

2018-2019 Transmission Planning Process: Review of Two Draft Special Study Scopes

Submitted by	Organization	Date Submitted
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Please accept these comments on behalf of National Grid.

National Grid offers the following comments on the California Independent System Operator's 2018-2019 Transmission Planning Process: Special Study Scopes. National Grid's comments are limited to the special study on increased capabilities for transfers of low carbon electricity with the Pacific Northwest

General Comments

National Grid supports the objectives of the Special Study, specifically the changes needed to:

- Increase the Capacity of AC and DC Intertie
- Increase Dynamic Transfer Capability
- Control Automation
- Assigning RA Value to Imports

National Grid believes that a study of this type is long overdue given the West Coast states' alignment on decarbonization goals and the significant high-voltage transmission system between California and the Pacific Northwest vis-v-vis the AC and DC Interties. The Pacific Northwest has significant amounts of existing and potential zero-carbon energy generating resources that could help California meet its energy policy goals. At the same time, the Pacific Northwest has significant potential for very attractive large-scale energy projects that can bank bulk surplus energy from California and return it to California consumers later in the day.

Generation Resource Assumptions

National Grid is currently developing two pumped hydro storage projects in the Northwest strategically located in the high-voltage grid (i.e. AC and DC Interties). The 400-MW Swan Lake Pumped Storage Project is a "closed loop" project consisting of three 131-MW variable-speed pump-turbines generators that will interconnect at Malin Substation of the Pacific AC Interties that could be operational as soon as 2024. The 1200-MW Goldendale Energy Storage Project is a proposed "closed-loop" pumped

storage project with three 400-MW variable-speed pump-turbines generators near the John Day Dam at the top of the AC and DC Interties that could be operational in 2028.

National Grid is disappointed that the proposed study will consider generation resource additions in California (i.e. 40GW of solar by 2030) based on the CPUC IRP; but will not fully consider the future generating mix in the Pacific Northwest. The study appears to consider a static view of only existing hydropower marketed by Bonneville Power Administration from the Lower Columbia River. While hydropower from the dams on the Lower Columbia is carbon-free, operation from those resources is increasingly limited by environmental constraints intended to protect salmon and the other multiple uses of the system including flood control and navigation. Additionally, there is limited storage potential in the reservoirs on the Lower Columbia.

While the proposal recognizes planned coal retirements in the Northwest, it should also consider new generation resources likely to be added to the Northwest capacity supply in the study timeframe. National Grid encourages the study team to work with the Northwest Power and Conservation Council, utilities in the EIM footprint and generation project developers to identify a likely future mix of generation resources for the Pacific Northwest that is fully consistent with the carbon policy goals of Oregon and Washington.

In the event the study team declines to consider the future resource mix of generation in the Northwest, National Grid encourages future studies which will consider the incremental benefits associated with additional flexible generation and storage located near the Celilo Converter Station, John Day and Malin Substations in enhancing reliability and flexible transfer capability of the AC and DC Interties as well as absorbing surplus generation and facilitating transfers of energy between the Pacific Northwest and California.

National Grid recognizes the value in making very conservative assumptions with regard to potential generation additions in the Pacific Northwest in this initial study. Hopefully, the study report will underscore for readers that any benefits resulting from the increased transfers between California and the Northwest are conservative. Any additional investment in modern, highly flexible “closed-loop” pumped hydro storage and generation would yield additional benefits to both California and the Northwest and expand the seasons when those benefits are available as well as multiply the benefits by increasing utilization of the high voltage transmission system for more effective coordination of regional low-carbon resources and flexible resources and storage. National Grid would be happy to provide technical data and other cooperation with the study team for this or future studies.