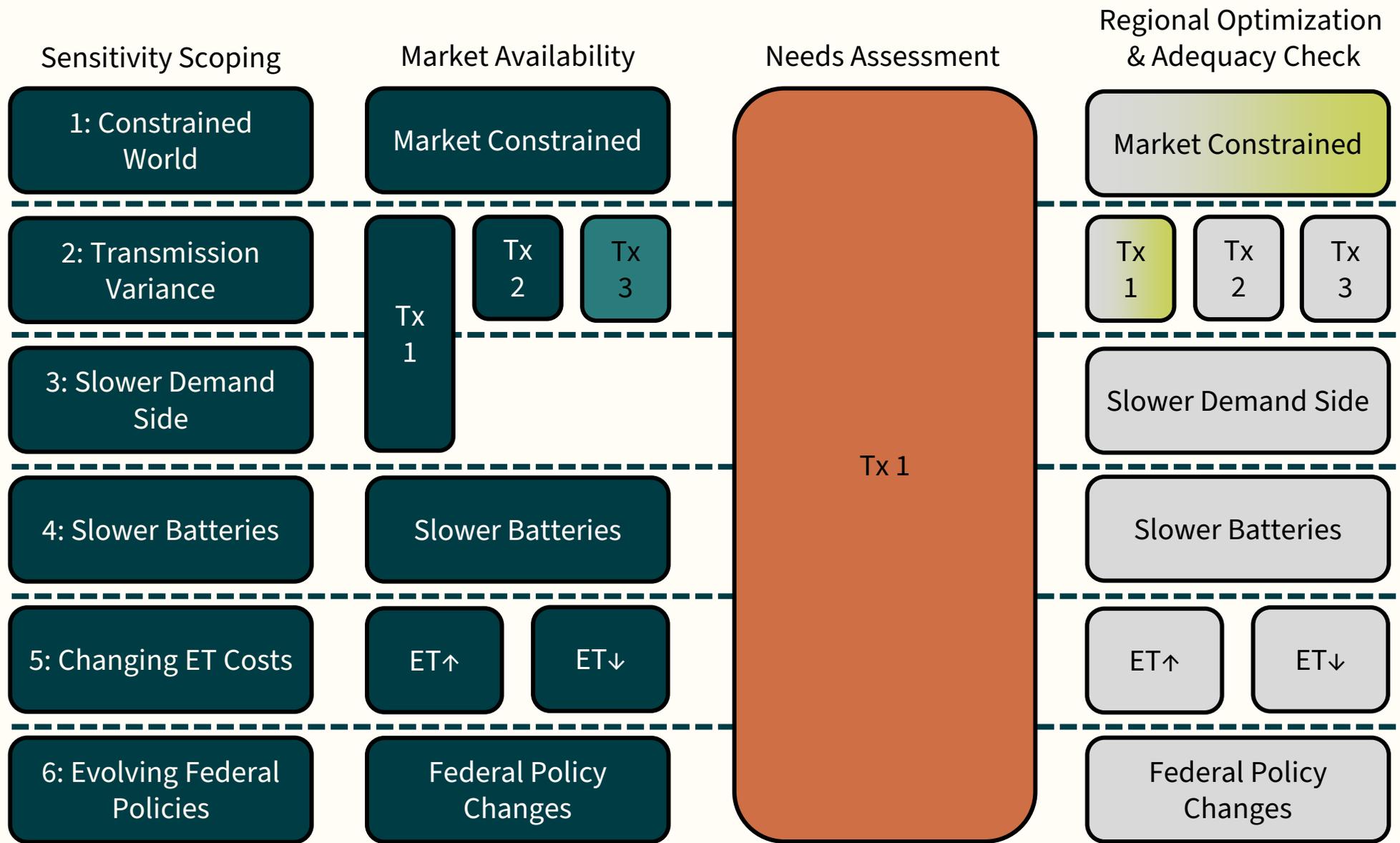
Northwest **Power** and  
Conservation Council

# Today's Topics

- Updates on scenario modeling
- Reminder of requirements for planning under the Power Act
- Proposed table of contents for the Ninth Power Plan
- Looking ahead

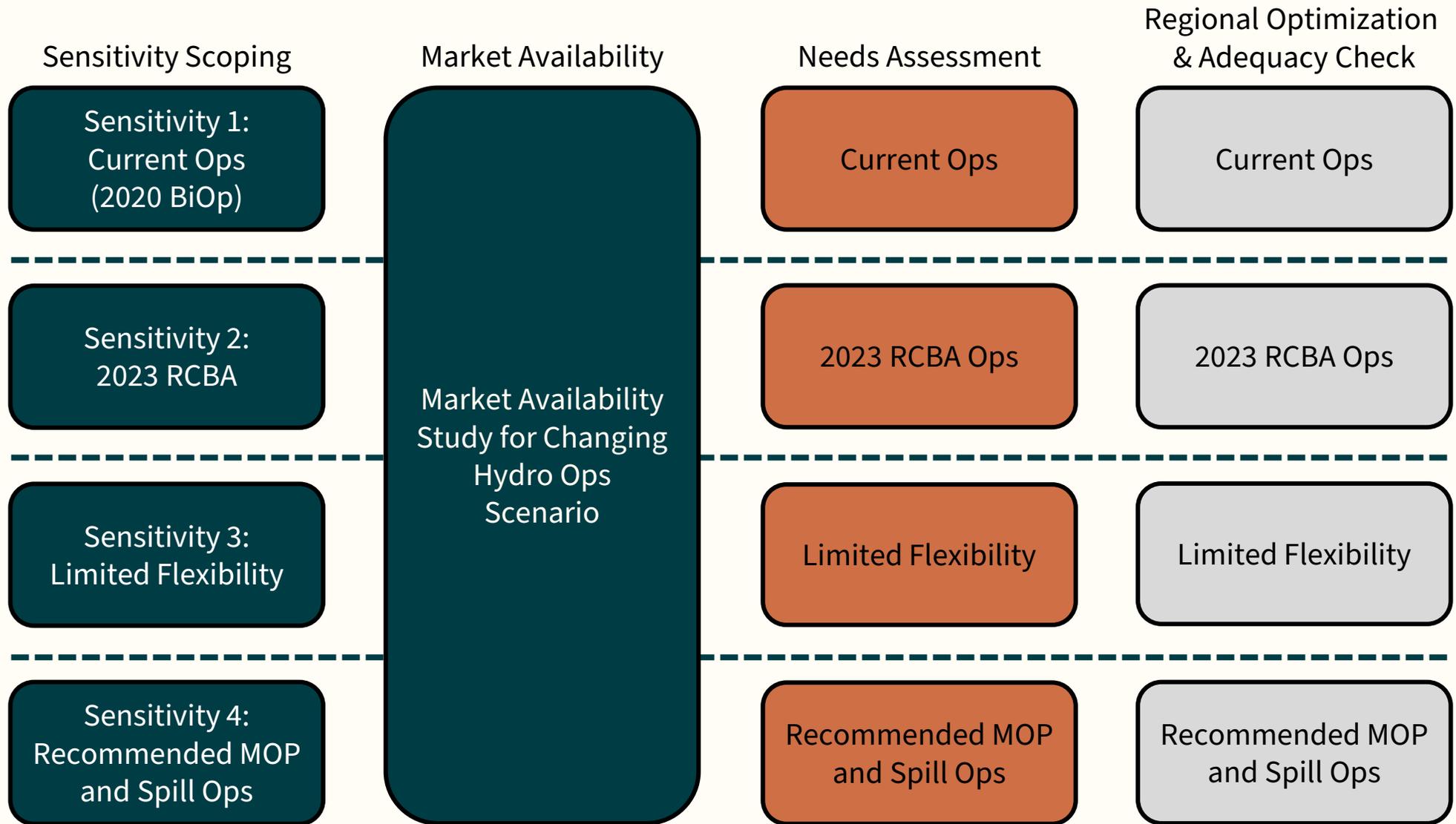
# Updates on Scenario Modeling

# Resource and Tx Risk



Color Key:  Analysis finalized & presented  Nearing completion  In progress  Not yet started  Updated Analysis

# Changing Hydro Ops



Color Key:  Analysis finalized & presented  Nearing completion  In progress  Not yet started  Updated Analysis

# **Market Study**

# Reminder of Market Study Findings from November

- Long-term market availability does not change significantly across the various sensitivities, although there are shifts in the near-term, primarily when certain resources are limited
- Key drivers of the builds are demand growth and state policies, specifically carbon pricing in California, Washington, and Canada
- Majority of resources built across all sensitivities are a balance of renewables, storage (both short and longer duration), and gas
- Buildouts and implied prices indicates that the economics of the market is likely to be very different from previous recent studies
- Given the similarity across buildouts, the differences in these market studies is not expected to be a significant driver of differences in regional resource buildouts in the next step

