

**Prepared Comments of Robert Lafferty
On Behalf of Avista Corporation and
Pacific Northwest Investor-Owned Utilities**

**Panel One of the FERC Staff Technical Conference on
Designated Network Resource Issues (RM05-17-002)**

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Good morning and thank you for this opportunity to participate in this important technical discussion concerning Order 890 implementation. We appreciate efforts by the Commission and Commission Staff to provide forums to discuss some of the complex technical issues associated with implementation of Order 890 and the designation and undesignation of network resources. I will speak today on the topic of a business practice protocol that the Pacific Northwest investor-owned utilities (IOUs) believe has merit when temporarily undesignating network resource capacity to facilitate “system” firm power sales.¹ I think you will find, as presented in my discussion, that the basic resource undesignation issues associated with system sales are essentially the same between “on-system” sales or “off-system” sales.

Proposed Business Practice:

The Pacific Northwest investor-owned utilities are proposing to treat undesignated resource capacity as an aggregate quantity that is transferable between resources within an Unconstrained Transmission Area (UTA).

¹ When using a system sale, the seller commits its whole system to make a delivery and thus has a “choice” among those system resources that will actually provide the power.

Benefits from such an approach include the following:

- Transmission operation and ATC within the UTA are not affected
- Important resource operational flexibility is permitted for the seller
- Firm power sales and reliable system operations are better supported for the buyer

First let me provide the background construct to this business practice.

Background:

A balancing authority² consists of one or more UTAs. UTAs are defined (for the purposes of this presentation) by the transmission providers' constrained posted transmission paths, both internal to and external to the balancing area, which are scheduled and tagged. A UTA is that portion of the balancing authority transmission system that has no constrained posted internal transmission paths. Therefore, no scheduling and tagging is required to transfer energy within the UTA. Posted transmission paths between UTAs or between balancing authorities, are scheduled and tagged per the transmission provider's business practices.

Basis For A Resource Capacity Undesignation Business Practice:

Because of the lack of constrained posted paths within a UTA, it is possible to treat the total amount of designated resource capacity within the UTA as if it was a single unit for the purposes of management of resource undesignation. This approach permits the

² Balancing authority refers to the load serving entities' control area and may be referred to as a "balancing area."

amount of undesignated network resource capacity to be assigned or allocated to any one (or more) of the specific resources in the UTA which would then support a sale to an off-system third-party.

The sum total of all of the designated network resource capacity within a UTA can essentially be treated as if it were a single resource for the purposes of temporary undesignation of network resource capacity. Because an UTA has no internal constrained posted paths, there is no effect on internal ATC (available transmission capacity) postings or on transmission operations regardless of which designated network resource is temporarily undesignated within that UTA. ATC on constrained posted paths entering or exiting the UTA are similarly unaffected by the choice of which designated resource within the UTA is undesignated.

It follows then that if all of the designated network resource capacity in a UTA is treated as a single resource for the purpose of temporary resource undesignation within a UTA then, similarly, the undesignation itself should simply consist of an aggregate capacity amount to be undesignated in the UTA, without the need to specify a specific network resource. The business practice that the Pacific Northwest IOUs are proposing to utilize would allow temporary undesignation by submitting a single capacity quantity for undesignation within a UTA. As explained, it would be unnecessary to assign that capacity undesignation to any specific network resource as ATC is unaffected by such undesignation³.

³ The amount of specific unit undesignation within each UTAs could be recorded if needed. However, such data would serve no purpose with regard to the determination of ATC and thus, seems irrelevant.

Capacity Undesignation Example:

Please refer now to the set of slides labeled “Capacity Undesignation For System Sales - Illustration.” With the aid of these slides, I will describe the business practice for the temporary undesignation of network resources currently under discussion in the PNW. I will first review how temporary undesignation might be accomplished on a resource by resource, or unit by unit, basis. I will then contrast that with the aggregated capacity undesignation approach proposed by the PNW utilities.

The four slides here provide a pictorial representation of a hypothetical system control area or Balancing Authority. This Balancing Authority is divided into two UTAs labeled UTA “A” and UTA “B”. There exists a posted constrained path between UTA “A” and UTA “B”. There also exist posted constrained paths between the Balancing Authority shown and neighboring Balancing Authorities.

Slide #1 reflects “steady state” on the Balancing Authority’s system, where there are no sales to third-parties and all generation resources located in both UTA “A” and UTA “B” are designated network resources serving network load. During steady state periods, 50 MW is scheduled for transfer from UTA “B” to UTA “A” across a posted path. The net load is assumed constant within the Balancing Authority and within UTA “A” and UTA “B” for the purpose of these examples.

