

Comment ID	Submitter	Location	Comment	Response
1	Paul Nguyen, BPA	Page 2, Line 10	It seems odd to specifically name a single stakeholder and no others. Consider listing the major stakeholders that also includes "developers" or do not list any.	", including developers" removed.
2	Paul Nguyen, BPA	Page 2, Lines 12-22	The process seems to include only Enrolled Party needs. Should it say Enrolled and Non-Enrolled party needs or NG member's need?	No change: Enrolled parties takes into account all FERC jurisdictional entities as well as those that have signed the Member Agreement
3	Paul Nguyen, BPA	Page 2, Lines 16-17	It is not clearly stated where the "Alternative Projects" originated. Are they alternatives to the Baseline Projects received from the Enrolled Parties, are they produced at NG for the evaluation process, etc.?	Great catch. A section on Alternative projects added.
4	Paul Nguyen, BPA	Page 2, Line 27	Page 2, Line 27 – Assuming that "projected transmission" is referring to topology or projects, are there other things it could be referring to, so clarity would be good.	changed to "anticipated transmission topology"
5	Paul Nguyen, BPA	Page 3, Lines 14-15	Assuming that generation retirements/additions are in max output MWs. Recommend to add wording for clarity.	No change.
6	Paul Nguyen, BPA	Page 3, Lines 16-17	Says that all 141 projects are line projects. Are all of them line projects? If not, the word "line" should be removed.	Removed "line"
7	Paul Nguyen, BPA	Page 3, Lines 37-38	The footprint being big and over varied terrain seems like an incomplete description for why only winter and summer conditions are being modeled. Why would spring and/or fall not also be included based on that explanation? This sentence also fits better in the paragraph prior that discusses summer/winter peak loading.	Entire paragraph re-worded
8	Paul Nguyen, BPA	Page 3, Lines 37-41/Entire Doc	Did not see anything about batteries in the generation sections. Are they not included in this study? Although there are several symbols shown on Figure 5 that look like a battery. However, the "Storage" icon referenced as a resource is not clearly seen anywhere on the map.	added, "; batteries are included in the resources."
9	Paul Nguyen, BPA	Page 8, line 15	add the word "above" to say 230 kV and above transmission additions.	"above" added
10	Paul Nguyen, BPA	Page 9, Line 7	Include "load" in the observation.	"load " added
11	Paul Nguyen, BPA	Page 9, line 13	Not 100% sure where this observation is coming from but it seems like it is referring to the add/removed nameplate gen in the figure above. If it is referring to a net nameplate increase it is fine, but a lot of the replacement generation is non-dispatchable so I'm not sure if I would come to the same observation for net output. Extra wording to clarify would help	Reworded sentence
12	Paul Nguyen, BPA	Pages 13 and beyond	Recommend using sub-headers for the project names to add distinction from descriptions.	Noted, thank you
13	Paul Nguyen, BPA	Page 14, Line 23	States Big Eddy and Troutdale. It should be Big Eddy and Harborton.	Corrected
14	Paul Nguyen, BPA	Page 14, Lines 33-34	states "existing 500 kV Robinson Summit substation (in the WestConnect planning region)". With NV Energy joining NorthernGrid, should this substation be in NorthernGrid region as indicated on page 15 lines 3-5?	Corrected
15	Paul Nguyen, BPA	Page 20, Line 1	Should be southbound flows on COI/PDCI for a Cal export case	No; by definition, exports out of California have to go to the north, so it's a northbound case
16	Paul Nguyen, BPA	Page 9, Figure 4	The summary number for NorthernGrid Regional transmission projects is 13, which is much lower than the sum of transmission projects shown for member submittals on the Figure. It may be good to separate the Local and Regional projects for member submittals in the Figure.	Sentence re-worded
17	Paul Nguyen, BPA	Page 11-12, Figures 5-6	The resource reference icons on the right were very faded and hard to differentiate. Is it possible to enlarge or add contrast? Either there are no Summer Peak Load between 1,501-4,000MW seen on the map or it was very difficult to locate. If possible, consider adding more contrast to the colors to differentiate between the 1,501-4,000 MW and 4,000-10,000MW ranges	Noted; will work with the graphics artist
18	Paul Nguyen, BPA	Page 15, Figure 8	ABV of Enrolled Party names and % of changes are broken into two lines. Consider reducing size of font to keep the whole name and number on one line -OR- adjust to a horizontal layout	Noted; will work with the graphics artist
19	Paul Nguyen, BPA	Page 16, Table 2	Table will be adjusted after all other changes incorporated to ensure proper formatting	Table will be adjusted after all other changes incorporated to ensure proper formatting
20	Paul Nguyen, BPA	Page 23, Appendix B	BA and Year are broken into two lines. Consider reducing size of font to improve the look of the document by keeping the words and year together on the same line; improves overall readability.	Appendix B will be adjusted after all other changes incorporated to ensure proper formatting

The undersigned State parties (States) file these comments concerning NorthernGrid's Draft Study Scope. As NorthernGrid and its Enrolled Parties are aware, the States have a keen interest in transmission planning and allocation processes, an interest that increases as changes to our states' loads and resources shift to reflect new realities. Despite the diversity of views among the States, a few common themes have arisen in our review of the Draft Study Scope. Among these are the accuracy and consistency of Enrolled Party data submissions, the importance of timely planning and processes designed to quickly reflect changing realities, and the need for analyses intended to more fully capture potential changing realities and their effects on our electrical system.

