Northwest **Power** and **Conservation** Council

September 3, 2025

MEMORANDUM

TO: **Council Members**

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

SUBJECT: **Finalizing Scope of the New Resource and Transmission Risk Scenario**

BACKGROUND:

Presenter: Jennifer Light

Summary: The Council has agreed to include a scenario in the Ninth Power Plan that explores the uncertainty around the future availability and cost of new resource additions and transmission. This scenario is intended to inform the Ninth Plan by providing insights into the types and amounts of resources that are cost-effective and robust across a range of uncertainty, as well as how a specific resource (or groups of resources) mitigate against the risk around future uncertainty.

At its February 2025 meeting, the Council discussed and agreed to a set of six sensitivities to model under this scenario. As the power planning efforts move into the scenario modeling stage, staff wanted to have another conversation with members to bring more details behind the proposed sensitivities and get a general head nod of support on the overall scope for this analysis.

Relevance: The Council is moving into the scenario modeling phase for the development of the Ninth Power Plan. The New Resource and Transmission Risk Scenario will provide valuable insight into new resource strategies under a range of futures with respect to resource availability and pricing and transmission buildouts.

Workplan: B. Development of Ninth Power Plan

Background: Early on in the preparation for the Ninth Power Plan, the Council and staff identified the need for a scenario to explore the risk and uncertainty around the cost, availability, and pace of new resource development. This was highlighted as a potential analysis area in the Ninth Power Plan Issue Paper. Comments received on the Issue Paper demonstrated strong regional support for a scenario in this space. These comments indicated interest in the Council including sensitivities that consider:

- Conservative or pessimistic assumptions around the availability of new resources, including the timelines and availability of new emerging resources
- Accelerated transmission development timelines and the impact on resource decisions (in addition to the delayed transmission timeline sensitivities discussed in the issue paper)
- Varying cost and availability assumptions for commercially available resources
- Cost of compliance with existing laws and regulations

In February 2025, staff proposed a suite of sensitivities to include in this scenario to address these and other potential risk areas. Since then, staff have spent time considering approaches to modeling these sensitivities, which has provided some proposed refinement to the specific assumptions. Additionally, there have been changes in policies at the federal level, requiring some adjustments to the approach. At the September meeting, staff will walk through the final proposed scope for this sensitivity, providing details on the approach and proposed shifts. All in all, staff believe that the proposed refinements are all within the initial scope discussed in February and will ultimately yield more valuable results to inform the Council in its power planning effort.

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Purpose of Today's Discussion

Focusing on the New Resource and Transmission Risk Scenario:

- Remind the Council and region of the planned scope
- Provide more detail on the proposed approach/assumptions

We are not proposing any big shifts in the direction at this point in time.

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New Resource and Transmission Risk Scenario

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Why this Scenario?

- This scenario explores a range of uncertainty (or risk) related to the region's ability to build new resources and transmission
- Each sensitivity will provide an optimized regional build-out given that suite of assumptions across the range of futures
- Collectively, the Council can learn:
  - What resources, and in what amounts, are robust across the range of uncertainty?
  - What resources (or suites of resources) are built to mitigate different risks?

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Reminder of Planned Sensitivities

Constrained New Resources and Transmission Options	How would new resource additions change with limitations on what the region can build?
Changing Transmission Availability	How does the pace of transmission development impact new resource selection for the region?
Changing Emerging Technology Costs	How does the uncertainty around the cost of emerging technologies impact the new resource selection?
Limited Short-Duration Storage Availability	How would our new resource additions change if we were limited in the amount of new storage available?
Slower Demand Side Resource Availability	How would our new resource additions change if demand side resource took longer to develop?
Evolving Federal Policy Landscape	How do changes at the federal level impact resource decisions in the region?

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Evolving Federal Policy Landscape

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Modeling Uncertainty in Federal Policy

- Over a 20-year planning horizon, there are always elements of policy uncertainty
- For the Ninth Plan, a key area of uncertainty during initial scoping was around the changing administration and policies at the federal level
- Staff proposed including an Evolving Federal Policy Landscape sensitivity as a space to model this policy uncertainty

Federal Policy in February 2025

- The Inflation Reduction Act was a significant new policy enacted since the 2021 Power Plan that impacted new resource costs
- At the time of developing assumptions, the IRA was still law and impacted the bulk of new resource costs
- Staff recognized the likelihood that many of the tax credits might be withdrawn and the Clean Air Act might be amended to remove the requirements for new gas sources

Inflation Reduction Act

- Provided technology neutral tax credits for clean generating resources, applying to:
  - All supply side resource reference plants, except the natural gas options
  - Some energy efficiency measures
- Included amendments to the Clean Air Act, which specifically applied to assumptions for new combined cycle combustion turbines
  - Required carbon capture sequestration if operating at >40% capacity factors

Federal Policy as of September 2025

- Recent policy changes have eliminated tax credits for renewables and energy efficiency
  - Tax credits remain for the other supply-side resources
- While the Clean Air Act has not yet been amended, staff continue to assume that the requirements for new gas generation will change under this administration
- With policies being different today than assumed during initial scoping, staff recommend a slight shift in approach

