

Power Committee Meeting

October 23, 2026



Northwest **Power** and
Conservation Council

Today's Agenda

- Staff to walk through an important modeling update we needed to make, which was identified through the public comment process:
 - What is the issue?
 - What is the significance for the draft Plan's resource strategy?
- Staff to share proposed next steps with the Council and the region as we continue to develop the Ninth Power Plan:
 - Proposed additional analysis
 - Scheduled upcoming advisory committee meetings
 - Plans for upcoming Council meeting
 - Timing for a second draft of the Ninth Plan

Discussion of Modeling Update

Quick Overview

- Through discussions with Bonneville regarding the Council's hydro system modeling, Bonneville raised a flag regarding some data from GENESYS
 - Modeling data shared with Bonneville showed an additional ~40 MAF of water coming through the system
- Staff reviewed the data and confirmed that there was an error in the GENESYS setup that needed to be addressed
- Since then, staff has made updates to the GENESYS modeling and completed some quick OptGen studies to roughly size the potential impact to the strategy
 - High level: This will result in a significant change to the strategy, more on this later

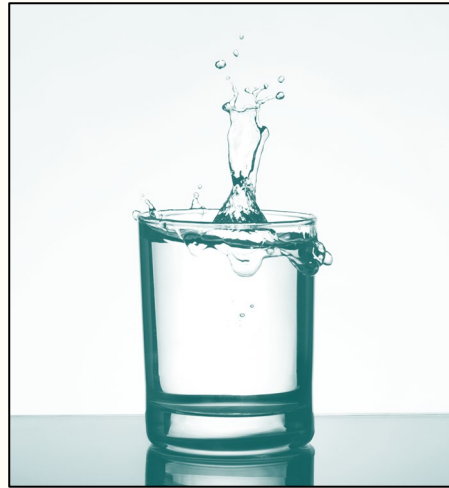
GENESYS Modeling Approach

- In advance of the Ninth Plan, the Council made an enhancement to GENESYS that allowed for improved modeling around the “future value of hydro”
- “Future value of hydro” is essentially trying to mimic the reality that operators have some insight around future water conditions that can guide decisions today
 - For example, weather forecasts provide insight to inform future stream flows and loads that might result in an operator holding back water today as a hedge for future needs
 - This modeling feature provides something similar by taking information from the weekly model to provide a range of future streamflow information to guide decisions in the hourly model
- The error occurred in the implementation of this enhancement

How This Feature Should Work

- The weekly stage provides a water inventory to the hourly stage to guide modeling
- The “bucket” of water available in the weekly stage should equal the “bucket” of water for that same week through the hourly stage

Weekly Stage



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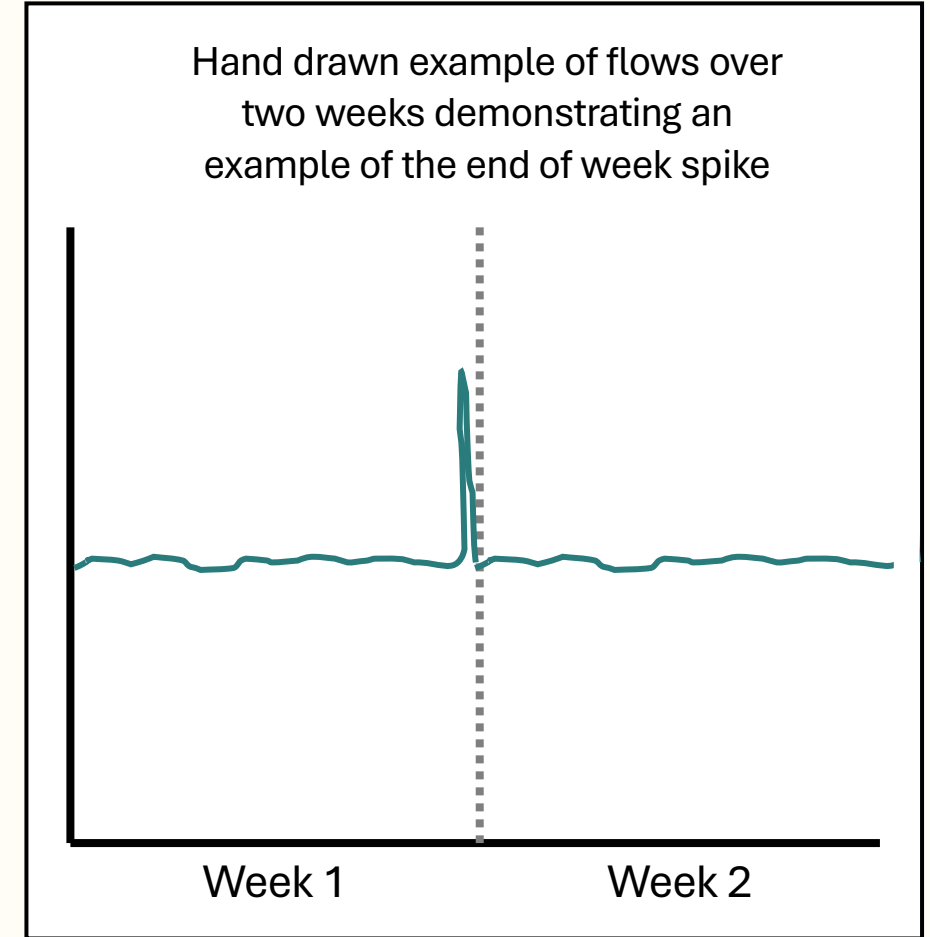
Hourly Stage



