Transmission Services

DRAFT

Intertie Open Season

Initial Scoping Document

Please submit comments to techforum@bpa.gov no later than Thursday, February 25, 2010

Prepared by BPA In Consultation with: PacifiCorp Transmission, Portland General Electric, Pacific Gas and Electric, CAISO, Transmission Agency of Northern California (TANC), Sacramento Municipal Utility District (SMUD), Western Area Power Administration, Los Angeles Department of Water and Power (LADWP), Southern California Edison, Public Power Council, Northwest Requirements Utilities

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Objective

The objective of this initial scoping report is to provide an assessment of interest in proceeding with efforts to increase Southern Intertie transfer capacity between the Northwest and California. This document also identifies several areas that should be further developed to establish a framework for an Intertie Open Season.

Bonneville developed this scoping document based on discussion with customers and stakeholders and we have incorporated comments on the initial draft from those parties. We are now seeking comments from a wider distribution. Specifically, we would like feed back on the following:

- Have we accurately captured the Northwest and California interest in proceeding with an Intertie Open Season?
- Are there additional elements for planning, inter-regional coordination, securing customer commitment, and rate treatment that we should consider as we develop a framework?
- Any other areas we should address as we develop a framework?

Summary

Interest in Increasing Transfer Capability: Based on discussions with interested parties and stakeholders in the Northwest and California, we believe there is significant interest in pursuing studies to evaluate the system impacts and new facility requirements for increasing inter-regional transfer capability (both upgrade and new expansion) between the Northwest and California

Coordinated Inter-regional Planning Process: The utilities we consulted are supportive of an open process for inter-regional coordination for planning studies. Both Western Area Administration (WAPA) and the California Independent System Operator (CAISO) have indicated interest and a willingness to coordinate the regional study effort south of COB. Columbia Grid has expressed interest in coordinating Northwest planning efforts with the California. Several utilities and potential customers have expressed interest in participating in an inter-regional stakeholder committee to help define the expectations for study process and results.

Issues that Require Further Development for Establishing the Framework for IOS: As part of the scoping effort, we identified several areas that require further definition as the framework is developed for a Southern Intertie Open Season

- Develop a basis for establishing the transfer capability requirements for the Northwest that includes Customer and potential equity participant needs.
- Define the Northwest Customer financing obligations
- Develop terms and conditions for obtaining customer commitment and implications for the SI transmission service queue
- Evaluate the Feasibility of meeting service requests in Bonneville's transmission service queue by Bonneville Participation in Inter-Regional Projects Proposed by Other Transmission Providers.
- Develop Policy for Funding NEPA Processes and Construction
- Establish Segmentation and Rates Policy for New Intertie Facilities
- Evaluate the Feasibility of Providing Limited Linkage Between Network and Intertie Service Commencement Dates

Southern Intertie Background

As defined in Bonneville's Transmission Rates , The *Southern Intertie* is the segment of the FCRTS that includes, but is not limited to, the major transmission facilities consisting of two 500 kV AC lines from John Day Substation to the Oregon-California border; a portion of the 500 kV AC line from Buckley Substation to Summer Lake Substation; and the 500 kV AC Intertie facilities, which include Captain Jack Substation, the Alvey-Meridian AC line, one 1,000 kV DC line between the Celilo Substation and the Oregon-Nevada border, and associated substation facilities.

Although Bonneville is the majority owner of the AC Interties, there are other facility and capacity owners. PGE and Pac, as facility owners, legally own portions of the AC Intertie. The agreements with each specify what parts of the system each party owns. For example, in the Pac agreement, it identifies certain facilities within the Captain Jack substation and specifies which entity owns what percentage of the various facilities and how the O&M is split up (which doesn't always coincide with the ownership).

The Capacity Owners do not have legal ownership of the system. They have access to a portion of Bonneville's capacity share for the life of the facilities. In return, they paid a portion of the expansion costs and have an ongoing obligation to pay their pro-rata share of the operating and maintenance expenses.

Facility Owners		Capacity Owners	
PGE	950 (19.8%)	Puget	400 (8.3%)
Pac	400 (8.3%)	Seattle	160 (3.3%)
BPA	2725 (56.8%)	PNGC	50 (1.04%)
		SNOPUD	42 (0.88%)
		Tacoma	41 (0.85%)
		Pac	32 (0.67%)

(Note: Pac has both a facility ownership share and a capacity ownership share.)