Data Accuracy, Consistency, and Timeliness

Although the States have not had time to fully review data, we are concerned that some load and resource data submissions to NorthernGrid under the Attachment K-mandated process may not be complete or match data from other regulatory proceedings. While mismatched planning timelines, varying regulatory requirements, and other factors might explain some differences, Enrolled Parties should submit their entire 10-year forecasted loads and resources for inclusion in this study cycle. If Enrolled Parties deviate from this standard, they should provide an explanation as to why some forecasted elements were excluded from the dataset.

Likewise, to the extent possible, Enrolled Parties should submit consistent information across various forums. Whether in submissions for state-required integrated resource plans, this transmission planning process, WECC processes, or other arenas, there should not be wide deviations in the load and resource analyses submitted. Where there are differences, they should be transparently explained to enable better evaluation by outside parties, including states.

NorthernGrid staff assesses Enrolled Party submissions to ensure independence of the process. The States suggest that a fuller explanation of NorthernGrid's validation work in documents like the Draft Study Scope, the upcoming final Study Scope and the ultimate report of the study would help bolster confidence in the process and its independence. Consistent information and clear, public explanations of any necessary inconsistencies are important, particularly because timeliness of planning processes is becoming more critical. If a planning cycle were lost to errors, it could be difficult to add resources in time to meet needs.

As WECC noted in its 2021 Western Assessment of Resource Adequacy, the West is at increased risk of reliability problems stemming from extreme weather, a growing reliance on increased transfer capacity that may not materialize, and an evolving mix of generating resources. Utilities, merchants, and other stakeholders will need as much time as possible to implement new projects identified by planning processes. The planning processes themselves must be well-designed and executed to reveal needs quickly and accurately. Deficiencies in data affecting planning could result in lost time and an increased risk of reliability problems. The States offer the following list of items

that should be included in the transmission planning process at the utility or the regional level, some of which are required by NorthernGrid's Attachment K:

- Load and resource projections that reflect public policy requirements
- Modeling that considers varied extreme weather events
- Modeling that addresses a changing generation mix that cannot be operated like legacy systems
- Planning that accounts for development challenges, such as siting issues and NEPA processes

Although not all of these are items on which NorthernGrid can directly act, the Enrolled Parties should take care to ensure their internal processes result in accurate and appropriate inputs for the regional planning process. With adequate data, the region is better poised to adopt a regional transmission plan that can meet tomorrow's needs.

Extreme Event Analysis

The States suggest that the Study Scope should include modeling several sensitivities in addition to the four base cases. These sensitivities would test the proposed mitigation strategies against several extreme weather events and wildfire risks. This analysis should account for the extreme events' effects on load and generation. The extreme event sensitivities should reflect current, not historical, climate conditions. After the main analysis and evaluation of the extreme event sensitivities, the study should identify how the mitigation strategies identified in the base case analysis perform under the extreme event sensitivities.

- State of Idaho
- State of Montana
- State of Nevada
- State of Oregon
- State of Utah
- Washington Utilities and Transportation Commission
- State of Wyoming

Response

The MPC will determine if one sensitivity is appropriate or if the commenter should wait for the near-term Extreme Scenario study

NIPPC comments on NorthernGrid's draft study scope for 2022-23

Thank you for the opportunity to submit comments.

The Northwest & Intermountain Power Producers Coalition (NIPPC)¹ shares these overall observations:

PGE appears to understate its need for new generation resources in the study period. PGE plans to add just under 19 MW of new hydrogeneration. At the same time, PGE forecasts that its summer peak load will increase 5-10% per year from 2026 to 2032. PGE also forecasts that its winter peak load will increase more than 10% per year from 2026 to 2032.

NIPPC notes that in PGE's IRP presentation² on July 21, 2022, PGE forecasts that it has a capacity need of about 750 MW at the end of 2025 with about 1,500 additional MW of capacity by 2036. To ensure reliability of the Pacific Northwest transmission grid, NorthernGrid should increase the basecase assumptions for generation resource additions attributable to PGE so that the assumptions are consistent with PGE's latest IRP forecasts. Alternatively, NorthernGrid should conduct a sensitivity study substantially increasing PGE's need for new generation resources.

NIPPC also notes that NorthernGrid has not taken the opportunity to voluntarily incorporate elements of the FERC NOPR on Regional Transmission Planning and Cost Allocation (RM21-17) that are especially suited to a region in which transmission planning will be greatly affected by state clean energy laws that have already passed, along with local and utility decarbonization objectives. In that NOPR, FERC identified a number of reforms that it believed were necessary to the regional transmission planning paradigm to ensure that wholesale rates remain just and reasonable. Among the proposals that NorthernGrid could have incorporated:

- Scenario planning using four defined scenarios, and
- Identifying geographic zones with the potential to support the needed quantities of location constrained resources.

NIPPC recognizes that the FERC NOPR has not yet been adopted as a final rule and that the final rule may be different than the NOPR. Nevertheless, NIPPC believes that NorthernGrid and its members could greatly enhance the value of the study if the study incorporated analytically beneficial elements of the proposed reforms in the current cycle on a voluntary basis. Nothing prevents NorthernGrid from studying additional scenarios in this planning cycle, which would benefit transmission service providers, transmission customers, policymakers, and stakeholders in the region.