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

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December 7, 2021

MEMORANDUM

TO: Power Committee

FROM: Ben Kujala

SUBJECT: High-level Summary of Comments Received

BACKGROUND:

Presenters: Power Division Staff

Summary: Staff will go over a summary of the [comments received](#). The intent of this presentation is to give a comprehensive sense of the comments related to suggested or recommended changes to the plan document and supporting materials. Any staff recommendations on responding to comments will be covered at the January meeting including where appropriate recommending edits and additions to the plan document and supporting material. We will also give serious consideration to any guidance from the members at this meeting when formulating recommendations on responding to comments.

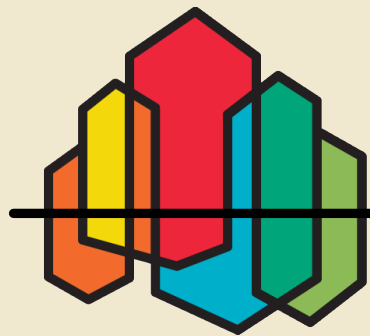
More Info:

All comments received are public and can be viewed here:
<https://app.nwcouncil.org/energy/powerplan/2021/comments/>

We have also provided a detailed summary of recommendations to the members in a table format. In order to summarize the comments, we have simplified and combined some concerns raised by different commenters. In considering the comments going forward we will use the provided summaries as tools but be referencing back to the full detailed comments to make sure we're giving them full consideration.

Draft Plan Summary of Comments

[Full comments are publicly posted and available on our website](#)



**THE 2021
NORTHWEST
POWER PLAN**

FOR A SECURE & AFFORDABLE
ENERGY FUTURE

Purpose of this Presentation

The Council received 178 comments on the draft plan – many comments supportive of elements of the current draft.

Thank you to everyone who took the time to comment

This presentation focuses on comments received regarding requested or suggested changes to the draft plan – it does not emphasize the comments supporting the draft or capture requests of the Council not related to the draft plan material.

This presentation is not intended to cover staff reaction to any of the comments – that discussion will be brought forward in January.





Themes from the Comments

- A potentially (in)adequate resource strategy when considering the major **load impacts of decarbonization**
- **Regional system adequacy**, particularly from the effects of resource retirements and replacement by renewables
- The **conservation target**
 - Analysis does not fully capture the benefits of conservation and therefore the target should be higher
 - Target is appropriate, though cost-effectiveness should be based on the upper-end of the range
- **Value and role of energy storage** is not fully captured; storage should have a greater role in the power plan resource strategy (adequacy, capacity)
- Over-reliance on the **flexibility of the existing hydropower system** and the effects on fish and wildlife; if constrained further than anticipated in the resource strategy, what else is needed to maintain resource adequacy (e.g. more of other resources)
- Analyzing the effects on the resource strategy *if* the **Lower Snake Dams** were removed
 - Comments that the Council **should and should not recommend removal** of the Lower Snake River dams



Demand Forecast

-  =numerous commenters
-  =a few comments (2-3)
-  =a single commenter

Climate Change

- Include a robust discussion and analysis on planning for extreme and outlier climate events that could have a significant impact on grid resilience and resource adequacy such as
 - Impacts from severe storms
 - Peak and energy needs in during extended extreme temperatures
 - Wildfire impact on the transmission system
 - Costs to mitigate adverse climate effects on power system
- Compare the plan's power system operations under influence of forecast climate change with those under historical climate conditions
 - Address possible limitations of the RMJOC climate models
 - The plan should include more climate data sets (and more variations)






Decarbonization (1)

- The draft plan does not fully incorporate reasonable decarbonization and electrification assumptions and thus doesn't call for sufficient resource additions
- The plan should account for Oregon and Washington's more aggressive greenhouse gas regulations
 - account for the accelerated adoption of zero emission vehicles
 - include increased use of electricity for building space-heating and water-heating loads associated with new building performance standards and energy codes in population centers
 - compare with other studies showing feasibility of deep (80%) decarbonization
 - analyze the effects on the electric system from state and national climate policies focused on sectors such as transportation and industry
 - revise accounting for upstream methane emissions








