



May 10, 2006

BPA Challenge for the Northwest Congestion White Paper

Comments of Northern Wasco County PUD

1. Introductory Statement

Northern Wasco County has a vibrant and growing economy. The present and future residents and businesses expect reliable power delivery at a low cost. That is the principal objective of Northern Wasco County PUD (NWCPUD).

NWCPUD serves 9,575 residential, commercial and industrial customers in The Dalles, Oregon, and surrounding communities in Northern Wasco County. As a people's utility district in the State of Oregon, NWCPUD is governed by a five member board that is responsible for setting utility policies, overseeing the capitalization and operations of the PUD, and articulating the concerns of the citizens in Northern Wasco County to external agencies that affect the county. It is from this perspective that NWCPUD provides these comments to BPA on this important matter.

NWCPUD's power system is primarily an open-loop distribution system; however, it also includes a 115 kV backbone that is part of the regional transmission network.

NWCPUD owns generation at the McNary dam and acquires the balance of its requirements through BPA's Priority Firm (PF) rate schedules. Under BPA's unbundled rates for power and transmission service, NWCPUD receives Network Integration Transmission Service. NWCPUD does not schedule power from source to sink, but may be impacted by policies affecting its scheduling agent, BPA's Power Business Line.

2. Overarching Concern About Infrastructure

At the outset of BPA's white paper titled "Challenge for the Northwest: Protecting and managing an increasingly congested transmission system," BPA provides an account of numerous instances where the reliability constrained physical limits of its transmission system were exceeded. It clearly states that on such occasions, the entire transmission system was "vulnerable to a cascading electrical failure." Until the mid-1990s, the transmission system in the Northwest was sufficiently robust to obviate concerns such as these. It now appears clear that the critical infrastructure constituting the interconnected

network of transmission lines in the Northwest, may be in a weakened state and reaching a point of inadequacy for present and future generations.

NWCPUD has an overarching concern that the power system infrastructure, upon which it is vitally dependent, needs to be proven adequate under all probable operating conditions. Recognizing that the economics of the system are affected by decisions in this regard, the trade-offs being considered must be clearly identified and quantified in an open, public forum. NWCPUD commends BPA for initiating this process of reviewing alternative approaches to these issues.

3. Primary Concern: Interconnection Reliability

A key component of the white paper is reliability. While NWCPUD operates facilities that are networked within the regional transmission system, and performs limited power scheduling functions, it is nevertheless dependent on the interconnected transmission system in the Northwest for reliable power delivery to its customers. A cascading disturbance that causes system blackouts, such as those described at page 6 of the white paper, will affect all electric power utilities and consumers regardless of their characteristics. In 2005, Grid West analyzed the resulting loss of economic productivity caused by cascading disturbances and showed that such events could result in potentially staggering economic costs. Therefore, measures to reduce the vulnerability, and hence reduce the probability of cascading disturbances, have potentially immense economic value to the region.

The white paper discusses both operational approaches and planning/expansion approaches to reliably manage or mitigate transmission system congestion. NWCPUD provides the following comments on the approaches suggested by BPA.

4. Near-term Congestion Management

The white paper suggests two approaches to congestion management that NWCPUD views as possible near-term options. Approach 3 is favored as the more orderly and effective option that may be implemented to manage congestion from now until sufficient systems and facilities are constructed to economically mitigate congestion.

Approach 1, curtailments with enhancements, while having the greatest potential for early implementation, is a reactive approach that has the potential of leaving the transmission system vulnerable to disturbances. As noted in the pros and cons section on page 19 of the white paper, this approach continues to place the burden of analysis and decisions on real-time operating personnel who may face other impending events that also require urgent attention. Furthermore, while BPA may be able to manage scheduled uses of the transmission system that are sourced or sink within the BPA system, parallel flows scheduled by other control area operators will be less visible to BPA operators. It is likely that only the Pacific Northwest Security Coordinator (PNSC) will have sufficient visibility to observe and take corrective actions for such schedules. Recall that lack of situational awareness was a primary factor in most of the historical disturbances.

Approach 3, minimizing congestion proactively, improves upon the former approach by providing operating personnel with advance knowledge of system uses. Arguably, assessing transmission network security during day-ahead preschedule periods will be a requirement of new federally mandated reliability standards, and Approach 1 would appear to fail to meet such a standard. Of the two methods discussed in the white paper, NWCPUD favors Method 1. All users of the regional transmission network have an obligation to work in concert to meet reliability standards and should willingly provide information necessary to assure that accurate and timely transmission security assessments are possible. To place the burden on BPA to estimate uses, as described in Method 2, is not appropriate except in instances where insufficient information is forthcoming or where BPA is otherwise obligated to make such forecasts on behalf of customers. Firm customers with operating flexibility should be required to provide accurate estimates of their intended use, and BPA should compile statistical measures of the accuracy of such estimates and hold all users to the same standard of accuracy.

