

Regional Dialogue Issues Team Meeting

Network Flowgate ATC Evaluation for NT

Posted for discussion at the
June 11, 2009
Customer Meeting

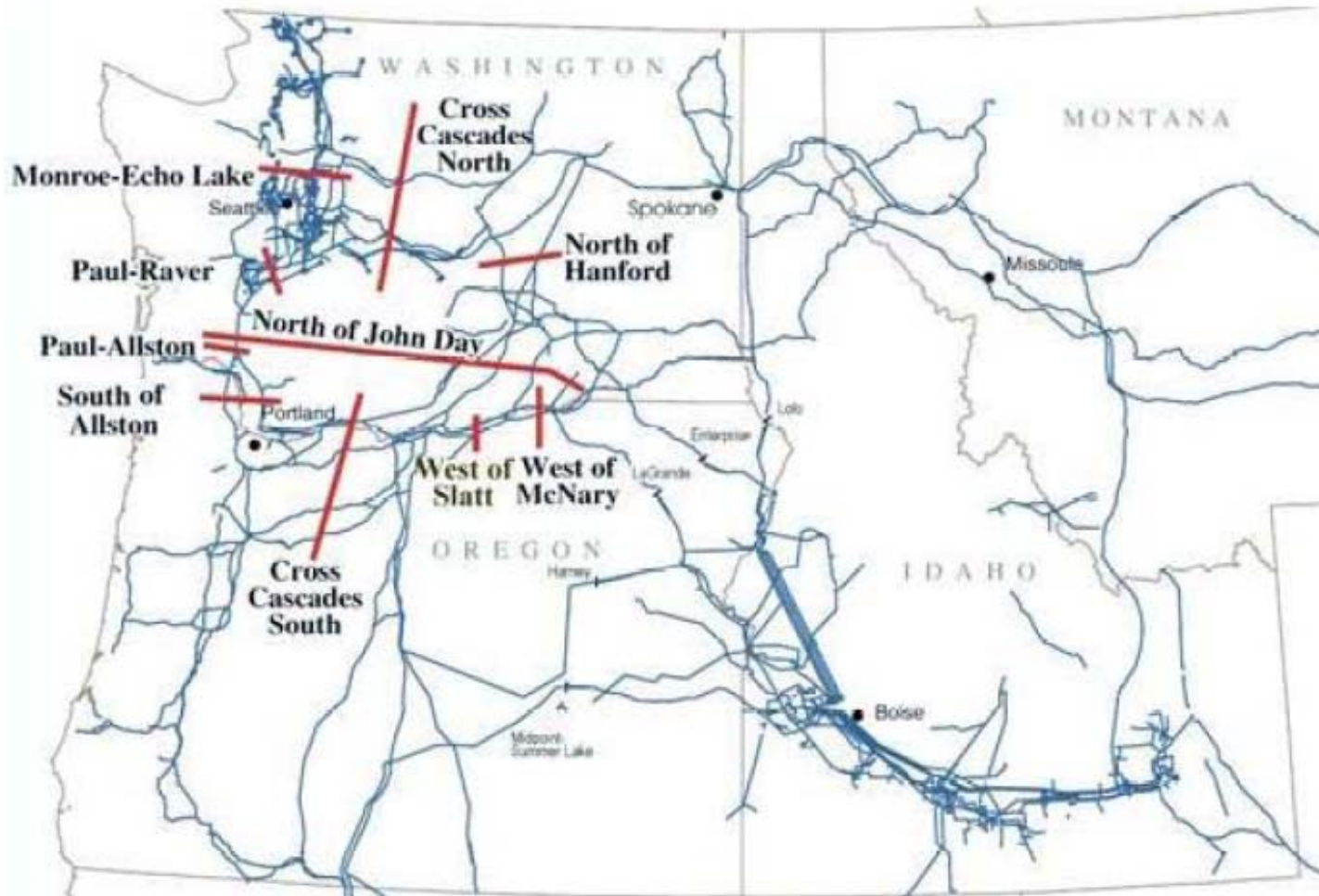


Objective

- Articulate how ATC for NT is evaluated today
 - Explain current load and resource assumptions
 - Define how Transmission Services processes NT requests
 - Designation of Network Resources (DNR)
 - Renewal
 - Service to New Network Load



LTF Network Flowgates



Useful Definitions

- **Path Utilization Factor (PUF)**: The fraction of power that will flow across monitored flowgates as that power is injected at a Point of Receipt (POR) and withdrawn at a specified Point of Delivery (POD).
 - The PUF calculation is an equation based on a POD, POR, and Transmission Demand used to determine the impacts to Network Flowgates.
 - $(POR\ PUF_A - POD\ PUF_B) * Transmission\ Demand = impact\ to\ Flowgate_A$
- **Load Growth**: Load added to an existing NT customer's system as a result of increased customer load or transfer of load from another NT customer.
- **New Network Load**: Load added to an existing NT customer's system as the result of:
 - Annexation,
 - Condemnation,
 - Merger,
 - Conversion of point-to-point Service Agreement to NT Service Agreement,
 - Reduction to Customer Served Load, or
 - Request by an NT customer to designate a particular load at a discrete point of delivery as Network Load, when the NT Customer had previously elected not to designate that load as Network Load.