# Testing Three Transmission Buildouts

- In the New Resource and Transmission Risk Scenario, we have three sensitivities exploring new resource additions under different transmission buildouts

Existing Transmission	Transmission Plus	Transmission Max
Assumes only the existing transmission plus projects under construction today	Adds additional projects planned to come online in the Action Plan period (2027-2032) plus one project adding additional transmission on the east side of the region	Adds additional transmission projects assumed to come online in 2033 or beyond

- In November, staff shared the market study results for most sensitivities in this scenario, but needed more time to scope and complete the Transmission Max sensitivity

# Additional Transmission Assumed in the Sensitivities

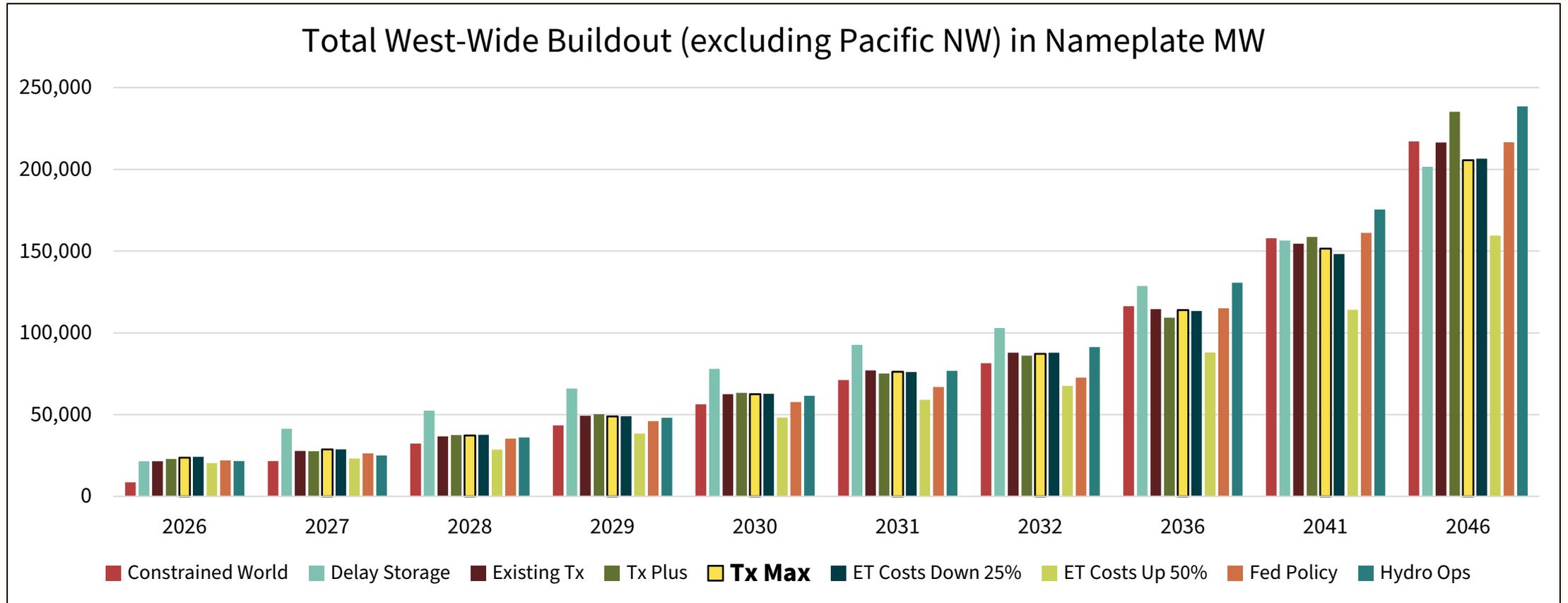
Project	Description	Date	Tx Plus	Tx Max
Cross Cascades North	650 MW across the Cascades in Washington	2031	X	X
Cross Cascades South	1500 MW across the Cascades in Oregon	2031	X	X
Path 8 Upgrade 1	600 MW upgrade between Montana and Washington	2035	X	X
Gateway West Segment D3	1000 MW between Wyoming and Idaho	2035		X
Gateway West Segment E	2000 MW across Idaho	2036		X
Path 8 Upgrade 2	Added 200 MW (W→E)/1500 MW (E→W) on Path 8	2036		X
Path 14 Upgrade 2	650 MW (W→E)/1000 MW (E→W) between ID and OR	2036		X
North Plains Connector	1000 MW interconnection into Dakotas	2033		X

Staff sought to align with other efforts, including WestTEC, with a focus on projects where there was sufficient public information that could be used in our modeling. These should be considered proxies of additional transmission capacity, and not an analysis of these specific projects.

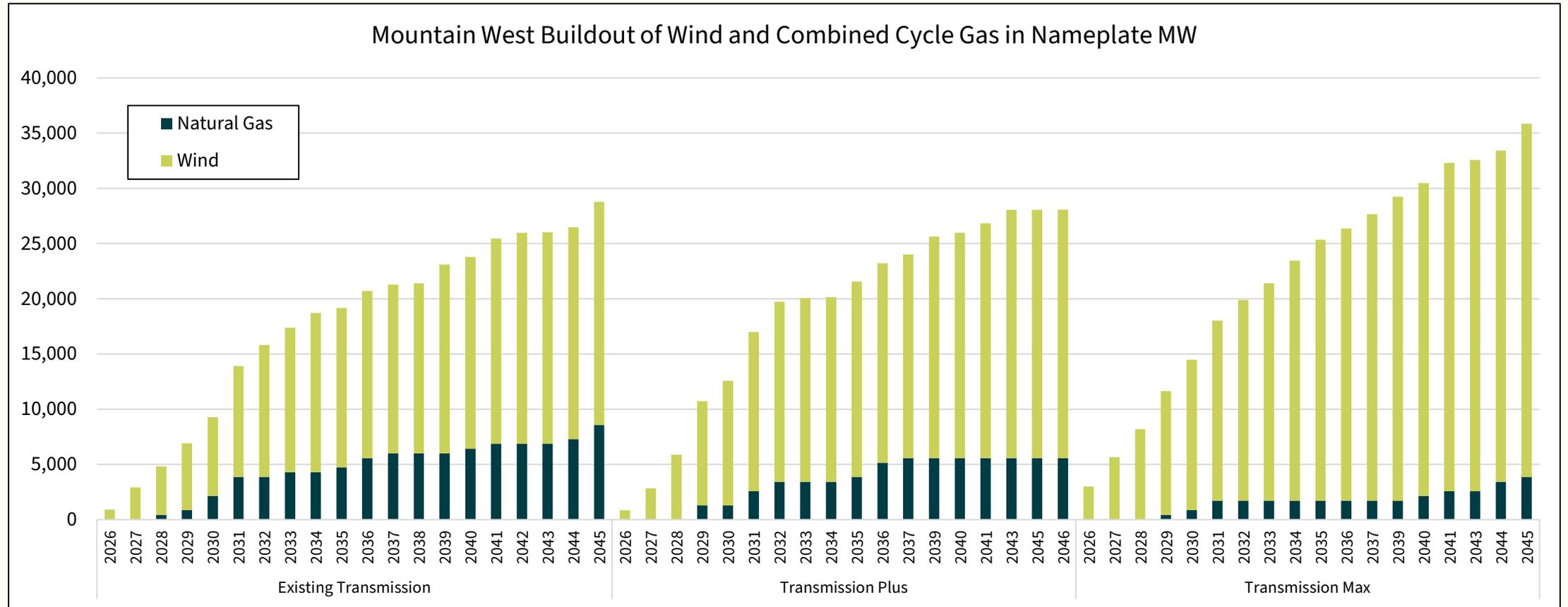
# High-Level Findings of Transmission Max

- Similar to previous results, market availability does not change significantly in the Transmission Max sensitivity
  - While WECC-wide builds are similar, we might see more differences in the regional optimization buildouts in the next step of modeling
- Transmission Max primarily facilitated more east to west transmission within the region and transmission connecting east of the region into the region
- More transmission increases the amount of Mountain West wind, displacing some combined cycle gas
- Due to the higher capacity factors of this Mountain West wind, there is also a decrease in solar throughout the west