Under the existing AC Intertie facility and Capacity Owner Agreements, Bonneville may upgrade, reinforce, or replace AC Intertie facilities. The agreements convey certain rights and obligations to the other parties. The Rated Transfer Capability (RTC) of the AC Intertie, in both directions (N to S, and S to N), is 4800 MW. Bonneville can upgrade existing facilities to increase RTC but must notify the facility and capacity owners of the upgrade amount, and make it available to them on a pro-rata based on their ownership or capacity share. Upgrade amount offered but not acquired by the facility or capacity owners remains with Bonneville. The existing agreements do not appear to place any limitation on Bonneville's right to construct new facilities separate from the existing AC Intertie.

Bonneville has a 100 percent share of the DC Intertie to the Nevada-Oregon border (NOB), with the exception of a 100MW capacity swap (AC for DC) with PGE that expires in 2012. Bonneville has the responsibility to perform maintenance on the DC Intertie to maintain the RTC of the AC Intertie.

Drivers for Intertie Expansion

Bonneville has requests in the Southern Intertie queue for 3,175 MW of Long-Term Firm transmission service on the AC Intertie, and 1,528 MW on the DC. Based on queue requests, there is strong customer interest in obtaining service at current Southern Intertie rates. However, the cost to enter and remain in the queue is small; customers need only supply a refundable deposit equivalent to one month of transmission service for the requested capacity. We do not know to what extent requestors would accept offers of transmission service if customers had to advance fund and pay significantly higher rates. As the framework for an Intertie Open Season progresses, Bonneville will take queue order into account when providing service on new Intertie facilities.

Moving wind-generated power from the Northwest to California to meet aggressive Renewable Portfolio Standards (RPS) requirements has become one of the primary drivers of the need to increase intertie transfer capability. However, there is regulatory uncertainty about the future RPS standards and related requirements for qualifying resources. The latest California PUC proposal (as of February 10, 2010) is to allow California IOUs to meet up to 40 percent of the 6620-percent RPS with unbundled or tradable Renewable Energy Certificates. This could potentially strand large amounts of unbundled wind in the Northwest.

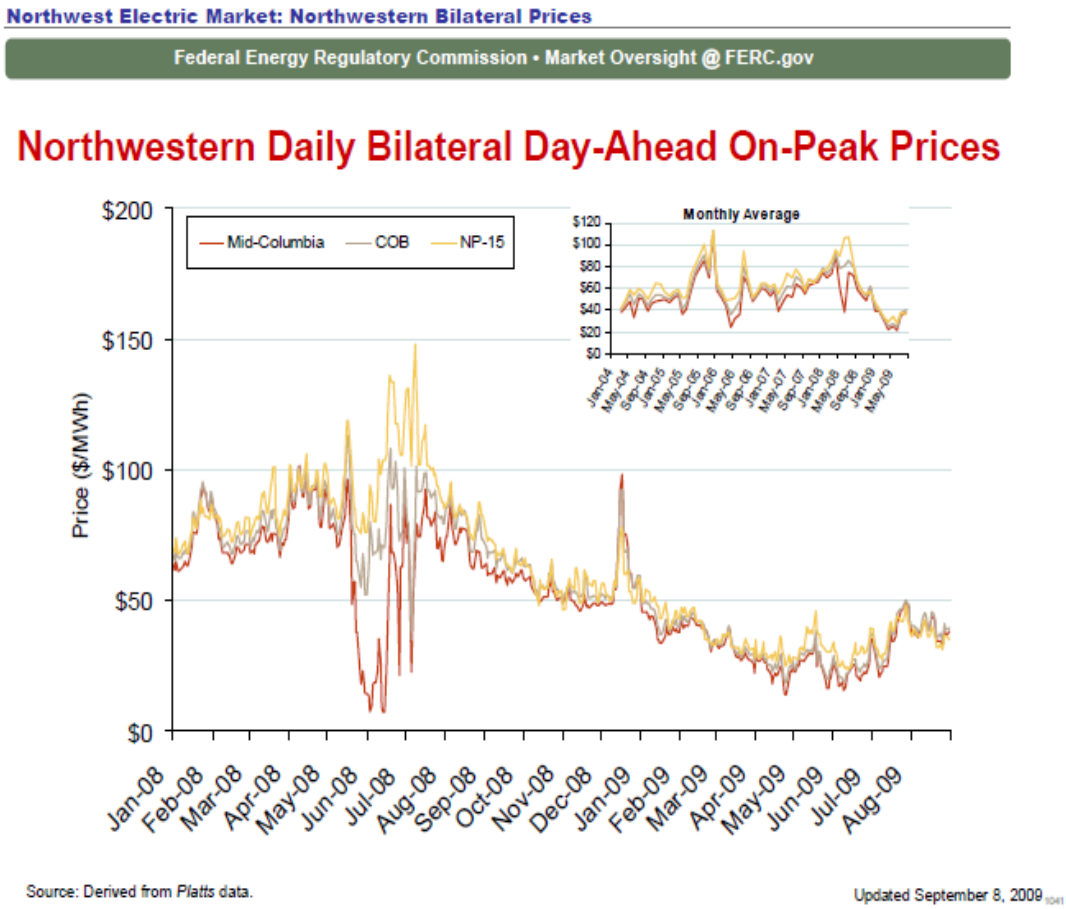
There is also a need to increasing the dynamic transfer capability on the Southern Intertie. Wind resources located in Bonneville's Balancing Authority Area (BAA) are subject to the Wind Balancing Service rate. Providing additional dynamic transfer capability on new interties facilities would provide a way for wind generators and utilities to avoid the rate by moving the balancing requirement to the loads served by the resources. There are limitations to how much generating capacity Bonneville has available for providing Wind Balancing Service; therefore, those resources dynamically transferred out of the Bonneville BAA reduce the reserve requirement on Bonneville.