Decarbonization (2)

-  The plan should account for regional utilities' resource planning to achieve decarbonization goals
 -  emphasize the potential for significantly more investment in resources and infrastructure to achieve decarbonization
 -  incorporate results from the early-coal retirement and partial decarbonization scenario studies that better match the assumptions in many regional utilities' planning for decarbonization







Greenhouse Gas Policy

- The plan should modify how the pathways to decarbonization analysis is focused, incorporated and considered.
-  Recommendations on emphasis of this analysis ranged from remove from the plan, augment the analysis or base all the plan recommendations on the pathways to decarbonization
-  Calls for the plan explicitly recommend the region transition to transportation and building electrification
- The plan should clarify and update assumptions relating to current and future greenhouse gas policies
 -  Clarify usage and analysis of carbon pricing and damages
 -  Incorporate lifecycle accounting of emissions from all resources in analysis
 -  Update assumptions to reflect the Oregon HB 2021 (100 percent clean) and Washington SB 5126 (Cap and Trade)



Transportation

-  The baseline modeling assumptions underestimate the impacts to the system from rapidly emerging transportation policies in Washington and Oregon
-  The load forecast from the High Electric Transportation Case is more realistic than the reference case
-  There is a lack of discussion of EV smart charging and vehicle-to-grid response
-  The plan should include recommendations for BPA and utilities to work to improve the efficiency of electric vehicles.



Regional Reserve & Reliability Forecast









=numerous commenters

=a few comments (2-3)

=a single commenter

Resource Adequacy

-  The plan's analysis on resource adequacy is not sufficiently vetted and should be heavily caveated or removed with a recommendation to take up further work on adequacy after the completion of the plan.
-  The plan's recommended resource strategy significantly understates the amount of resource needed to maintain an adequate regional power supply.
-  For future power plan cycles, examine whether continued resource adequacy work by the Council is necessary now that resource adequacy is being addressed through the Western Resource Adequacy Program (WRAP).
-  The plan should encourage BPA and other utilities to participate in the WRAP.
-  The Council should consider adjusting (lowering) its baseline resource buildout outside of the region to be more reflective of other region's policies and forecasts.
-  The plan and supporting material should supply more detail on the Associated System Capacity Contribution (ASCC) methodology, especially since the Council's estimates for wind and solar ASCC are higher than estimates by other entities.



Resiliency



- The plan should incorporate resiliency into its analysis and recommendations



- The plan should recommend resiliency measures like microgrids and rooftop solar plus storage



- The plan should include analysis of Grid-Interactive Efficient Buildings (GEBs)



Conservation Resources & Program



=numerous commenters

=a few comments (2-3)

=a single commenter

Conservation



- Conservation (EE) level (target) should be higher
 - Numerous comments recommend a greater levels of conservation needed in the Resource Strategy
 - Underestimating system needs such as from the impacts of decarb or loss of generation etc.
 - The current target is half of the 7th Plan target; EE infrastructure and programs will suffer as a result



- Conservation cost-effectiveness
 - Conservation level should be based on a higher amount than 750 aMW
 - 1000 aMW should be the cost-effective level, but the regional target should remain as the 750-1000 range
 - Initiate a process to re-evaluate its cost-effectiveness methodology for EE
 - Use the utility cost as the basis for cost-effectiveness
 - Clarify the EE cost-effectiveness methodology
 - Not fully capturing all benefits (would result in a higher target)
 - Include more NEIs in the cost-effectiveness (especially for equity)
 - More quantification of environmental benefits of EE



Conservation (2)