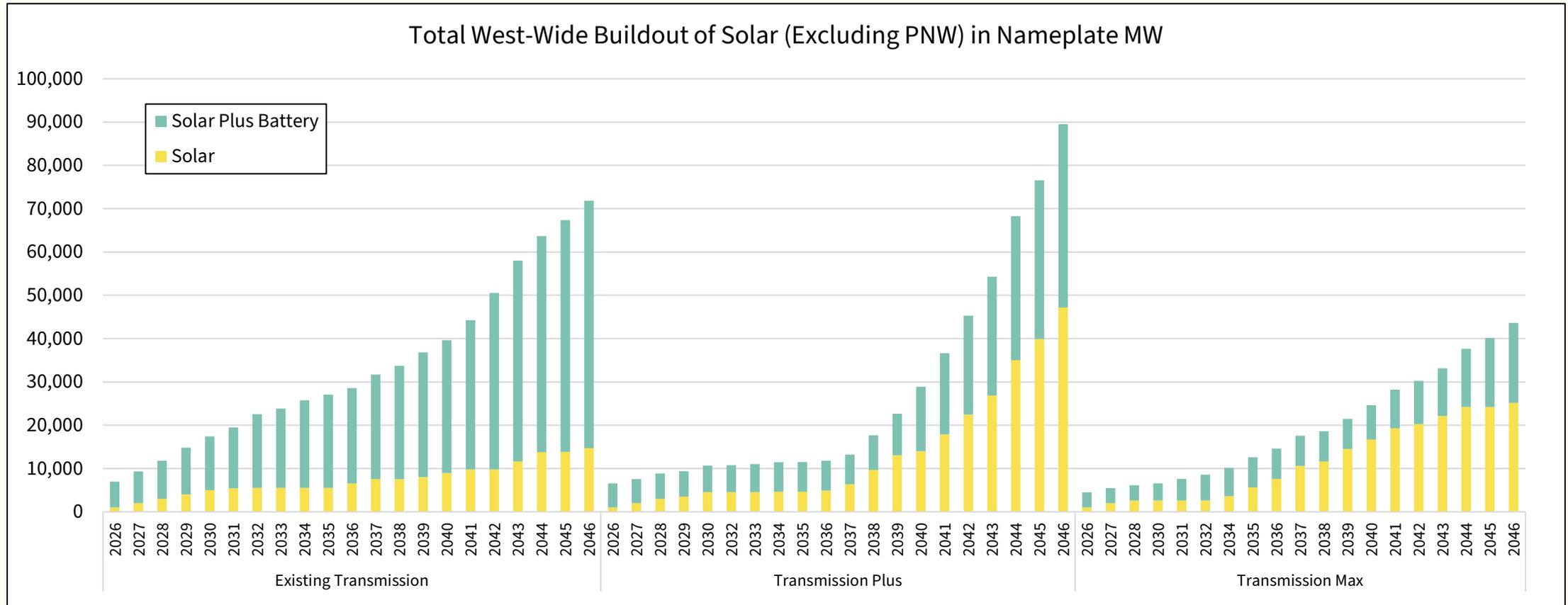
# Transmission Max (Yellow) Shows a Similar Buildout to Other Sensitivities



# Wind and Natural Gas Trade-Off with Different Transmission Builds



# Less Solar is Built under Transmission Max, as More Wind is Available



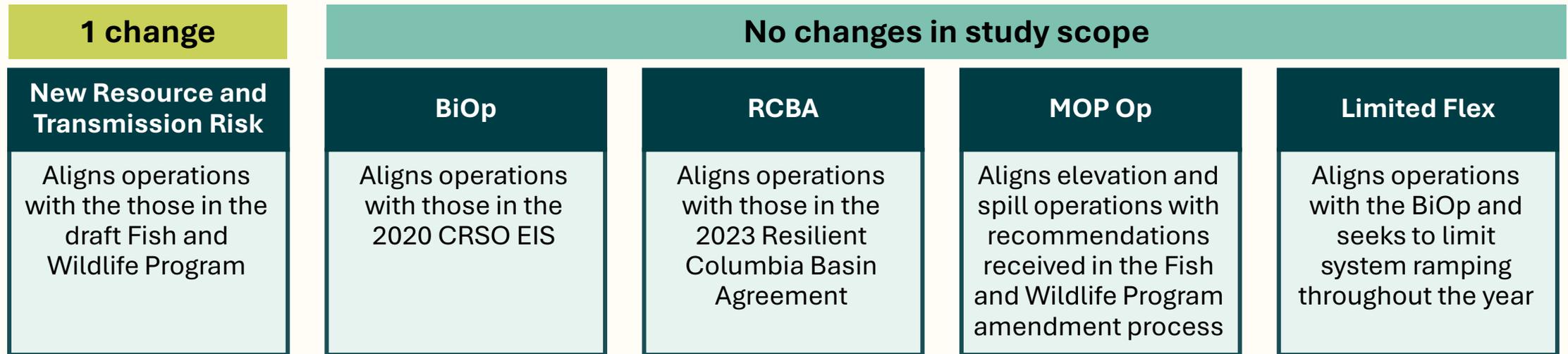
# **Updated Needs Assessments**

# Rationale for Updated Needs Assessments

- For the Ninth Plan, staff updated the approach for modeling irrigation in GENESYS and OptGen to improve the modeling of stream flows
- While doing some final rounds of testing on OptGen, staff identified an issue with the assumed irrigation demand and traced it back to a data entry error related to cumulative vs incremental demands
- After correcting the error, staff did a test run and confirmed that it would be valuable to re-run all five of the needs assessments to ensure a better signal is sent to OptGen



# Reminder of the Five Sensitivities

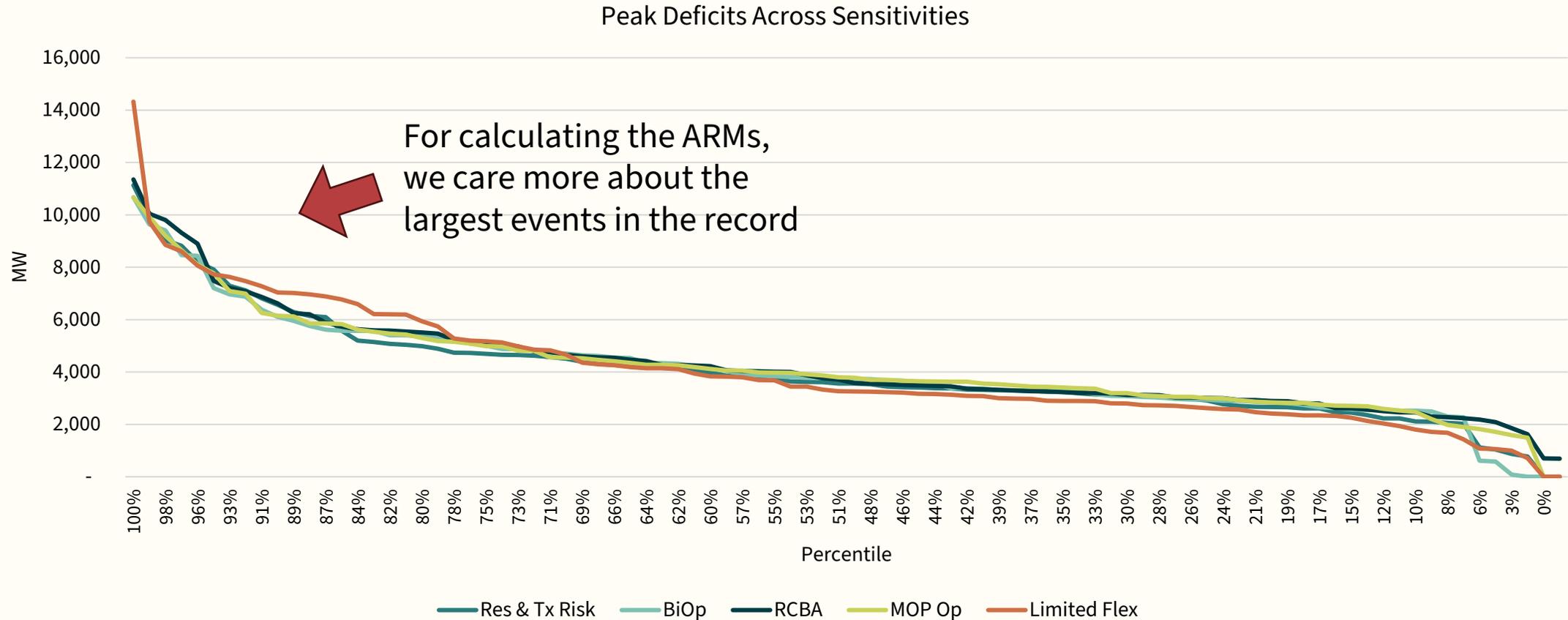


**Update:** For the New Resource and Transmission Risk sensitivity, staff was able to update the summer spill dates to align with those proposed in the draft Fish and Wildlife Program