The success of Bonneville's 2008 Network Open Season (NOS) has created opportunities for wind resources to receive transmission service in the Northwest, but has also presented challenges for those resources to find a market. The rate of new wind generation integrating into Bonneville's BAA exceeds load growth and RPS requirements in the Northwest. Bonneville expects up to 6,000 MW of wind interconnected to our network by 2013.

When these new resources are operating and serving Northwest load, they will displace existing generation in the Northwest. This level of wind energy if left in the Northwest may have significant market impacts to Bonneville and the region. Increasing intertie capacity will facilitate cross-regional economic efficiency for delivery of resources to loads.

Potential Market Price Differentials: Large price differentials between the Northwest and California power markets drive heavier utilization of the intertie and increase the volume of short-term transmission sales. While these price differentials have been low for fiscal year 2009 (averaging less than a third of the prior five years), current forward curves out through fiscal year 2014 indicate both a prompt rebound to previous levels by fiscal year 2011 and continued growth in the spread beyond that. If intertie reinforcement took several years to complete, energy prices for delivery then indicate average price differentials around 20% greater than the prior five years. Five years out, the market price differential is 50% greater. This says that high and increased

demand for additional intertie capacity is anticipated for the foreseeable future.



Inter-Regional Joint Planning for Intertie Expansion

The Northwest and California stakeholders are supportive of moving forward with coordinated planning studies. CAISO/WAPA and ColumbiaGrid are regional planning organizations willing to coordinate these study efforts. Given the large number of stakeholders and potential customers and equity participants both north and south, a cross-regional steering committee could be established to develop expectations for the studies.

The general sense is that wind powered generation and RPS have stimulated a number of proposed transmission upgrades across the western interconnection and that we need a holistic approach to evaluating the impacts and benefits from expansion of the Southern Interties in context with other proposed transmission projects.

Transmission owners in California face significant challenges for licensing and siting new transmission facilities. Demonstrating need and support for new transmission is critical and the utilities we consulted while preparing this initial scoping document stated that broad support and an inclusive process will provide best results for siting. The California investor owned utilities suggest that CAISO is well positioned to coordinate studies south of COB, and CAISO is supportive of performing that function. WAPA is also supportive of the regional coordination.

Both Northwest and California stakeholders have stated that studies should include an evaluation of existing facilities for feasible capacity increases. For rate-making purposes, Investor-Owned Utilities must demonstrate to regulatory authorities that they have considered all economically-feasible upgrades.