- Target is appropriate or too high
 - Target should better recognize differing needs of utilities and cost effectiveness levels
- Point target instead of a range
 - The plan should set a point target instead of a range
 - This is the first time ever the plan has included a range
- Shortfall of EE acquisition and utility-specific targets
 - Council should take action for not meeting the 7th Plan targets
 - The plan should explicitly outline what cooperative actions the region, the Council, and Bonneville should take to address a future shortfall in EE acquisition and set forth the conditions that trigger these actions
 - Council should set utility-specific EE targets and propose a surcharge for those that miss the target
- EE Modeling methodologies
 - Revise modeling approach to adopt EE first, then add in other resources per the Act
 - More consistency in comparing EE to other resources: tax credits, capital cost forecast (decline), RECS, dispatchability



Conservation (3)






• Miscellaneous





- MCS on “conversion to electric space & water heating” implies the Council is encouraging fuel switching
- The plan should emphasize energy efficiency that improves resiliency
- Plan should recommend research into EE in rental properties and multifamily buildings
- Improve T&D value to reflect higher capacity values; also, T&D benefits are under-represented
- Clarify approach to the portion of EE that is technically achievable
- The plan’s EE supply curves are missing substantial potential because of the methodology used
- Utilities should weatherize all tribal homes by 2025
- Include analysis of Grid-Interactive Efficient Buildings (GEBs)
- Explicitly include weatherization measures in the target for EE
- Highlight the importance of codes and standards and include them in the BPA program target



New Generating Resources

-  =numerous commenters
-  =a few comments (2-3)
-  =a single commenter

Renewables Build

- The 3,500 megawatts of renewables by 2027 in the draft plan's resource strategy is:
 -  Too low/not enough
 -  Too high/unrealistic/would take up too much land
 -  The overall resource strategy understates the amount of resources needed to maintain an adequate system, especially considering upcoming thermal retirements
-  The plan should include consideration for land use and habitat requirements and impacts of siting new transmission and renewable resources



Generating Resource Wrap-Up (1)

- The plan resource strategy should specifically recommend new:
 - Energy storage
 - Distributed generation (e.g. rooftop solar)
 - Geothermal energy
 - Nuclear; Small modular reactor (SMR) nuclear and natural gas + carbon capture and sequestration
 - Pumped storage
 - Offshore wind and ocean energy resources
 - Anaerobic digestion (biogas)
- The plan resource strategy should specifically not recommend new:
 - Nuclear
 - Natural gas






Generating Resource Wrap-Up (2)




- The plan should include a deeper analysis on emerging technology resources which could become viable and even vital in the plan horizon
 - The plan should use offshore wind as the emerging tech proxy resource
- The plan should recommend getting rid of existing:
 - Nuclear
 - GHG-emitting resources
- The plan should include R&D items on
 - Batteries
 - Ocean & wave energy technologies
 - Electrolytic hydrogen production as a grid-level energy storage, a resource to support ancillary services, and transmission redispatch



Demand Response

-  =numerous commenters
-  =a few comments (2-3)
-  =a single commenter

Demand Response

-  Plan should require more DR and/or have an explicit target for DR
 - Current approach to adequacy does not capture full value of DR
 - Plan should recommend utilities consider *all* forms of DR to fit needs
-  However, one commenter thought the potential for demand voltage regulation was overstated and another felt time-of-use is not very feasible for residential customers
-  Additional DR comments are that the plan should recommend:
 - All non-residential customers be moved to time-of-use
 - Utility implementation of electric vehicle-to-grid capabilities
 - RTF incorporate equity metrics into DR (and EE) measure analysis



Existing Generation



=numerous commenters

=a few comments (2-3)

=a single commenter



Lower Snake River Dams

mentioned in 66 out of 178 comments

The plan included many comments regarding the Lower Snake River dams including:

- **The plan should include a scenario that examines removal of the dams** – Commenters included CRITFC, Washington State Energy Office, Washington Department of Fish and Wildlife, Idaho Conservation League, Idaho Rivers United, Columbia Riverkeepers, and many individuals
- **The plan should recommend removal of the dams** – Commenters included Idaho Conservation League and many individuals
- **The plan should recommend the dams be preserved as an important part of the system** – Commenters included Oregon Municipal Electric Utilities, Salmon River Electric Coop, and some individuals