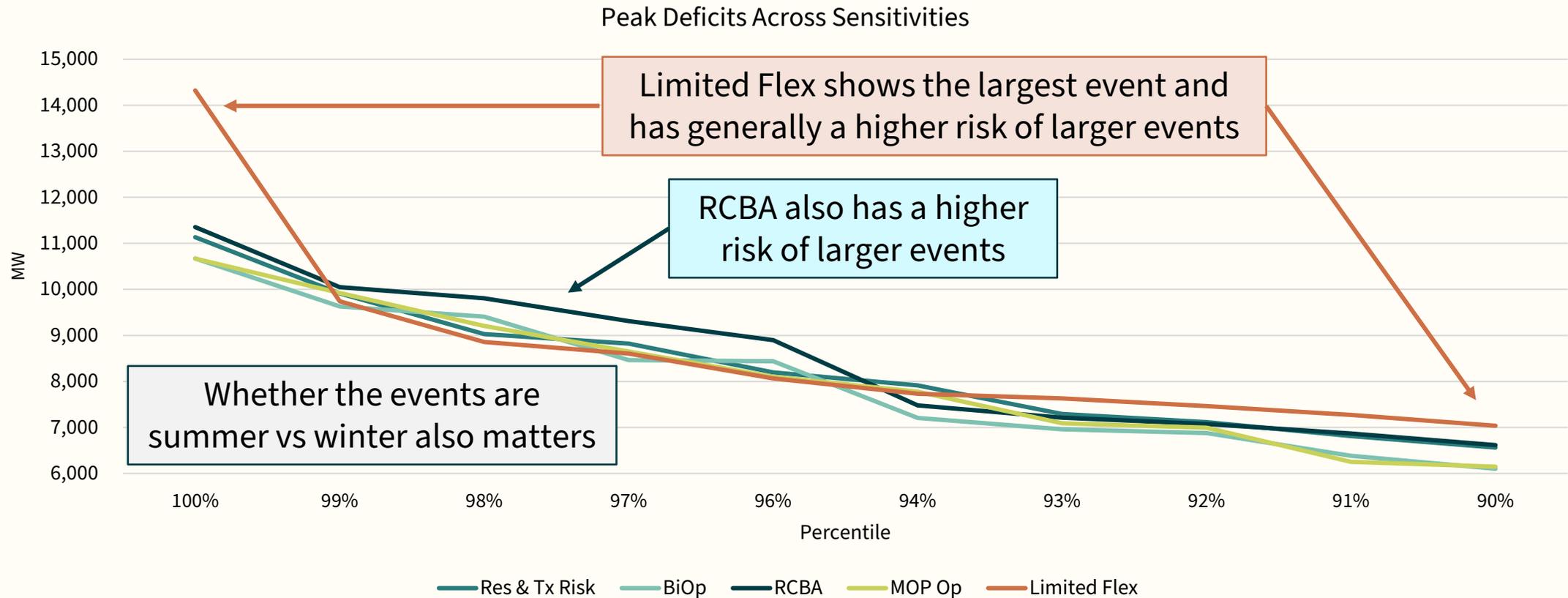
# A Couple Reminders About the Needs Assessment

- Purpose of this analysis is to develop adequacy reserve margins (ARMs) that we feed into OptGen to help ensure the regional optimization meets the Council's adequacy criteria
  - Based on the forecasted load growth for 2031 and no addition of new resources, the needs assessment shows significant deficits (as expected for this study)
  - Review of project data shows that GENESYS is appropriately modeling the different operations (e.g. spill, flexibility, etc.), but staff suggest caution be taken over-interpreting results given how constrained the system is in this specific type of study
- ARMs are developed based on the shortfall record from the modeling, and digging into the nuances of those can be helpful if you want to understand differences between sensitivities
  - Seasonality of large and long events (i.e. summer vs winter) can impact ARMs
  - Distribution of the size of the shortfall impacts the peak ARMs
  - Diversity of events across simulation years (vs clustering in specific years) can impact energy ARMs

# Example of Deficit Record Across Studies



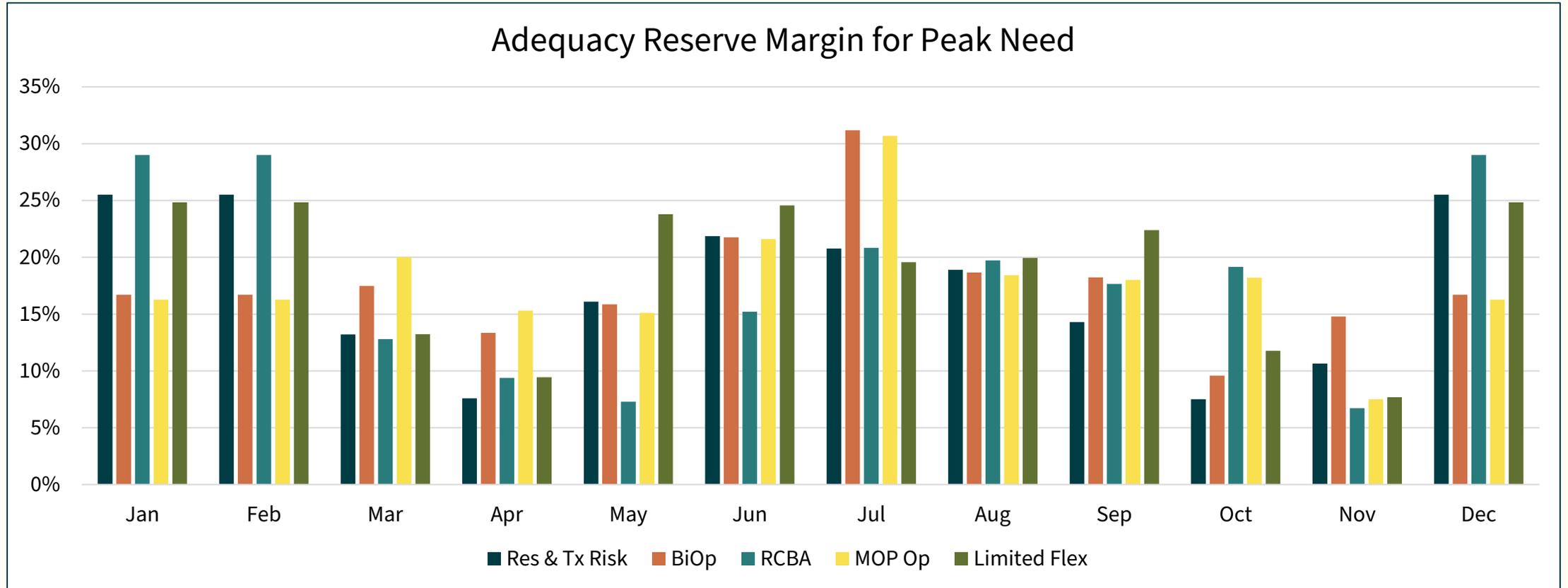
# Example of Deficit Record Across Studies