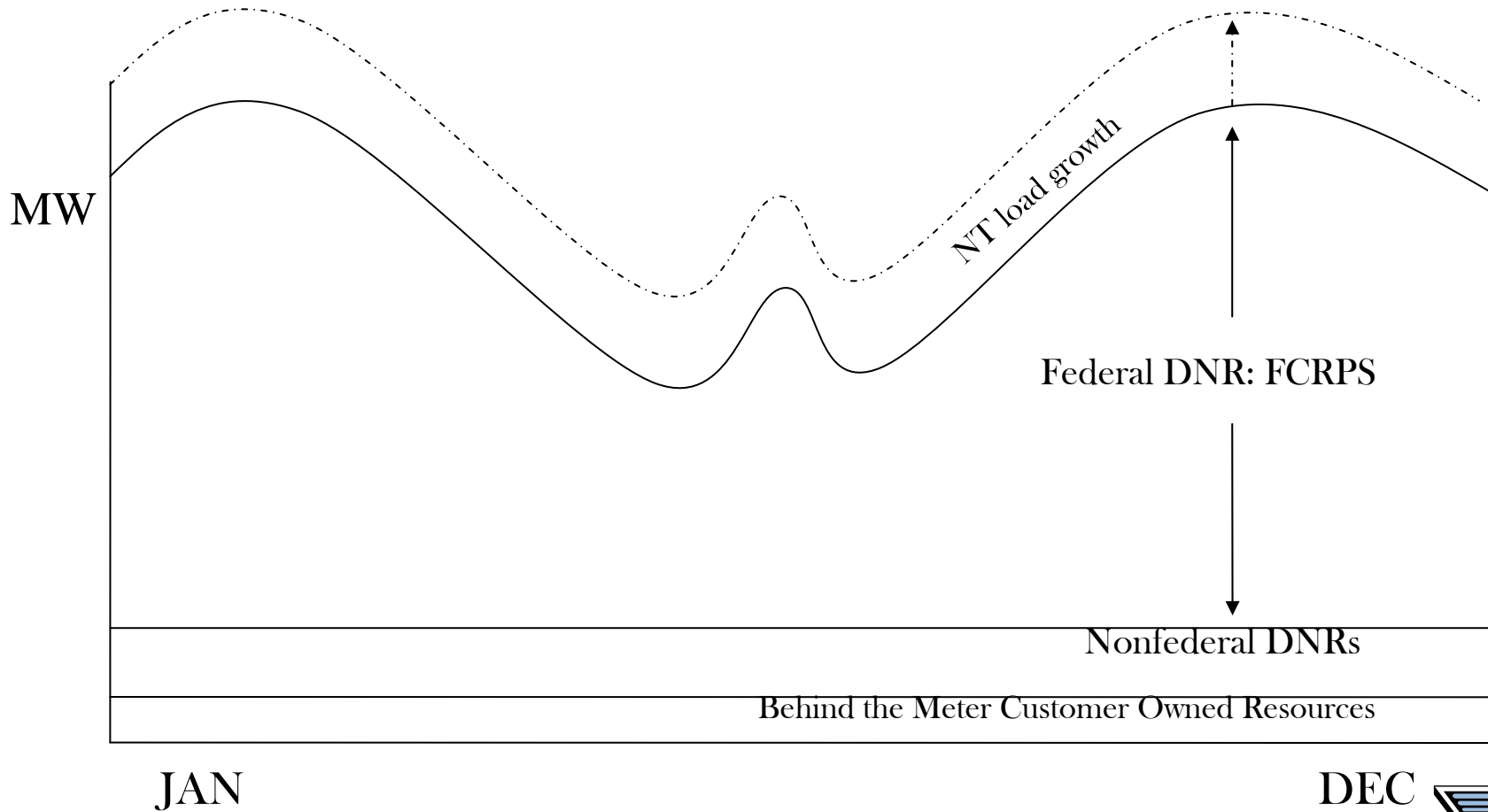


Power Flow ATC Base Case NT Assumptions

- Power Flow Model
 - Basic inputs are load and generation assumptions.
 - Output is a computation of how much power will flow over each element in the power system for the assumed load and generation levels.
- LTF ATC is calculated based on a combination of our contractual obligations and the results of the power flow model.
- NT Resource assumptions
 - Behind the Meter Customer Owned Resources: resource is assumed to run at designated amount and rollover indefinitely.
 - Nonfederal Designated Network Resources (DNR): resource is assumed to run at designated amount and rollover indefinitely.
 - *Wind resources*: The flowgate impact of wind generators are determined on a flowgate by flowgate basis, and set at the greater of:
 - Wind on at 100% of designated MW or
 - Wind off and replaced by FCRPS.
 - Federal Designated Network Resources Power System (i.e. FCRPS): assumed to serve all other NT load and load growth indefinitely using the “Modified 90th Percentile Method” as described in the *Contract Accounting and Planning Power Flow ATC Methodology*
- *Note*: Any changes to these assumptions will go through a public process.