Budget Reconciliation Bill

- Terminated of tax credits for wind and solar tax credits for facilities that have commenced construction after July 4, 2026 or are in service after December 31, 2027
- Terminated the tax credits for energy efficiency in service after December 31, 2025

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Staff Proposes Shifting the Approach to Account for Recent Policy Changes

Initial Approach Reflecting Former Policy

Constrained New Resources and Transmission Options	Changing Transmission Availability	Changing Emerging Tech Costs
Limited Short-Duration Storage Availability	Slower Demand Side Resource Availability	Evolving Federal Policy Landscape

Updated Approach Reflecting Current Policy

Constrained New Resources and Transmission Options	Changing Transmission Availability	Changing Emerging Tech Costs
Limited Short-Duration Storage Availability	Slower Demand Side Resource Availability	Evolving Federal Policy Landscape

- Assumed IRA incentives and 111(b) requirements continue
- Remove IRA incentives (for most resources) and 111(b) requirements
- Remove IRA incentives for renewables and efficiency, and remove 111(b) requirements
- Assume new tax credits and emissions requirements for new gas in the future

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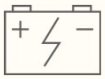
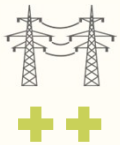
Evolving Federal Policy Landscape Sensitivity

- More specifically, this sensitivity would assume:
  - New tax credits for renewables
  - Requirements for new combined cycle combustion turbines
  - Tax credits available for specific energy efficiency measures
- Assumptions would be based on those from the IRA and would be assumed to come into effect for 2030
  - IRA provides a set of assumptions we can use, and have already used in early work
  - 2030 is a midpoint in the Ninth Plan action plan period and is far enough out to be realistic in terms of a potential change in policy, but not too far out to not inform near-term decisions
- Reminder: The purpose of this sensitivity is to explore how regional resource decisions are affected by changes in federal policy to understand how big an uncertainty or risk factor this is in our power planning effort

Remaining Sensitivities

Quick Key for Remaining Sensitivities

- All the remaining sensitivities assume the tax credits as defined currently (i.e. no tax credits for renewables or energy efficiency) and no CCS/capacity factor requirements for new natural gas reference plants
- As we walk through, resources with specific changes will be highlighted in red with a note describing the proposed change

Renewables	Storage	Natural Gas	Emerging Tech	Demand Side	Transmission
					

The number of ✚'s provides insights on the amount of assumed transmission. None means existing only, ✚ is aligned with WestTEC 10-year study results, and ✚✚ is aligned with even more transmission

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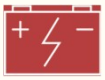
Constrained New Resources and Transmission

- How would new resource additions change with limitations on what we could build?
- Sensitivity is designed to capture the risk around the ability to build new resources and transmission, as well as uncertainty around emerging resource opportunities
- Key assumptions are:



Limit near-term (first 2-year) availability	Delay availability by 10 years	Remove emerging tech measures	Only existing transmission

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Changing Transmission Availability

- How does the pace of transmission development impact new resource selection for the region?
- Sensitivity is designed to understand how optimizing new resource additions change under different transmission futures
  - Assumptions will leverage WestTEC and other transmission expertise
- Key assumptions are:

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Changing Emerging Technology Costs

- How does the uncertainty around the cost of emerging technologies impact the new resource selection?
- Recognizing inherent uncertainty in emerging technology costs, sensitivity is expected to inform at what price points different emerging resources might make more sense for the future needs
- Key assumptions are:

Test both an increase in costs by 50% and a decrease in costs of 25%

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Limited Short-Duration Battery Availability

- How would our new resource additions change if we were limited in the amount of new storage available?
- Sensitivity would explore the impacts of near-term limitations on the availability of short-term (Li+) batteries
- Key assumptions:

Limit near-term (6-year) availability of short-duration storage

Limit related demand response potential

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Slower Demand Side Resource Availability

- How would our new resource additions change if demand side resources took longer to develop?
- Sensitivity explores how development limitations on the demand side (instead of supply side resources) would change the optimal resource selection
- Key assumptions:

Limit availability of efficiency and demand response by slowing ramp rates for all resources

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Next Steps

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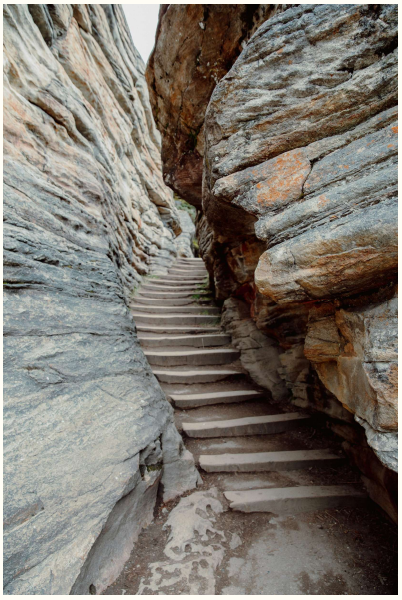
Next Steps this Scenario

- Staff plans to start modeling for the New Resource and Transmission Risk Scenario in late October/November
- In preparation, updates will be made to generating resource reference plants and demand side resource supply curves consistent with each sensitivity
- Consistent assumptions will be used across the market availability study and in-region resource optimization



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