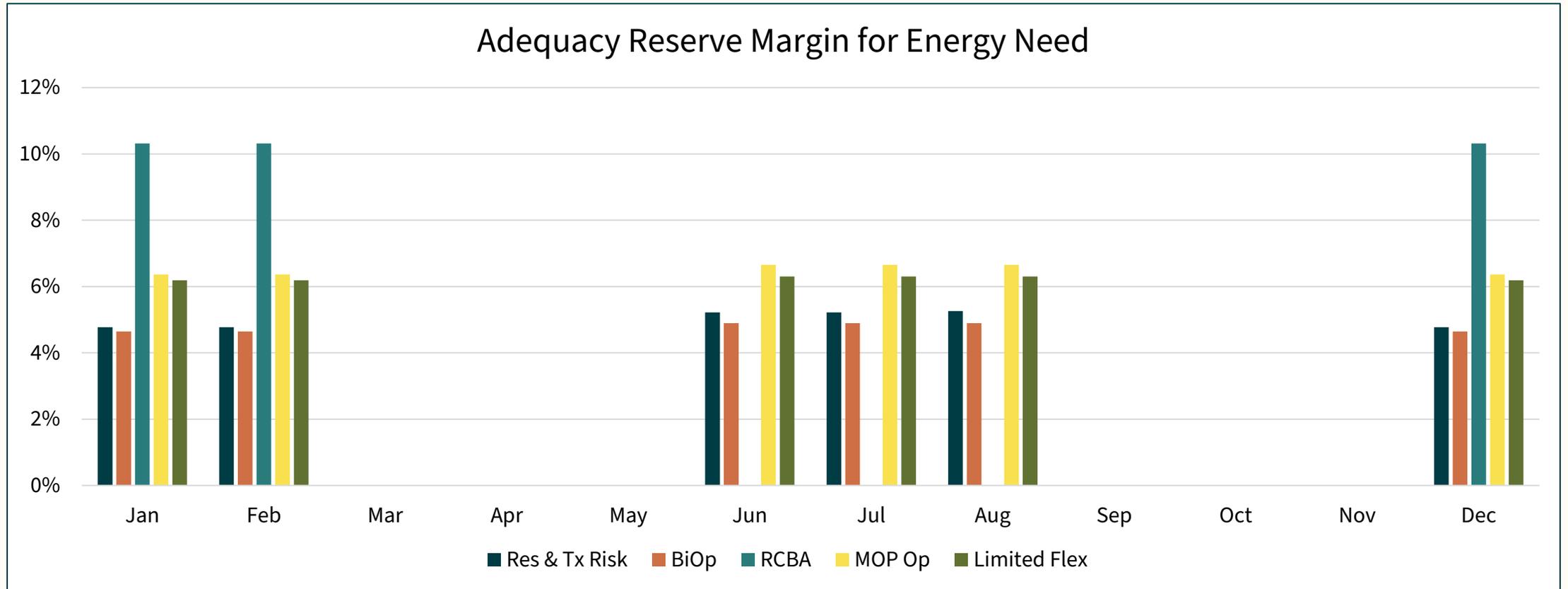
# High Level Findings

- Assessment continues to show peak needs across all seasons, particularly in the winter and summer
  - We do see some shifts between the winter and summer signal for some studies, which is connected to the details of the shortfall record
  - That being said, the overall signal continues to show that the region needs significant resources to meet peak needs across all months
- Assessment show energy needs in the winter and summer
  - These energy needs are consistently lower across all sensitivities
  - This makes sense with the update to the irrigation data, which results in more water in the system and more energy available

# Updated Peak Needs



# Updated Energy Needs



# **Status of Regional Optimization**

# Updated Timeline for Results



- Completing dry-runs of two sensitivities and having discussions with outside experts to sort through any remaining modeling questions
- SAAC scheduled for January 29

- Kick off all the OptGen analysis for all sensitivities
- Sensitivities will run in parallel, and the runs will likely take a couple of weeks to complete

- Bring full suite of results to the Council
- Targeting March 10-12 meeting in Portland for sharing results, with a deeper dive at the late March webinar

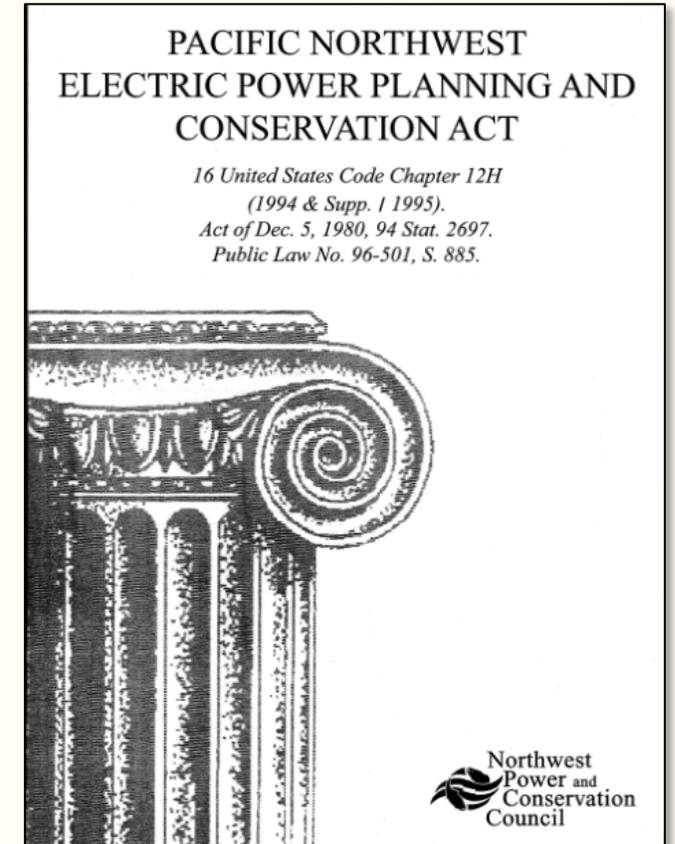
# Reminder of Power Act Requirements

# Section Outline

- Relevant Power Act provisions related to power planning
- Purposes of the Act
- Substantive power plan requirements and considerations, elements, and relevant definitions
- Relationship of the Council's power plan to Bonneville resource acquisitions
- Relationship of the Council's power plan to resource decisions by others than Bonneville

# Relevant Plan Provisions in the Power Act

- Power plan provisions are in Sections 4(d) through 4(g)
- Relevant definitions in Section 3
- Purposes of Act in Section 2 inform how the Council is to understand and implement the power plan provisions
- Section 4(d)(2) and Sections 6(a), 6(b) and 6(c) describe the relationship of Bonneville's resource acquisitions to the Council's power plan



# Section 2 has the Relevant Purposes of the Power Act

- 2(1) to encourage, through the unique opportunity provided by the Federal Columbia River Power system –
  - (A) conservation and efficiency in the use of electric power, and
  - (B) the development of renewable resources within the Pacific Northwest
- 2(2) to assure the Pacific Northwest an adequate, efficient, economical, and reliable power supply
- 2(3) to provide for the participation and consultation of the states, local governments, consumers, customers, users of the Columbia River system (including federal and state fish and wildlife agencies and Indian tribes), and the public at large within the region in:
  - (A) the development of regional plans and programs related to energy conservation renewable resources, other resources, and protecting, mitigating and enhancing fish and wildlife resources
  - (B) facilitating the orderly planning of the region’s power system, and
  - (C) providing environmental quality
- 2(6) to protect, mitigate and enhance the fish and wildlife of the Columbia River and its tributaries...

# Basic Directive for the Power Plan

- Section 4(d)(1) provides the basic directive: “Council shall prepare, adopt, and promptly transmit to the Administrator a **regional conservation and electric power plan.**”
- Sections 4(e) and 4(f) then detail the substantive priorities, considerations and elements that the power plan must contain and reflect.



**The 9th Northwest  
Power Plan**

# Power Plan Timing

- Section 4(d)(1) says the Council is to “review” the power plan “not less frequently than **once every five years**”
- This section also recognizes that the plan “may be amended from time to time”
- Note that prior to the review of the plan or any major amendments, Section 4(h)(2) requires the Council call for the recommendations to amend the fish and wildlife program, thereby triggering first the fish and wildlife program amendment process under Section 4(h)

# Prioritizing Cost-Effective Resource and Conservation

- Section 4(e)(1) specifies that the power plan is to “give priority to resources which the Council determines to be **cost effective**” with priority to be given “first, to **conservation**; second, to **renewable resources**; third, to generating resources utilizing waste heat or generating resources of high fuel conversion efficiency; and fourth, to all other resources.”

# Power Plan Recommendation for Resources

- Section 4(e)(2) then provides that the Council’s plan “shall set forth a **general scheme for implementing conservation measures and developing resources** pursuant to section 6 of the Act to reduce or meet the Administrator’s obligations...”
- Section 4(e)(2) also requires that the Council develop this resource scheme “with **due consideration**” by the Council for:
  - Environmental quality
  - Compatibility with the existing system
  - Protection, mitigation, and enhancement of fish and wildlife and related spawning grounds and habitat, including sufficient quantities and qualities of flows for successful migration, survival, and propagation of anadromous fish, and
  - Other criteria the Council might set forth in the plan

# Specific Power Plan Elements (1)

Sections 4(e)(3) and 4(f) then list specific elements that the Council is to include in the power plan “to accomplish the priorities,” while leaving it to the Council to set forth the elements “in such detail as the Council determines to be appropriate”

Section 4(e)(3):

- (A) an **energy conservation program** to be implemented, including **model conservation standards**
- (B) recommendations for **research and development**
- (C) methodology for determining **quantifiable environmental costs and benefits** (connected to the definition of cost-effectiveness under section 3(4))

# Specific Power Plan Elements (2)

Specific elements captured in Section 4(e)(3) continued...

- (D) a **demand forecast of at least twenty years**, to be developed in consultation with Bonneville, customers, states (including state agencies with ratemaking authority over electric utilities), and the public, “in such manner as the Council deems appropriate” and

“a **forecast of power resources** estimated by the Council to be required to meet the Administrator’s obligations and the portion of the Administrator’s obligations the Council determines can be met by resources in each of the priority categories” in Section 4(e)(1).  
The resource forecast:

- (i) shall include regional reliability and reserve requirements
- (ii) shall take into account the requirements of the fish and wildlife program, and
- (iii) shall include the approximate amounts of power the Council recommends should be acquired by Bonneville and may include, to the extent practicable, an estimate of the types of resources from which such power should be acquired

# Specific Power Plan Elements (3)

Specific elements captured in Section 4(e)(3) continued...

