



PUGET  
SOUND  
ENERGY



Seattle City Light

September 15, 2004

Vickie VanZandt  
Senior Vice President  
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Transmission Business Line  
P.O. Box 491  
Vancouver, WA 98666

Re: 2004 Transmission Programs in Review Joint Comments of Puget Sound Energy Inc., Seattle City Light and Snohomish County PUD No. 1

Dear Vickie:

At the Transmission Programs in Review ("PIR") Technical Workshop held on August 25<sup>th</sup> in Vancouver, Puget Sound Energy, Inc., Seattle City Light and Snohomish County PUD No. 1 (the "PSANI Utilities") jointly presented a draft paper entitled "Vision Paper for Puget Sound Area Transmission Reliability to Obviate PSANI Curtailments and Disputes." At that time, we indicated that the paper was a draft and that we would be submitting more detailed written comments in the Programs in Review process. Snohomish County PUD submits the attached formal comments, on behalf of the PSANI Utilities, which replace the earlier draft Vision Paper.

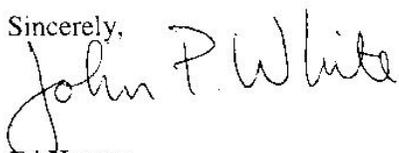
Among other things, the attached comments identify long-term and near-term technical measures as potential solutions to the PSANI curtailments. The comments are presented in the PIR process to help ensure that the TBL Expense and Capital Budgets are established to accommodate a cost effective and timely solution to the PSANI curtailment issue and do not preclude the measures described in the attached comments.

There are also important policy questions associated with the return of Canadian Entitlement which must be addressed. These include the question of who should bear the ultimate responsibility for solving the PSANI curtailment issue and how the cost of any solution(s) should be allocated. We fully expect these policy issues to be addressed in the near future.

We urge you to carefully consider our comments in light of the joint efforts by BPA, the PSANI Utilities and others to resolve the issues surrounding return of the Canadian Entitlement and the PSANI curtailment procedures. We look forward to working collaboratively with BPA in the PSANI policy forum to find a timely, cost-effective and

satisfactory resolution to these issues. If you have any questions about these comments or the related PSANI issues please feel free to contact any of the undersigned.

Sincerely,

*for*   
Ed Hansen  
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**COMMENTS TO**  
**THE BONNEVILLE POWER ADMINISTRATION**  
**REGARDING**  
**POTENTIAL SOLUTIONS TO OBVIATE BPA NORTHERN**  
**INTERTIE TRANSMISSION RELIABILITY**  
**CURTAILMENTS AND DISPUTES**

**INTRODUCTION**

The northern Puget Sound area is the largest population and employment center of the Pacific Northwest. The area is served primarily by Puget Sound Energy, Inc. ("Puget"), Seattle City Light ("Seattle") and Snohomish County Public Utility District No.1 ("Snohomish"). It also includes ALCOA's Intalco plant at Ferndale, which BPA serves as a direct service industry ("DSI"). As described in more detail below, for the last six years the Puget Sound area has also been the route for much of BPA's return of the Canadian Entitlement. Since that time, BPA has experienced a significant increase in transmission congestion on the Northern Intertie ("NI").

The return of the Canadian Entitlement is the final chapter in a multi-decade Treaty arrangement that benefited both British Columbia and all of us in the Pacific Northwest who receive power from the Columbia River. The Treaty is a great success story of working together for the mutual benefit of the region.

In 1996, BPA made the decision not to build a new transmission line to Oliver, B.C. as called for in the Treaty. BPA believed that this would save Transmission Business Line ("TBL") customers money and that this portion of the Canadian Entitlement could be returned via Puget Sound without affecting local reliability. However, the EIS committed BPA to accelerating construction of more cross-Cascade transmission to as "early as 2005".

In the Transmission Programs in Review ("PIR") process, one project TBL has proposed to drop is the Echo Lake to Monroe line. This project would add a 500 kV line to a segment in BPA's Puget Sound grid that is a constraint. TBL has thought that this line was no longer needed because certain new generation proposed in the area has been cancelled, but recent technical analysis (described below) shows it may still be needed as a long-term solution to BPA's NI transmission reliability problems.

There may also be other long-term alternatives that should be considered as potential solutions to this issue.

In an effort to alleviate NI congestion, BPA has adopted its Puget Sound area and Northern Intertie ("PSANI") curtailment procedures. Puget, Seattle and Snohomish have been meeting with TBL for several months to identify solutions for these curtailment problems. We have made progress on a number of technical issues including identifying upgrades that could be made to our respective systems. We have not yet determined how to fund everything that is needed, but we ask that the PIR process not limit BPA's ability to join with the local entities to work together on solving this important reliability issue. Interim efforts to avoid PSANI curtailments should have relatively small costs. All involved in this effort hope that we can find agreeable solutions that maintain the reliability of BPA's transmission system in the Puget Sound area while equitably addressing the cost and risk associated with returning energy to British Columbia as called for by the Columbia River Treaty. The following paragraphs describe some measures that we believe could relieve NI congestion and PSANI curtailments.