Slide #2 reflects “System Condition #1,” where two firm off-system third-party sales are taking place. The net load remains the same in UTA “A” and UTA “B,” as does the 50

MW scheduled power transfer between the UTAs. An 150 MW off-system sale is scheduled from UTA "A". Gen #1 and Gen #3 have a combined increased undesignated capacity totaling 150MW. A 50 MW off-system sale is scheduled from UTA "B". Gen #5 has an undesignated capacity amount of 50 MW.

Slide #3 reflects "System Condition #2," where the Balancing Authority's system is experiencing certain changes in system generation patterns. Again in this case, net load and power transfers remain the same. Gen #3 has experienced an outage and, therefore, the amount of undesignated capacity for Gen #1 has been increased to make up for that loss in UTA "A". Gen #2 output has increased to make up for the outage. Gen #5 has experienced a reduction in planned output, and Gen #6 scheduled output has been correspondingly increased and 40 MW of its capacity has been undesignated.

System Condition #1 is simple enough, making it appear that unit by unit undesignation is easily accommodated for system sales. However, as illustrated in System Condition #2, complications do arise affecting a dynamic utility system, making unit by unit undesignation difficult in certain instances. For example, it is not clear how Order 890 accommodates System Condition #2 in real-time without the Balancing Authority either cutting a system supply schedule or making up for the outage with generation from a designated resource.

Slide #4 is labeled "System Conditions #1 & #2 – Aggregated Capacity Undesignation" and illustrates the system operational improvement and efficiency gained by taking an

aggregated approach to temporary undesignation of resources within an UTA. For the purposes of temporary undesignation, the total amount of designated resource capacity has been aggregated. The amount of temporary network resource undesignated capacity was then subtracted from the designated resource capacity. The net designated network resource capacity and the undesignated resource capacity is thereby determined independently for both UTA “A” and UTA “B”. Using this approach for temporary undesignation of resources, there is no need to specifically manage and record undesignation of specific units if generator operation is below planned output levels, (e.g., a resource trips off-line or other, unplanned issues occur such as loss of plant ancillary equipment, unpredictable output during ramp-up or ramp-down of generation, lack of wind for generation, different water flow pattern for hydroelectric resources, etc.).

Operations – Scheduling/Tagging:

For scheduling and tagging purposes, a “source” is registered³ by the transmission operator. Such a “source” may represent a UTA as discussed in this presentation. Because there are no constrained posted paths within the UTA, there are no ATC paths to recalculate within the UTA for “normal” or planned system generation operation. UTAs, therefore, may be treated as a single point or “hub” for scheduling and tagging.

System Operations Benefits:

The flexibility within a UTA that provides for the aggregation of undesignated network resource capacity supports the market for firm power, meets the intent of the OATT, and enhances system reliability and efficiency.

³ Sources are registered by the PSE (purchasing-selling entity) with NERC.

Non-resource specific or “system” characteristics of power sales in the Pacific Northwest have been a key element of the power markets in the region for many years. Firm power sales are relied upon by jurisdictional and non-jurisdictional load serving utilities to help them meet their long-term and short-term obligations. By permitting firm power sales to third parties to be supported by multiple generators from within a UTA, the seller is able to more effectively and reliably manage the operation of its many, variable output resources under a variety of operating conditions. Support of such a business practice facilitating system sales sourced from an UTA with multiple generators, reduces the exposure of firm power sales and system reliability to the risk of single resource outages.

As stated earlier, the system can be operated more efficiently and reliably when a transmission provider is able to undesignated resources on an aggregated basis within an UTA. Such an approach allows a transmission provider to continue to operate reliably during those times when operating plans change unexpectedly such as when a generator is not able to operate at the planned level of output, or if a resource trips off line, or if a unit has a change in capacity level due to unplanned issues (e.g. loss of plant ancillary equipment, unpredictable output during ramp-up or ramp-down of generation, lack of wind for generation, different water flow pattern for hydroelectric resources, etc.).

Additionally, non-resource specific or “system characteristics of sales from UTAs have the potential to increase the amount of resource available for redispatch by transmission operators.

Summary:

The Pacific Northwest IOUs believe that treating temporarily undesignated resource capacity as an aggregate quantity that is transferable between resources in an unconstrained transmission area will benefit both sellers and purchasers of firm power and at the same time preserve FERC OATT objectives as embodied in Order 890.

The following summarizes some of the salient benefits of such an approach:

- Transmission operation and ATC within the UTA are not affected
- Important resource operational flexibility is permitted for the seller
- Firm power sales and reliable system operations are better supported for the buyer