Existing NT Load & Resource Assumptions



Current treatment of NT Load Forecast Updates

- Each Base Case Update, Transmission Services endeavors to incorporate updated NT load forecasts into the posted Network Flowgate ATC values.
 - Load forecasts may increase or decrease without change in DNRs, so FCRPS is assumed to flex up or down to accommodate the difference.
 - ATC shifts with each ATC Base Case Update to absorb these new load forecasts and resulting federal resource assumptions.
 - No Transmission Service Request (TSR) is submitted
 - No “queuing” required
 - Resulting changes in ATC are “rolled in” to the posted Flowgate ATC values as part of existing commitments.



Management of ATC Between Planning Baseline Studies

- Transmission Services performs planning power flow studies to update final long-term firm ATC baseline amounts for the Network Flowgates at least once per year.
- In between ATC Base Case updates, TSRs for new transmission are evaluated by determining the impact the new request has on each Network Flowgate using the *ATC Impacts of Long-Term Firm Requests ATC Methodology* document.



Processing of NT Requests

- **Designation of a Network Resource (DNR)** for existing or forecasted load growth (i.e., not New Network Load) must be submitted as an Original LTF NT Request over OASIS.
 - Path Utilization Factors (PUF) Calculations are prepared to determine the impacts of the requested service on Network Flowgates.
 - The Evaluated POD/POR used to prepare the PUF calculation will be determined based on the Requested POD/Requested POR as provided in the following matrix:

	Requested POR	Requested POD		Evaluated POR	Evaluated POD
2.3.2.1	Any POR not associated with a wind generator	Network POD or Export POD		Requested POR	FCRPS
2.3.2.2	Any POR associated with a wind generator	Network POD or Export POD		(A) Requested POR	(A) FCRPS ¹
				(B) FCRPS	(B) Requested POD ¹

¹ The impact to each Flowgate is deemed to be the larger of either the Path (A) or Path (B) impacts, subtracted from the impacts of Path (B). Path (A) models impacts assuming the wind generator is operating, and displacing FCRPS generation; Path (B) models ATC impacts assuming the wind generator is not operating, and not displacing FCRPS generation.



Processing of NT Requests (cont.)

- **NT Requests for service to New Network Load** must be submitted as an Original LTF NT Request over OASIS.
 - PUF calculations are prepared to determine the impacts of the requested service on Network Flowgates.
 - The Evaluated POD/POR used to prepare the PUF calculation will be determined based on the Requested POD/Requested POR as provided in the following matrix:

	Requested POR	Requested POD		Evaluated POR	Evaluated POD
2.2.2.1	Any POR not associated with a wind resource	Network POD		Requested POR	Network Composite POD
2.2.2.2	Any POR not associated with a wind resource	Export POD		Requested POR	Requested POD
2.2.2.3	Any POR associated with a wind generator	Network POD		(A) Requested POR	(A) Network Composite POD ¹
				(B) FCRPS	(B) Network Composite POD ¹
	Requested POR	Requested POD		Evaluated POR	Evaluated POD
2.2.2.4	Any POR associated with a wind generator	Export POD		(A) Requested POR	(A) Requested POD ¹
				(B) FCRPS	(B) Requested POD ¹

¹ The impact to each Flowgate is deemed to be the larger of either the Path (A) or Path (B) impacts.



Processing of NT Requests (cont.)

▪ **Renewal Request**

- A Renewal Request via OASIS is required to renew NT service, per section 2.2 of the OATT.
- Renewal requests will be compared to the existing NT transmission service exhibit. If the POR, POD, and demand match those identified in the existing NT transmission service exhibit and if no competition is held, the Renewal request is granted.



Granting of NT Requests

- An NT request shall be granted if, at each Flowgate, there is either:
 - Sufficient ATC based on the latest baseline final ATC calculations as adjusted for higher queued TSRs; or
 - The TSR qualifies as having a *de minimis* impact on the flowgates and there is sufficient *de minimis* ‘inventory’.
- When a new TSR is granted, the baseline final ATC for each flowgate will be decremented by the new use on the flowgate of the transaction.



ATC Methodology Reference Documents

- ATC Methodology webpage:
http://www.transmission.bpa.gov/business/atc_methodology/
 - ATC Methodology
 - ATC Methodology Margin (AMM)/*De Minimis*
 - Contract Accounting Methodology
 - ATC Impacts of Long-Term Firm Requests
 - Power Flow Base Case