### **TRANSMISSION SYSTEM MODIFICATIONS TO ALLEVIATE NI CONGESTION**

The Puget Sound Area Study Group ("PSASG"), which is a subcommittee of the Northwest Transmission Assessment Committee ("NTAC") of the Northwest Power Pool ("NWPP"), is identifying a package of portfolios of transmission upgrades to help alleviate NI transmission congestion. These portfolios, together with several other measures described below, are envisioned to help BPA fulfill its transmission obligations and to alleviate PSANI curtailments and disputes with respect thereto, both over the near term and in the longer term. A summary of the NTAC Study as presented at the August 11 PSANI policy forum is attached as Attachment 1 and is briefly described below. Please note that the NTAC Report is still in a draft state and the studies and other development of these portfolios by PSASG are still ongoing and that there may well be additional refinements or modifications to these portfolios in the upcoming weeks.

#### **1. Long-term Measures: NTAC Portfolio 2 - Echo Lake-Monroe 500 kV Line**

NTAC Portfolio 2 consists primarily of the development of a BPA Echo Lake-Monroe 500 kV line. The development of this line was included as one of BPA's G-20 projects. Development of this line will require a number of years, but will substantially alleviate NI congestion caused or exacerbated by Canadian Entitlement return.

## **2. Near-term Measures: NTAC Portfolio 1 – Transmission Facility and RAS Upgrades**

Substantial relief of NI congestion can be attained in the near term through transmission system modifications. The PSASG committee is identifying the transmission upgrades in the Puget Sound area that would alleviate many instances of such congestion (see "NTAC Portfolio 1") that appear to be feasible to complete in the next few years.

## **3. Other Possible Measures (near and long-term)**

- (i)* BPA pursues buy/sell arrangements
- (ii)* Review certain relevant equipment ratings
- (iii)* Review modeling assumptions regarding BPA stability reserve interruption rights
- (iv)* BPA pursues non-wires solutions and other reliability measures

## **BPA TRANSMISSION BUSINESS LINE EXPENSE AND CAPITAL BUDGETS**

Simply put, cost-effective relief of the NI congestion is very important to the PSANI Utilities, the Puget Sound area and to the region. BPA should evaluate the options available to it for relief of that congestion, including non-wires solutions such as buy/sell arrangements with Powerex and re-evaluation of return of Canadian Entitlement power to Oliver as was originally contemplated in the treaty. It should then include the most cost-effective solution(s) in the PIR and budgeting process.

Further, the PSANI solution must be approached in a comprehensive manner that recognizes the fundamental obligations of the U.S. Entity. The cost of any solution must not be unfairly levied on the Puget Sound area utilities as a group or singly. Canadian Entitlement power provided broad benefits to the Northwest region and the costs of the return obligations should likewise be spread broadly through the region.

## **BACKGROUND ON NORTHERN INTERTIE CONGESTION**

1. BPA Northern Intertie Congestion and PSANI

BPA has experienced a significant increase in transmission congestion on the Northern Intertie ("NI"). As recognized by BPA in its 1991-2000 Transmission System Facilities 10 Year development plan at page 97-1, "Northern Intertie development with B.C. Hydro in Western Washington will stress the transmission system south of Monroe." As a result of this need, BPA has made some upgrades in the Puget Sound area, but these upgrades have not eliminated NI congestion. In addition, NI transmission congestion has become a more significant problem since the Canadian Entitlement return increased to about 1,150 MW in April 2003.<sup>1</sup>

In an effort to alleviate NI congestion, BPA has adopted its Puget Sound area and Northern Intertie ("PSANI") curtailment procedures.<sup>2</sup> Under the PSANI procedures, BPA attempts to curtail certain deliveries to utilities in the Puget Sound area under BPA transmission contracts in order to facilitate BPA's Canadian Entitlement return.<sup>3</sup> However, the PSANI procedures have been inefficient and do not satisfy BPA's obligations to its customers. For example, depending on the particular constraint that is causing BPA to experience NI transmission congestion, curtailment of deliveries under various BPA transmission contracts into the Puget Sound area can have little or no effect in alleviating NI congestion.<sup>4</sup>

## 2. BPA's Recognition of Need for Major Transmission Upgrade

In deciding to deliver a large fraction (11/14ths) of the Canadian Entitlement in Western Washington over existing transmission, BPA concluded that such delivery

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<sup>1</sup> Under the Columbia River Treaty Entity Agreement on Aspects of the Delivery of the Canadian Entitlement for April 1, 1998 through September 15, 2024 between the Canadian Entity and the United States Entity ("Entity Agreement") in November 1996, 11/14ths of the Canadian entitlement is to be delivered at Blaine (west of the Cascade Mountains) and 3/14ths of the Canadian entitlement is to be delivered at Nelway and Waneta points of delivery (east of the Cascade Mountains).