Some comments went in the opposite direction encouraging the Council to maintain the draft plan's current approach of not engaging in analysis of the Lower Snake River Dams





Hydro Operations




- Concerns around assumptions of flexibility within the FCRPS and Mid-Columbia PUD dams related to fish constraints
- Plan should include scenarios with differing operations
- The plan should update hydro operations to match the most recent spill agreement for the Federal Columbia River Power System. It also does not consider effects of potential future changes to fish and wildlife hydro operations.



Natural Gas

- Appreciate the effort to include upstream methane emissions, continue to update the assessment of upstream methane emissions - consult with both industry and scientific experts
- The Plan understates the potential for renewable natural gas use in the region
- Council should revisit its natural gas price forecast to ensure that the 2021 Plan adequately captures the risk of higher gas prices on the identified resource strategy
- Reject new natural gas plants and new building use in the Plan



-  =numerous commenters
-  =a few comments (2-3)
-  =a single commenter

Methodology for Determining Environmental Cost & Benefits of New Resource




Methodology for Determining Quantifiable Environmental Costs and Benefits






- We received several comments concerned that the methodology does not adequately capture the entire scope of environmental costs and benefits of various resources
 - Consider quantifying costs and benefits (beyond those that are known and already included) and incorporating into the analysis (e.g. considerations of fish and wildlife habitat, non-energy impacts for energy efficiency measures)






Bonneville

-  =numerous commenters
-  =a few comments (2-3)
-  =a single commenter

Bonneville Power Administration

-  Uncertainty in amount of market exposure needs to be explored further and plan should be clear on BPA's role in a potential RTO
-  Differing thoughts on 36% assumption of Bonneville's portion of regional energy efficiency target
 - Lowering percentage from historical 42% will negatively impact small, rural customers that entirely depend on BPA for efficiency funds
 - Percentage is greater than percent of load estimated (drops to ~32%)
-  Suggestions for additional BPA recommendations:
 - Incorporate equity in programs and operations



-  =numerous commenters
-  =a few comments (2-3)
-  =a single commenter

General & Other Comments

Transmission



- The plan should include an integrated review of transmission and generation expansion and/or commit to pursuing that analysis in the next plan



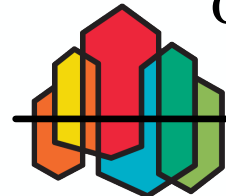
- The plan should recommend and the Council should pursue an integrated plan for siting transmission and renewables



- The plan should evaluate the use of electrolytic hydrogen production as a resource to support ancillary services and transmission redispatch on the electric grid



- The plan should include more explanation and discussion about transmission and distribution system elements that are not part of the planning and analysis process and should provide further explanation of how these omissions impact the resource selection process



Equity



- We received several comments in support of the work done thus far around equity (e.g. system integration forum on DEI in power planning), with a variety of commenters urging the Council to expand the emphasis
 - Equity should be considered and quantified as an impact (cost or benefit) to energy efficiency and generating resources
 - Consider the recommendations and findings from the forum and integrate them into the Council's work