- (E) an analysis of electricity reserve and reliability requirements and **cost-effective methods for providing reserves** designed to insure adequate electric power at the lowest probable cost
- (F) the program adopted pursuant to subsection (h) (i.e. the **Fish and Wildlife Program**)
- (G) if the Council recommends **surcharges** pursuant to subsection (f) of this section, a **methodology for calculating such surcharges**

# Specific Power Plan Elements (4)

- Section 4(f)(1) provides that the Council shall adopt “**model conservation standards**” into the plan “after consultation with the Administrator, states, political subdivisions, customers, and the public.” Model conservation standards to be included in the plan shall include (but not be limited to) standards applicable to:
  - (A) new and existing structures
  - (B) utility, customer, and governmental conservation programs
  - (C) other consumer actions for achieving conservation
- Model conservation standards shall:
  - reflect geographic and climatic differences within the region and other appropriate considerations
  - be designed to produce all power savings that are cost-effective for the region and economically feasible for consumers, taking into account [available] financial assistance
- Section 4(f)(2): gives the Council authority to recommend to the administrator a surcharge, and the Administrator may impose a surcharge, in accordance with the methodology provided in the plan

# Connection to Bonneville

- Bonneville is to act consistent with the Council's power plan in making decisions to acquire new resources, as set forth in Section 4(d)(2) and Sections 6(a) through 6(c)
- Section 5 requires Bonneville to offer power sales contracts to public and private utilities in the region and others, without limitation to the amount in Bonneville's federal base system
- Section 6 of the Act then authorizes and obligates Bonneville to acquire resources to reduce or meet its obligations, and do so consistent with the Council's power plan with some narrowly specified exceptions

# Bonneville Resource Acquisition Authority

- Bonneville’s resource decisions to be consistent with the Council’s power plan:
- Conservation resources: Section 6(a) obligates Bonneville to acquire conservation and implement such conservation measures “as the Administrator determines are consistent with the [Council’s power] plan.”
- Generating resources: Section 6(a)(2) and 6(b) then require Bonneville to acquire “sufficient resources”:
  - to meet the agency’s “contractual obligations” “after taking into account planned savings from [the conservation] measures”; and
  - “to assist [the agency] in meeting the requirements of section 4(h) of the Act” [Fish and Wildlife provisions]
- Acquisition of these resources “shall be consistent with the plan, as determined by the Administrator,” with some room for exceptions.

# Bonneville Resource Acquisition Authority (con't)

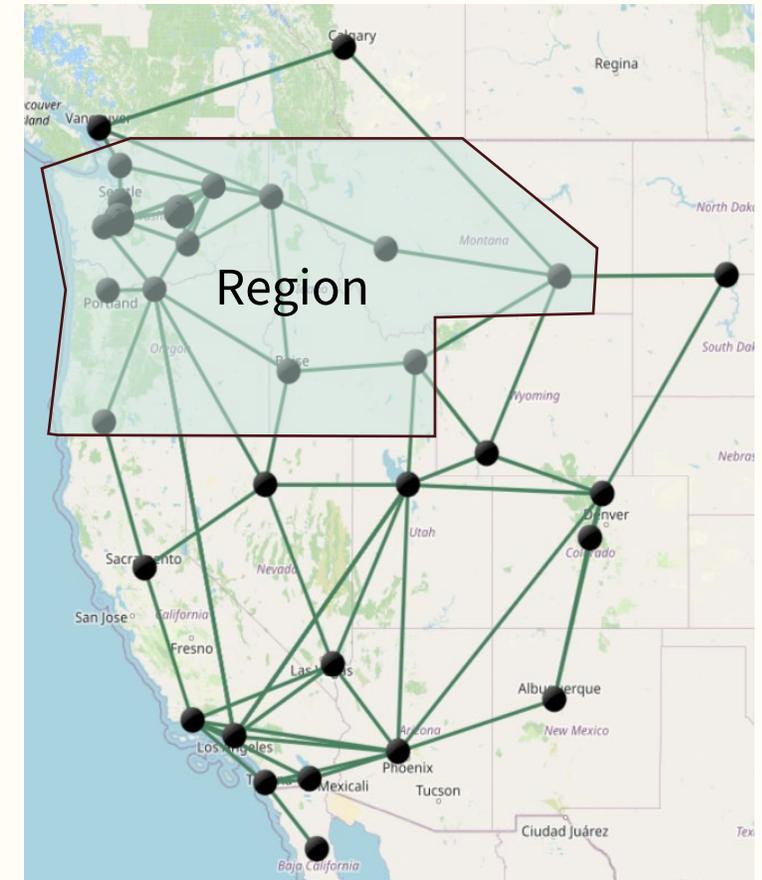
- Bonneville resource acquisition is also divided between “major” resources, defined in Section 3(12) to mean resources with a planned capability greater than 50 aMW and to be acquired for more than five years, and “other than major resources.”
- For “other than major resources,” Section 6(b)(2) says the Administrator may acquire either consistent with the power plan or “which are not consistent with the plan, but which are determined by the Administrator to be consistent with the criteria of section 4(e)(1) and the considerations of section 4(e)(2) of this Act [the power plan provisions]
- Major” resources: Section 6(c) provides additional specific procedures for acquiring “major” resources. Requires a significant Bonneville public process aimed at a determination by the Administrator whether a proposed major resource acquisition is consistent with the Council’s power plan. If not consistent with the plan, and Bonneville still wants to pursue, expenditure requires authorization by Congress.

# Power Act Concept and Changing Context

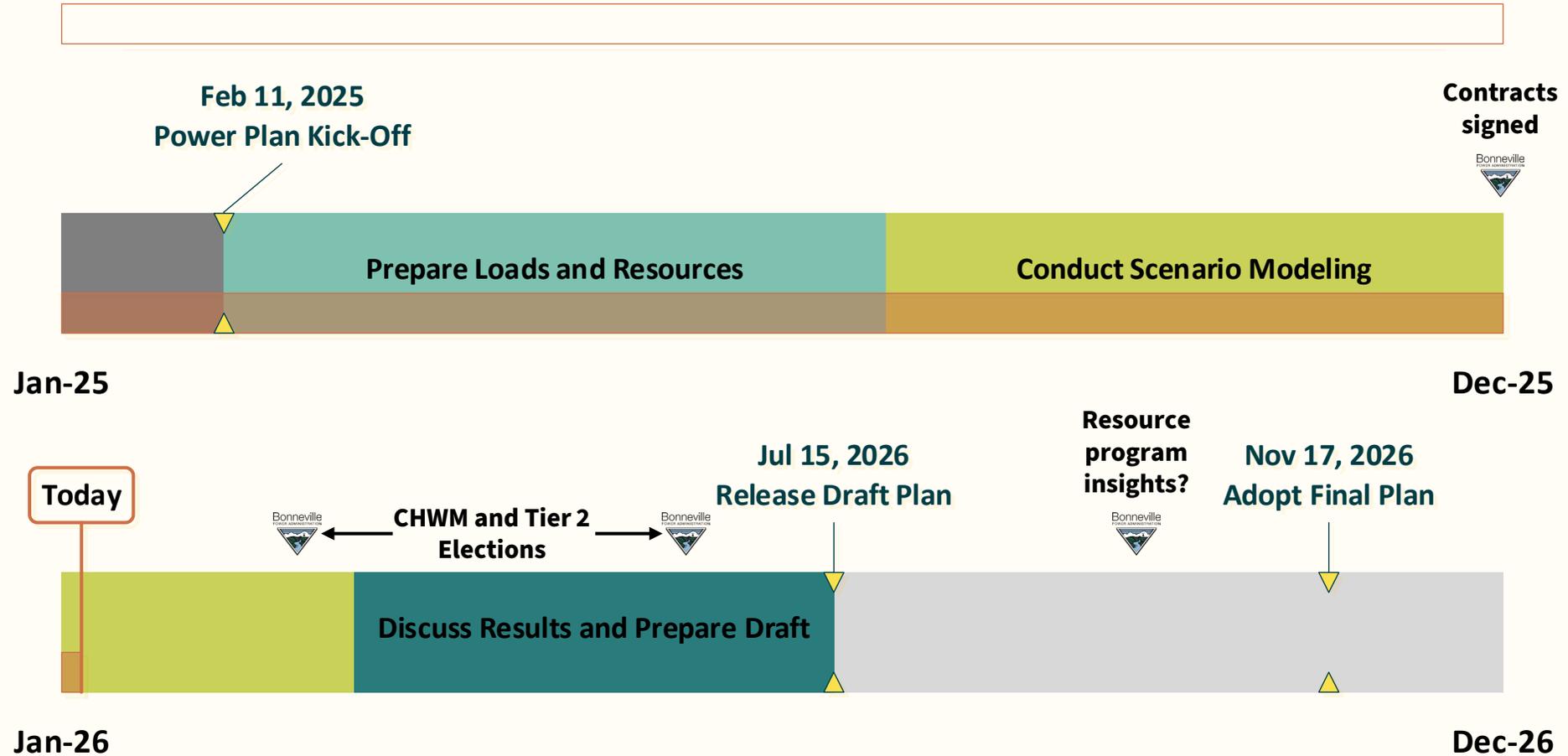
- At the time of passage of the Act:
  - Assumption was that Bonneville would sell the electric power produced by the Federal Columbia River Power System and “federal base system” resources (e.g. CGS) and Bonneville would be the major engine for adding new conservation and generation resources
- Today, and almost immediately post passage of the Act:
  - Bonneville and others have added significant conservation resources to the system. But others, not Bonneville, have added new generation resources to the region’s power supply
  - Bonneville’s current contract structure defined in Regional Dialogue has, in many ways, encouraged preference customers to add new resources to meet their load growth
  - This dynamic might change, at least somewhat, under the post-2028 Bonneville contracts