Photo by [Rahul Himkar](#) on [Unsplash](#)

Initial Testing of This Enhancement

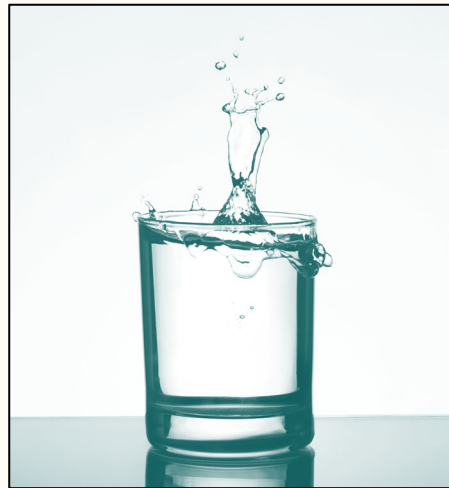
- During initial testing of this enhancement, we found times when the model had significant shifts in flows at the end of the day or week
- This was driven by multiple factors, such as:
 - Periods of high water when the model was not using the full inventory and had to adjust quickly
 - Constraints in the hourly mode providing new information about an obligation that needed to be met
- The model developers added functionality (a slack variable) allowing us to smooth out operations to avoid these spikes



What Happened During the Plan

- The model was utilizing the slack variable more than we had expected, resulting in the hourly stage at times having more or less water than in the weekly inventory
- On average, more water was being added in the hourly stage, resulting in increased generation assumed in the existing system

Weekly Stage



Hourly Stage



More generation
in the existing
system means
less need for new
resources

Photo by [Rahul Himkar](#) on [Unsplash](#)

Major Updates to Improve the Flows

- Staff made a few changes in the model to address the issue

Tighter control of target storage between the weekly and hourly stage

This significantly improves the alignment of the weekly and hourly storage levels, and therefore the outflows and generation in the model