5. Long-term Congestion Mitigation

The near-term approaches referenced above are both designed to provide physical reductions in power flows on constrained transmission flowgates. While both may be implemented to equitably “share the pain” of preschedule limits or curtailments on a pro-rata basis, neither provides a basis for managing congestion with an economic criteria. As a result, the second prong of BPA’s solution principles of ensuring “least cost to consumers” may be difficult to gauge. Furthermore, such approaches are penalizing and lack incentives that would ensure sustainable, favorable outcomes. Quite simply, parties that are faced with limits or curtailments will seek ways to avoid such actions by scheduling around constraints, and BPA may have limited authority in instances where alternative contract paths can be found. A long-term congestion mitigation objective should provide clear incentives, yet hold a firm line with curtailment penalties.

Approach 4, infrastructure building, is a solution that provides enduring benefits and may ultimately eliminate the need for penalties. BPA has been heralded as a national leader in transmission construction in recent years. Nevertheless, it is not clear from the white paper that construction will continue beyond what is required “to ensure that contractual commitments are met.” Future resource needs will no doubt extend beyond existing contractual commitments, and BPA correctly observes that “a system built to handle all congestion would be vastly uneconomical.”

It may be that a framework for evaluating new construction and appropriate levels of “economical” congestion is needed before additional infrastructure additions can proceed. Ideally the costs of infrastructure projects should be assigned to the beneficiaries of those projects. However, if the potential beneficiaries are unwilling to bear the cost of such facilities, it then becomes appropriate for them to bear the cost of congestion which results from measures required to sustain the reliability of the transmission system. In instances where all BPA customers benefit from new infrastructure, or beneficiaries of a necessary infrastructure project cannot be clearly identified, the costs should be rolled-in to fairly allocate costs to all customer classes.

The other long-term approach that BPA suggests, Approach 2: Commercial redispatch, may provide some basis for an economic framework that provides transparent measures of congestion costs. Redispatch as a congestion management tool has been debated in the region and nationally without clear consensus on market structures needed to support the approach. The trade press is replete with examples of failed implementations of congestion pricing schemes. Yet the absence of any economic structure with financial settlement of congestion costs when constraints are binding and require immediate dispatcher action also results in dislocations in price and potential for market manipulation. A method for commercial redispatch must: effectively ensure transmission system security; preserve the quality of existing long-term firm transmission rights; provide reasonable incentives for generators to redispatch; and be resistant to market manipulation. While the dialog and debate of commercial redispatch approaches has been long and inconclusive for this region, most stakeholders are now well aware of the available methods and BPA should consider how to accomplish commercial redispatch consistent with this criteria.

Approach 5, application of non-wires solutions, is also viewed as a potential long-term solution with relatively limited applicability. For non-wires solutions to be effective, demand side resources must have sufficient economic incentives to participate and must perform immediately when called upon by dispatchers. The current pilot programs could provide guidance on the technical feasibility and economics of these measures, as well as facilitate formulation of reasonable compensation for participants.

6. Economics of Congestion Management Approaches

“Economic dispatch” is a term used in the white paper that is only second to reliability in frequency and importance. Absent congestion, the many stakeholders that seek to each economically dispatch their resources to meet load and interchange requirements would be able to proceed with those objectives unconstrained. Now that the region is confronted with transmission system congestion, dispatch for some stakeholders will become suboptimal and the “cost” of congestion is internalized by each as an increased cost of production or loss of revenue. From the perspective of some, dispatch will no longer be economic. Methods for conducting security constrained economic dispatch (SCED) under congested conditions have not been accepted in this region. With no basis for determining a feasible, secure dispatch that minimizes overall system production costs, the cost of congestion remains largely unknown.

In going forward with any of these approaches, BPA must consider the effect of resource selection and its impact on flows. Customers acquiring interests in generating resources that do not produce congestion when delivered to their points of delivery should not suffer the penalties or costs that customers delivering power over congested flowgates must face. While there may be a tendency to curtail generators pro-rata, proper source to sink analysis should be used to determine whether a customer should be subject to curtailment, responsible for new transmission, or receive a financial hedge against congestion.

BPA cites the proliferation of non-firm transmission service under Order 888 open-access tariffs as the primary cause of transmission congestion. While it may seem expeditious to consider reducing or eliminating non-firm services, legal and economic factors must weigh heavily on whether this approach would be prudent. From a legal perspective, BPA must offer open-access transmission service under reciprocity provisions in FERC Order 888 if it expects to use transmission services provided by other utilities. Furthermore, in accepting this burden, BPA must not unduly discriminate against any electric utility in favor of another in providing this service. From an economic perspective, non-firm transmission services facilitate market transactions that benefit BPA customers in the form of revenue credits for sales of surplus energy, and purchases of economy energy from others. Artificially limiting non-firm service offerings is not an economically neutral solution and will adversely impact consumers.

7. Conclusion

BPA's white paper provides a sobering perspective of the state of the Northwest's critical transmission system infrastructure. As an electric utility with an obligation to serve consumers, Northern Wasco County PUD is vitally interested in participating in the process of identifying approaches to managing, rather than reacting to, transmission system congestion. In the near-term, a proactive and orderly approach to identifying congestion should be BPA's top priority. In the long-term, where new transmission infrastructure projects are feasible and costs can be reasonably assigned, such projects should proceed expeditiously.

Thank you for the opportunity to comment on this important matter.

Dwight Langer
General Manager
Northern Wasco County PUD

(541) 298-3300