Electricity Markets

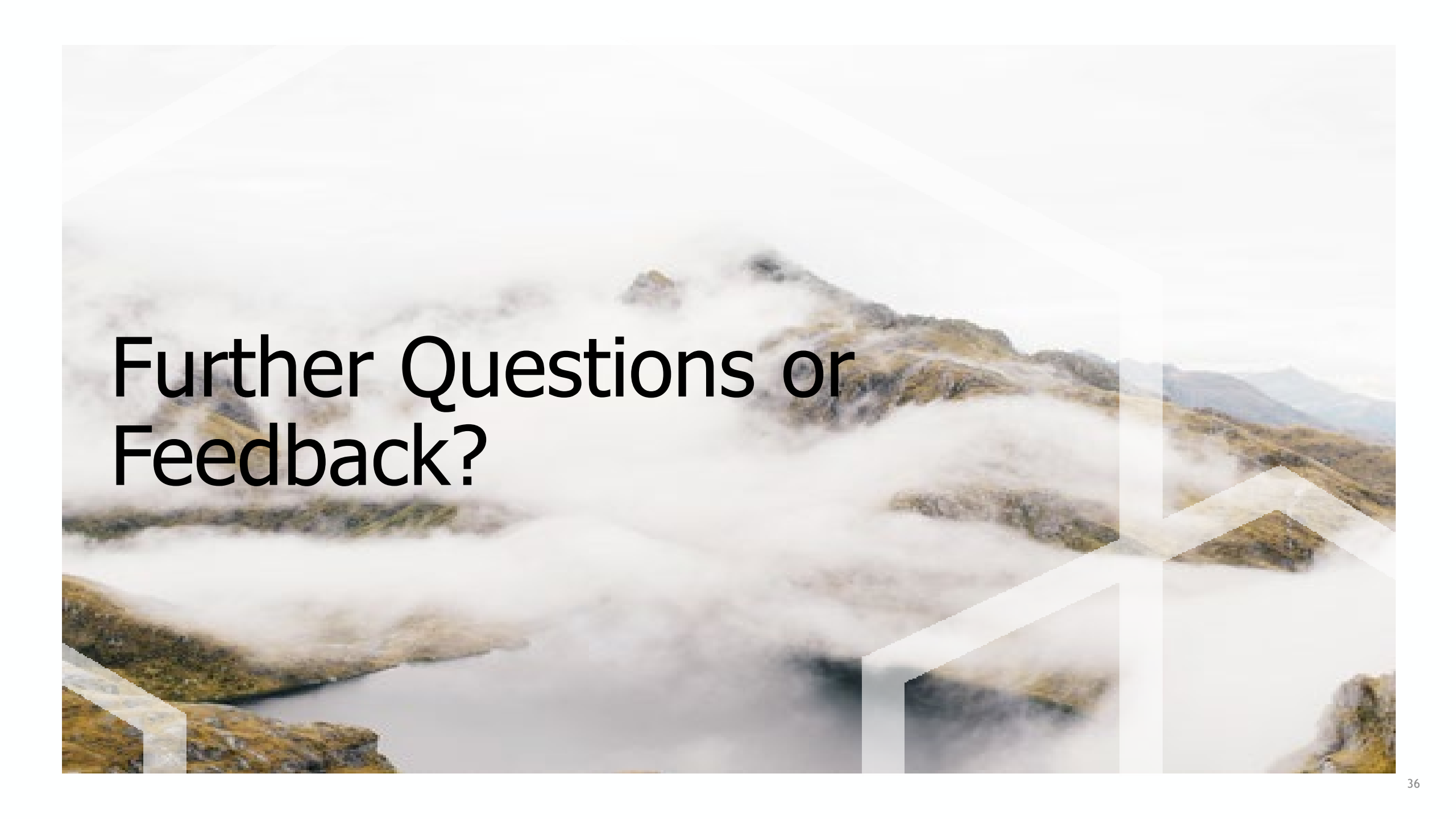
- Plan should recommend the region integrate piecemeal efforts on markets and adequacy and move toward a comprehensive regional solution, e.g. form an ISO/RTO
 - The plan should be clear if it recommends BPA participate in the establishment of an RTO
- The plan should alter its approach to the baseline conditions in the treatment of resource expansion outside the region



Action Plan

-  • The plan should include an action plan
-  • The action plan period should be extended to 2030



A scenic landscape featuring a calm lake in the foreground, surrounded by rugged mountains and a stone wall. The scene is partially obscured by a white geometric pattern of overlapping triangles and lines. The text "Further Questions or Feedback?" is overlaid on the left side of the image.

**Further Questions or
Feedback?**