New initial storage alignment in Mica and Arrow in the weekly stage

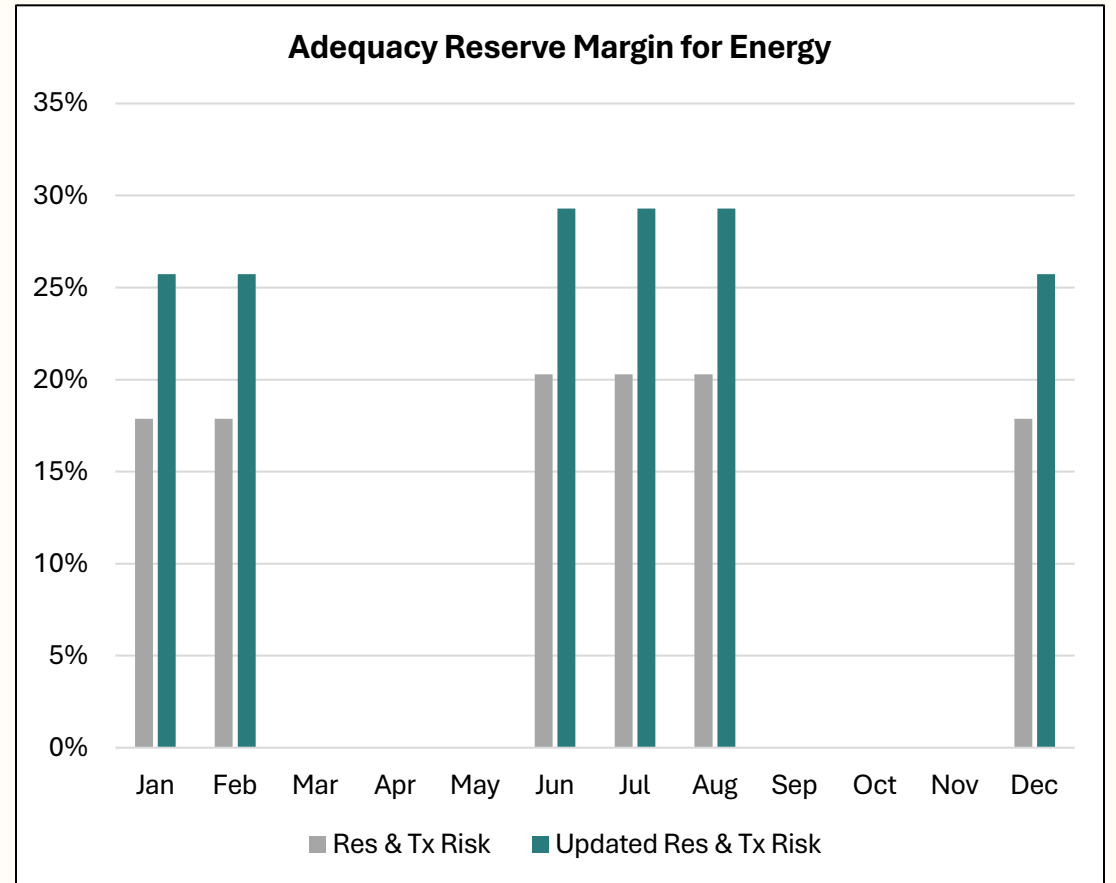
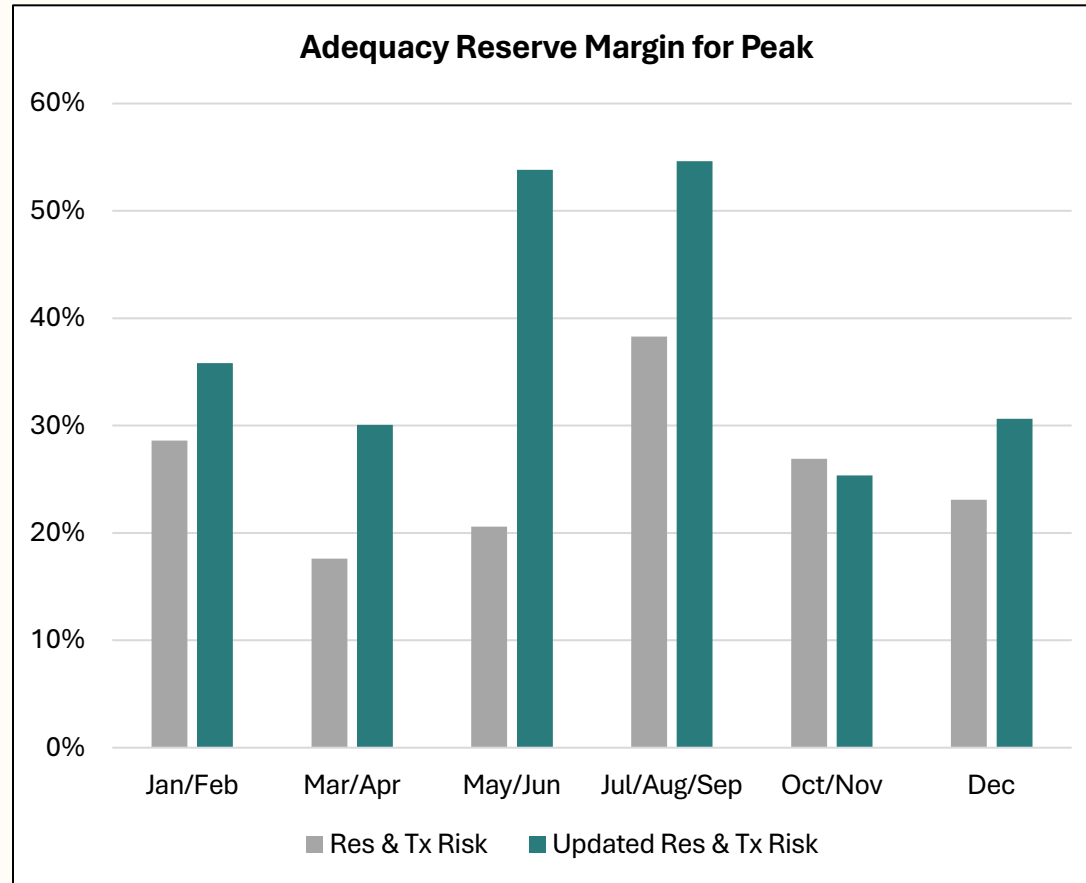
While the previous assumption was not an error, this improvement provides more nuanced information for the future value of hydro