Although Bonneville has a large queue of requests for service on the Southern Interties that cannot be granted without facility upgrades, we do not know with any certainty the level of interest in proceeding with expansion efforts. To provide some basis for sizing the capacity requirements for the plan-of-service, Bonneville could develop a requirement that customers requesting intertie transmission service fund a proportional share of study costs or be removed from the queue. Potential equity participants for capacity ownership could fund an appropriate share of study costs. There may be customers or equity participants that will decline to proceed past the studies, so some consideration should be given to a flexible plan-of-service that can be adjusted by reasonable increments, commensurate with needs.

Secure Customer Funding for NEPA

Once studies are complete, securing customer commitment to fund NEPA could be the next stage of Intertie Open Season. Potential transmission service customers and equity participants should have a progressively increasing financial stake in the project as we move forward. There are appropriate stages along the way for both securing customer commitment to proceed and for providing off-ramps to customers who do not want to continue with the expansion process.

This would be a reasonable point for off-ramps for potential customers and equity participants, as we would have a plan-of-service with costs for any feasible capacity increases to existing facilities and the costs for additional facilities. NEPA activities would cost significantly more than initial studies, so customers willing to fund these activities are more likely to take service. Bonneville has a very effective environmental group that is well-positioned to manage the NEPA process for facilities north of COB/NOB.

WAPA is well-positioned to perform NEPA south of COB/NOB. WAPA has ownership rights to Pacific AC Intertie and the California-Oregon Transmission

Projects, and expansion of extra-high voltage transmission capability between the Northwest and their service territory fits well with their strategic objectives. California investor-owned utilities are supportive of WAPA participating in intertie activities. Those that we consulted believe that Federal siting authority is critical to the success of intertie expansion and a coordinated NEPA process involving Bonneville and WAPA could prove to be effective.

Develop Rates and Intertie Financing Policy

Bonneville will need to develop rates and financing policy for new Intertie facilities. Policy development could begin early in the study and NEPA process to provide customers with critical information for their business case evaluations. Before Bonneville can offer customers service agreements with conditions precedent, we will have to define our policies for customer advance funding requirements and transmission credits for new intertie facilities, and we need to articulate any minimum term length requirements.

We would also need to define how we will allocate costs for segmentation, including the costs of any additional network facilities needed on the underlying AC network for intertie expansion. Current Southern Intertie users are unlikely to support rolling new Intertie facilities into existing Intertie segments if there is any associated cost-risk shift.

Rate development will be challenging for new intertie facilities. It is unlikely that the revenue requirements for new intertie facilities will be less than the revenue requirement for the Southern Intertie with the new facilities rolled-in, so an incremental rate may be appropriate. Without knowing the financing requirements and likely rate in advance, we expect customers would be resistant to committing to take service.

Develop the Business Case for Expansion

Bonneville will need to prepare a business case in order to help inform the Bonneville Administrator's decisions about constructing new Intertie facilities or participating in builds by others that would expand Northwest- California transfer capability. As part of that business case, we will need to address customer advance funding requirements and transmission credits resulting from advance funding, the cost-shift risk, if any, and potential risk mitigation from proposed segmentation and rates, and we will need significant regional support for proceeding with expansion. Bonneville will develop robust public processes to work through all issues and will publically vet the business case as we did for Network Open Season.

Summary of Principles and Objectives

The primary recommendation in this scoping document is to move forward with coordinated system impact and facilities studies for increasing the transfer capability between the Northwest and California. We have identified several principles and objectives we believe warrant consideration if we move forward with these studies and any related follow-on efforts.

- **Close coordination between the Northwest and California parties throughout the process.** This includes studies, NEPA activities, agreements to proceed with construction, and coordinating timelines through energization of facilities.

- **Open processes, with an inclusive steering committee.** Broad support is critical for success. Siting new transmission facilities is challenging and the more inclusive the stakeholder process are, the better.

- **The parties requesting intertie service should have a financial stake in funding expansion efforts.** Potential customers and equity participants for capacity ownership should have an increasing large financial stake as efforts move through studies, NEPA, and construction.

- **Cost allocation and rates should be fair and equitable.** Intertie expansion brings both broadly distributed and specific benefits. Rate structures and segmentation should consider who bears rate pressure risks commensurate with the benefits.

- **A publically-discussed business case should be developed.** Regional needs and concerns, financial analysis including rates, cost shift risk and risk mitigation, and all other relevant factors should be put into a business case to help inform the Bonneville Administrator about decisions related to expanding interties.