# Council's Power Plan and Bonneville

- Council's power plan identifies new resource development needs in the region and then will provide specific direction for Bonneville, for consistent resource acquisition activities as specified in Sections 4d and 6.
- Ninth power plan will leverage the whole range of regional analysis to inform recommendations to Bonneville
  - Council will not model Bonneville's obligation directly, but will be able to map that obligation to the regional analysis
  - Regional granularity in modeling and analysis may help provide Bonneville specific insights, where relevant



# Connecting Bonneville Processes to Power Plan Timeline



# Resource Acquisition Decisions by Others

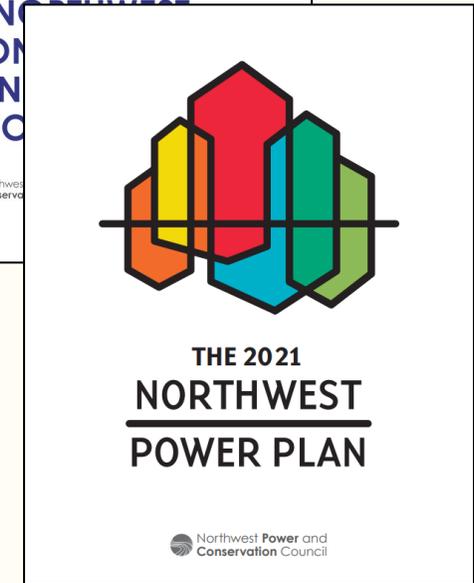
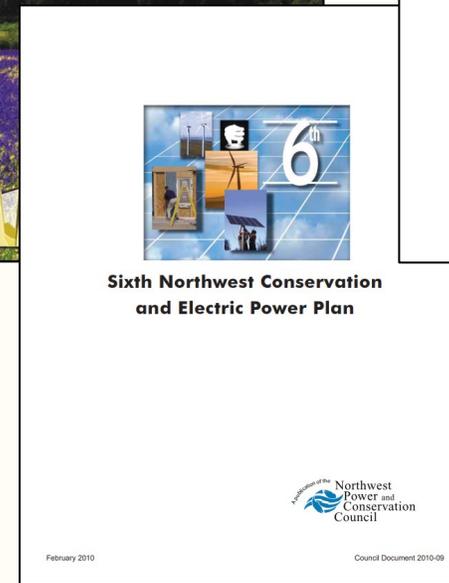
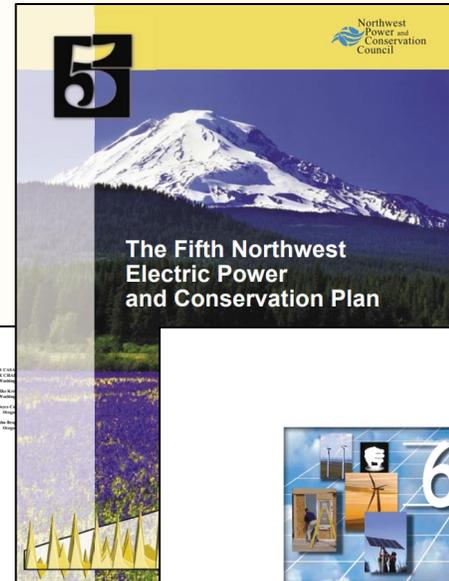
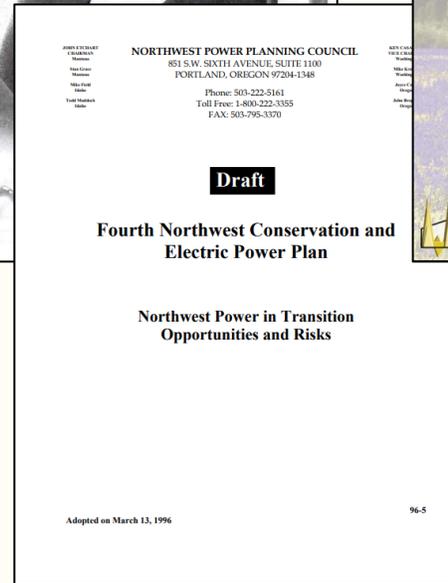
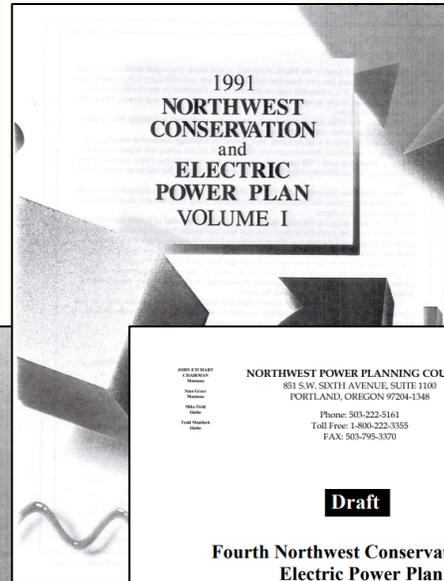
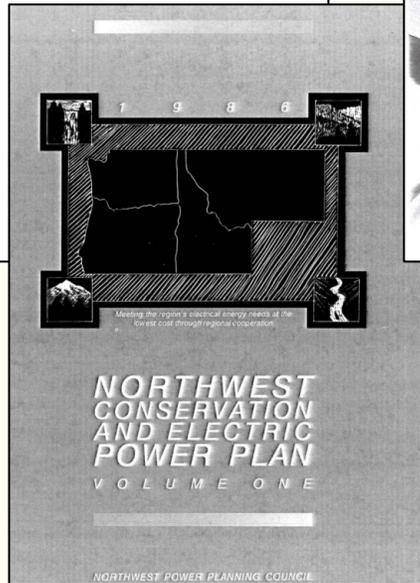
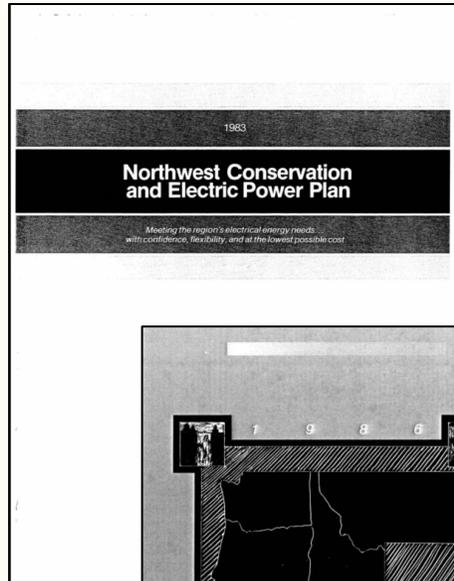
- The Council's power plan is influential in the resource decisions of the region's non-federal utilities and in the decisions to review resource choices by the states' utility commissions
  - There is no legal obligation for these entities to acquire new resources consistent with the Council's power plan
- In Washington, I-937 does require that Washington utilities be consistent with the Council's conservation methodology for developing conservation potential
  - Note, this does not require consistency with the plan's recommended resource strategy, just the methodologies used in the development of the potential
  - Additionally, this is not a legal responsibility of the Council under Federal law, but rather a responsibilities of the utilities under Washington state law

# Super High-Level Summary

- Need to put forth a plan that provides a general scheme for new resource development for Bonneville and the region
- Power Act is pretty light on how that plan is development, but it does require public engagement and the inclusion of some specific elements
- Ultimately, our approach is to consider what we know of the existing system, forecast out potential load growth, and analyze how best to fill the gap
  - Council must prioritize cost-effective resources, with some priority order underneath that
  - Council must also put forward recommendations for research and development
- Bonneville's is obligated to act consistent with the Council's plan when making resource decisions, including conservation
- For others, the plan is influential for resource decisions, but there is no legal obligation for consistency in resource acquisition like there is with Bonneville

# Proposed Table of Content

# Power Plans Over the Years



# Basic Power Plan Structure

The content and structure have evolved over the years, but the power plans are generally split into two main volumes:

## Main Policy Document

Sets the context for the current moment and provides the Council's recommendations for Bonneville and the region

↑  
This is the volume we will be working through in detail together

## Technical Supporting Appendices

Provide detail on the technical analysis throughout power plan development to support future Council and stakeholder work

↑  
We will share these with members, but do not plan to edit collectively. These are intended to represent the staff's technical analysis.