- Collectively, these tightened the relationship between inflows and outflows ensuring that water is not being added (or destroyed) in the modeling
- Staff is confident the model is now in a good place to guide needs and adequacy for the Ninth Plan

Impact on Needs and Adequacy

- As stated earlier, the draft Plan assumed more water on average in the hourly stage of GENESYS, and therefore more generation in the existing system, than is appropriate
- More generation translates to less need for new resources to meet future load growth
- After updating GENESYS, the generation from the existing system is reduced and the resultant need for new resources increases
 - Important note: This modeling feature only impacted the hourly modeling in GENESYS and did not affect the weekly stage of GENESYS or OptGen, meaning information learned regarding policy and economics from previous runs continues to provide valuable insight for planning
- The proposed strategy including in the draft Plan is no longer adequate and early tests suggest that the Council will need to add additional resource (1,000s of MW) to the proposed strategy

Updated Needs



Next Steps

Next Phase of Power Plan Development

Additional Modeling

Staff proposes conducting some additional modeling to provide insights on the most cost-effective approach for filling the remaining gap

Advisory Committee Meetings

Staff is planning additional advisory committee meetings to broaden understanding of these updates, the resolution, and discuss new modeling

Release a Second Draft

This update warrants releasing a second draft to provide time for additional public comment on the updated resource strategy

Proposed Additional Modeling

- Staff proposes re-running a subset of the sensitivities to provide information on cost-effective approaches for meeting resource adequacy under a range of conditions
- Specific sensitivities include:

Transmission Plus

Provides a strategy for when resources are constrained only by technical limitations, and planned transmission is developed on time.

Constrained World

Provides a counterpoint where supply side resources and transmission are constrained and/or delayed.

Changing Federal Policy

This sensitivity showed a difference in near-term builds previously and explores how changing prices between renewables and gas impact builds.