<sup>2</sup> Indeed, BPA's PSANI procedures reflect the fact that BPA is unable to meet its transmission obligations without leaning on other transmission systems, because line outages on other transmission systems have already triggered BPA attempts to implement the PSANI procedures.

<sup>3</sup> By this letter and attachments, no entity waives or releases any right or remedy it may have under or arising out of any of its respective transmission contracts and other agreements with BPA or otherwise. By this letter and attachments, no entity commits to take or not take any action with respect to its transmission system, NI congestion, or any of its transmission contracts or other agreements with BPA.

<sup>4</sup> For example, PSANI curtailment may require curtailment of three or more megawatts of BPA transmission deliveries in order to reduce one megawatt of NI congestion.

could be made while maintaining the reliability of BPA's system but recognized that construction of a major transmission line across the Cascades would be accelerated to as early as 2005. On November 8, 1996, the United States Entity (the Administrator of the Bonneville Power Administration and the Division Engineer, North Pacific Division of the US Army Corps of Engineers) issued a Record of Decision on the "Delivery of the Canadian Entitlement Final Environmental Impact Statement" ("ROD"). This ROD indicated that the United States Entity had decided to fulfill its obligation under the Columbia River Treaty ("Treaty") by delivering Canada's Entitlement under the Treaty to points on the border between Canada and the United States near Blaine, Washington and Nelway, British Columbia.<sup>5</sup> The ROD stated as follows:

Delivering the full Entitlement at existing interconnections at those locations [near Blaine, Washington and Nelway, British Columbia] will require no new transmission facilities in the United States or in Canada. However, construction of cross-Cascade transmission in the United States would be accelerated, to as early as 2005. Delivery of the Canadian Entitlement will begin April 1, 1998.

The ROD concluded that such delivery of the full Entitlement<sup>6</sup> at Blaine and Nelway (Selkirk) was consistent with the "purposes of action", including the following:

**Maintain the reliability of BPA's power system.** Like all of the alternatives it does not impede BPA's ability to operate the transmission system to meet its obligations to its customers.

(ROD Supplementary Information, p. 12. (Emphasis in original).)

However, BPA has not yet completed (or even begun) the cross-Cascade transmission line that it anticipated would be needed as early as 2005 when it decided

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<sup>5</sup> This ROD replaced the Record of Decision issued March 12, 1996, in which the United States Entity stated that it had decided to fulfill its obligation under the Treaty by delivering Canada's Entitlement under the Treaty to a point on the United States/Canada border near Oliver, British Columbia and indicated that such delivery would require BPA to construct and operate a new single-circuit 500-kV transmission line from Grand Coulee or Chief Joseph Substation to the United States/Canada border, a distance of 135 to 155 kilometers, depending on the alignment selected.

<sup>6</sup> The ROD indicates that "Canada's half of the downstream power benefits, the Canadian Entitlement (Entitlement), is calculated to be approximately 1,200 to 1,500 megawatts (MW) of capacity and 550 to 600 average megawatts (aMW) of energy."

to return most of the Canadian Entitlement at Blaine. Nor has BPA otherwise alleviated NI congestion caused by return of the Canadian entitlement.

Attachment 1 to 2004 Transmission PIR Comments

Draft NTAC Study Summary

**Portfolio 1:**

**Monroe-Echo Lake Constraints:**

Tap Bothell-Sammamish into SnoKing (BPA)	\$4 million
Reconductor Bothell-Sammamish (PSE)	\$5 million
Bothell-Snohomish #2 upgrade (SCL/BPA)	\$0.3 million
Horseranch tap to Snohomish (BPA)	\$3 million
Uprate 115 kV Lines (PSE)	\$0.6 million
Upgrade Snoh Bus sectionalizing breaker (BPA)	\$0.5 million
<b>Subtotal</b>	<b>\$13.4 million</b>

**North of Covington Constraints:**

Covington- Berrydale 230kV (PSE)	\$7 million
<b>Subtotal</b>	<b>\$7 million</b>

**RAS Improvements:**

Custer-Monroe #1 & #2 arming (BCTC)	\$0
Additional Breaker at Echo Lake (BPA)	\$1 million
Refine RAS Controller/Arming (BPA/BCTC)	\$.5 million
<b>Subtotal</b>	<b>\$1.5 million</b>

**Portfolio #1 Total** \$21.9 million

**Portfolio 2:**

**Monroe-Echo Lake Constraints:**

Echo Lake – Monroe 500kV (BPA)	\$85 million
<b>Subtotal</b>	<b>\$85 million</b>

**RAS Improvements:**

Custer-Monroe #1 & #2 arming (BCTC)	\$0
Additional Breaker at Echo Lake (BPA)	\$1 million
Refine RAS Controller/Arming (BPA/BCTC)	\$ .5 million
<b>Subtotal</b>	<b>\$1.5 million</b>

**Portfolio #2 Total** \$86.5 million

**Portfolio 3:**

**Portfolio #1 and #2 Total** \$106.9 million