# Proposed Table of Contents

Executive Summary/Introduction

Targeting late June/early July for the introduction

1. Power Act Requirements

2. Existing System Capabilities

- Existing resource base including the Council’s Fish and Wildlife Program
- Existing/recent demand
- Existing policies

**Target having a first draft of these chapters to the Council for the May meeting**

3. Future Needs and New Resource Potential

- Electricity demand forecast and assessment of system needs
- New potential resources and amounts, including environmental methodology

4. Action Plan: Recommended Resources Strategy for Region and Bonneville

- Recommendations for regional resource acquisition and cost-effective reserves
- Recommendations for Bonneville’s resource acquisition
- Supporting recommendations, including recommendations for research and development

**Targeting the June meeting for these chapters**

5. Conservation Program

# Planned Technical Appendices

- A. Global Assumptions
- B. Existing System Parameters and Policies
- C. Environmental Methodology
- D. Climate Change Data and Assumptions
- E. Fuels Forecasts
- F. Electricity Demand Forecast
- G. New Generating Resources
- H. Conservation Methodology and Potential
- I. Demand Response Methodology and Potential
- J. Rooftop Solar Methodology and Potential
- K. Modeling Framework
- L. Wholesale Market Availability
- M. Needs Assessment and Resource Adequacy
- N. Scenario Modeling Results
- O. Cost-Effective Reserves Methodology
- P. Cost-Effective Conservation Methodology
- Q. Model Conservation Standards
- R. Glossary

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- A. Global Assumptions
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- G. New Generating Resources
- H. Conservation Methodology and Potential
- I. Demand Response Methodology and Potential

***Anticipated in February-ish***

- J. Rooftop Solar Methodology and Potential

- K. Modeling Framework

***Anticipated***

- L. Wholesale Market Availability

***in April-ish***

- M. Needs Assessment and Resource Adequacy

- N. Scenario Modeling Results

- O. Cost-Effective Reserves Methodology

- P. Cost-Effective Conservation Methodology

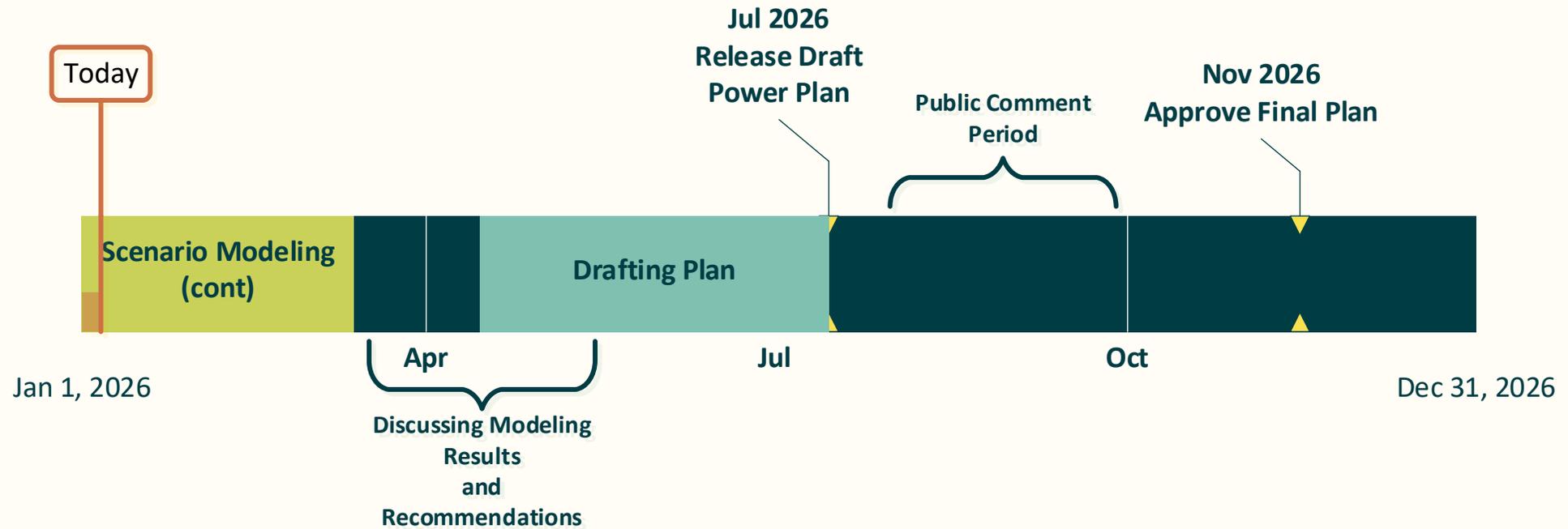
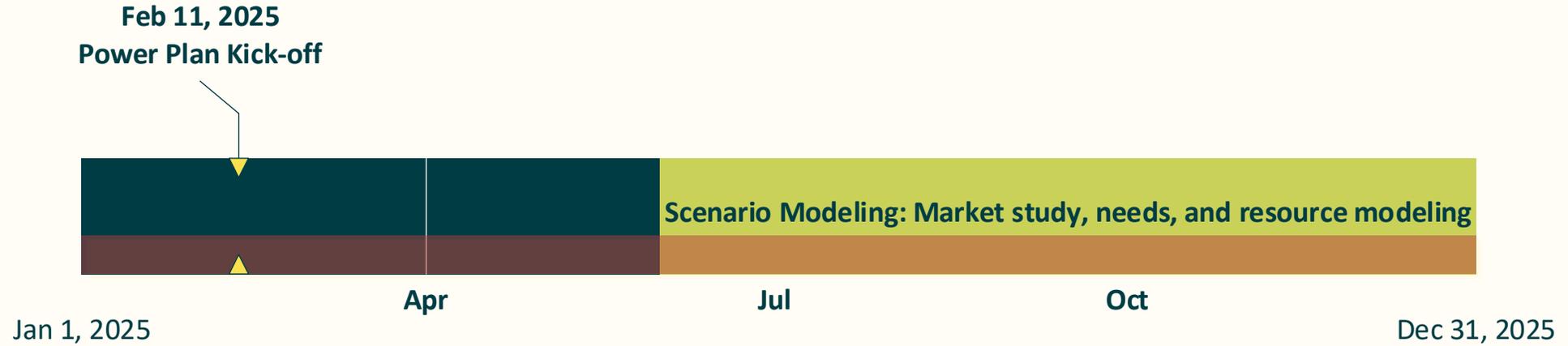
- Q. Model Conservation Standards

- R. Glossary

***Anticipated in June-ish***

**What's Coming Up Next**

# Power Plan Timeline



# Looking Ahead

Month	Council Agenda Item	Time Est.
February 10-11 (Portland)	Primer on modeling results	1 hr
March 10-12 (Portland)	Initial review of scenario modeling results	4-6 hr
March 24-25 (webinar)	Extra work session to dive deeper into modeling results	4-6 hr
April 14-16 (White Fish, MT)	Discussion of proposed recommendations, topics include: <ul style="list-style-type: none"> <li>• Resource strategy options and conservation program elements</li> <li>• Supporting recommendations</li> </ul>	8 hr
April 28-29 (webinar)	Tentative extra work session to continue discussing recommendations	TBD
May 12-14 (Pendleton, OR)	Continued discussion of proposed recommendations and review of draft power plan chapters <ul style="list-style-type: none"> <li>• First look at context setting chapters</li> </ul>	8 hr
May 27-29 (webinar)	Tentative extra work session to continue refining recommendations & chapters	TBD
June 16-18 (Portland)	Continued review of draft power plan chapters <ul style="list-style-type: none"> <li>• First look at chapters covering recommendations (as previously discussed)</li> <li>• Second look at context setting chapters</li> </ul>	8 hr
June 30-July 1 (webinar)	Tentative extra Council meeting to continue refining draft plan chapters, if needed	TBD
July 14-15 (Portland)	Adopt draft power plan for public comment	1+ hr

Work sessions

# Getting from Draft to Final

Month	Council Agenda Item/Ongoing Activities
July	Post draft power plan and initiate 60-day public comment period
August	Start public hearings
September	Continue public hearings Comment period closes
October 14-15 (Donnelly, ID)	Discuss public comment with Council
November 17-18 (Portland)	Approve final plan (target date)

**Questions?**