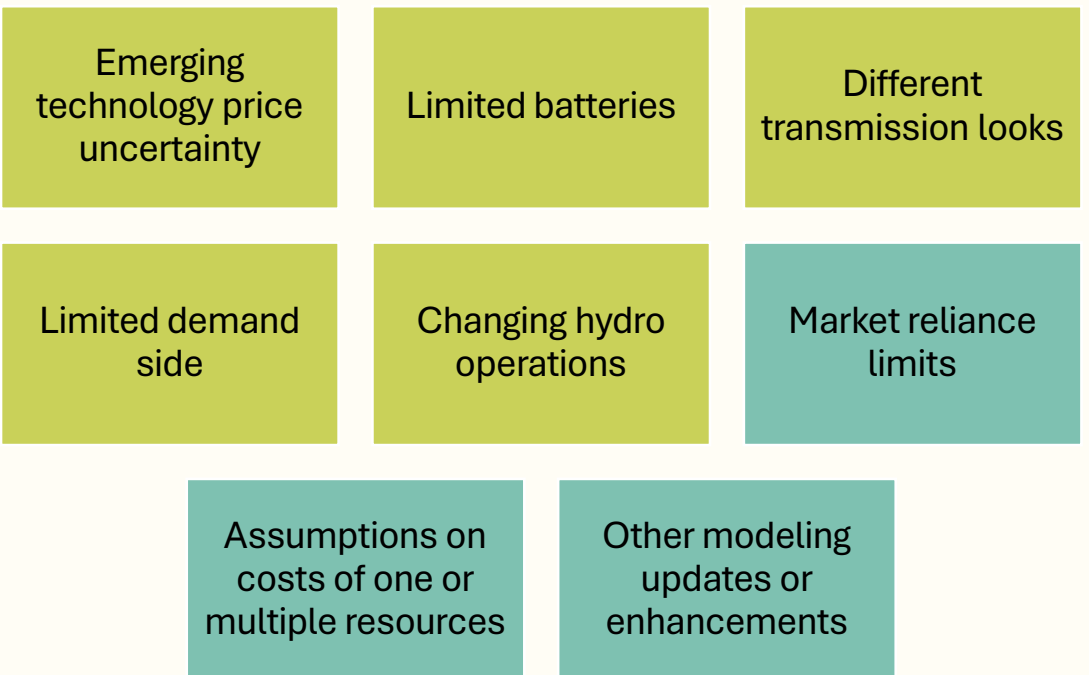
Lower Data Center Loads

This would remove the highest data center loads, providing information on if those loads don't show up and/or they are providing their own resources.

Staff is Proposing to Not Revisit Other Sensitivities or Assumptions

- The information from the other sensitivities continues to provide useful directional data that can be considered in developing the strategy
- While commenters have proposed updating various assumptions and/or adding sensitivities, staff believe that revisiting any of these assumptions would likely benefit from revisiting all (or most), which would require a year+ of analysis

Other **sensitivities** or **assumptions** staff is not recommending revisiting at this time:



Upcoming Advisory Committee Meetings

- Staff is planning some additional advisory committee meetings to walk through staff's model updates and new analysis
 - **November 3, 9-1 Pacific:** RAAC/SAAC meeting to discuss the hydro modeling and updated needs assessment
 - **November 19, 10-3 Pacific:** RAAC/SAAC meeting to provide time for follow-up question on hydro updates and share out updated modeling results
 - **November 19, 3-4 Pacific:** Open webinar to provide space for broader community to ask questions regarding these new updates
- These have been advertised more broadly than typical advisory committees
- We can make space for more time, if needed, as we work through any outstanding questions or concerns as we develop a second draft

Upcoming Council Meetings

Month	Council Agenda Item	Time Est.
November 17-18 (Portland)	Continue development of draft plan • Updated modeling results and a review of comments related to the resource strategy in the draft Plan • Discussion and staff recommendation of potential changes on comments received on other aspects of the power plan	4-5 hr
December 2 (Webinar)	Extra work session with the Council to continue development of draft Plan • Discussion of updated resource strategy and related recommendation • Continued work on addressing other comments from the draft plan, as needed	2-4 hr
December 15-16 (Portland)	Potential release of a second draft Ninth Plan	1-? hr

Public Comment and Finalizing a Plan

Staff is working towards
this timeline for now

Month	December Draft 2 Release	January Draft 2 Release	February Draft 2 Release
Release Draft 2	December 15-16 Meeting	January 12-13 Meeting	February 9-10 Meeting
Public Comment Period	60-day	45-day	45-day
End of Public Comment	Mid-February	Late February	Late March
Review of Comments	Use the March and April Meetings	Use the March and April, and maybe May Meetings	Use the April and May Meetings
Potential release of Final Plan	April 13-14 meeting	April or May Meeting	May 11-12 Meeting

Times can evolve as we learn more over the coming months

Discussion