



## Department of Energy

Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

PUBLIC AFFAIRS

September 13, 2011

In reply refer to: DK-7

Richard van Dijk  
Another Way BPA  
Ex 6

### **FOIA #BPA-2011-01733-F**

Dear Mr. van Dijk:

This is a final response to your request for records that you made to the Bonneville Power Administration (BPA) under the Freedom of Information Act (FOIA), 5 U.S.C. 552.

#### **You have requested the following:**

A copy of the full and detailed financial justification used to kick off the I-5 project as part of the 2008 Network Open Season. Provide a list of all those that approved this justification and the dates they approved it.

#### **Response:**

BPA has provided the responsive documents in their entirety. The Agency Decision Framework (ADF) was not signed. Administrator Steve Wright sent a letter to the region on February 16, 2009, informing them of the decision that was recommended in the ADF. The letter is attached.

Pursuant to 10 CFR 1004.8, if you are dissatisfied with this determination, or the adequacy of the search, you may appeal in writing within 30 calendar days of receipt of a final response letter. The appeal should be made to the Director, Office of Hearings and Appeals, HG-1, Department of Energy, 1000 Independence Avenue, SW, Washington, DC 20585-1615. The written appeal, including the envelope, must clearly indicate that a FOIA Appeal is being made.

I appreciate the opportunity to assist you. Please contact Cheri Benson, FOIA/Privacy Act Specialist at (503) 230-7305 with any questions about this letter.

Sincerely,

*/S/Christina J. Munro*

Christina J. Munro

Freedom of Information Act/Privacy Act Officer

Enclosure: Responsive documents

## 2008 Network Open Season (NOS) Project Alternatives and Recommendation

### 1) Objectives:

Decide which expansion facilities BPA will propose to undertake in response to its 2008 Network Open Season obligations, which require BPA to determine whether the service over the expansion facilities identified in the NOS Cluster Study can be provided under the PTP or NT rate schedule (rolled-in rate determination).

The selected transmission expansion projects will be advanced to the Capital Allocation Board (CAB) for authorization and funding of National Environmental Policy Act (NEPA) work, including preliminary engineering and design required to identify alternatives and evaluate environmental impacts.

Proposed Projects: McNary-John Day, Big Eddy-Station Z, Little Goose and West of Garrison Remedial Action Scheme.

### 2) Agency Strategic Direction:

- *S1-Policy & Regional Actions-BPA policies result in regional actions that ensure adequate, efficient and reliable regional transmission and power services.*
- *S4-Open, non-discriminatory transmission services are provided at rates that are kept low through achievement of BPA's objective at the lowest practical cost.*
- *F2-Cost Recovery-BPA consistently recovers its costs over time.*
- *I4-Asset Management-Integrated asset management practices maximize the long-term value of FCRPS assets.*
- *I8- Transparency- BPA process, decision making and performance are transparent.*
- *I9-Collaboration-Collaborative relationships with customers, constituents and tribes are supported by our managing to clear, long-term objectives with reliable results.*

### 3) Decision Makers and NOS Team:

Decision makers

- Steve Wright

- Vickie VanZandt

VP Sponsors

- Cathy Ehli
- Brian Silverstein

- Dave Armstrong

NOS Management and Supervisory Team

- Mary Jensen
- Dave Fitzsimmons
- Bob King
- Melvin Rodrigues

- Elliot Mainzer
- Claudia Andrews
- Sue Holden-Baker
- Kammy Rogers-Holiday
- Dennis Oster

Team Members

- Mark Jackson
- Sean Egusa
- Doug Johnson
- Chuck Combs

- Len Morales
- Robert Shier
- Jon Dull
- Erik Westman

## Agency Decision Framework Analysis – 2008 Network Open Season

- Matt Perkins
- Rebecca Fredrickson
- Tim Hein
- Danny Chen
- Dennis Stevens
- Chuck Matthews
- Mike DeWolf
- Damen Bleiler
- Ken Marks
- David Barringer
- Susan Millar
- David Manary
- Ravi Aggarwal
- Don Rose
- Gene Lynard
- Mark Korsness
- Gary Beck
- Maryam Asgharian
- Virginia Schaeffer
- Kyle Kohne
- Pat Rochelle
- Ryan Josephson

### 4) Background and Context:

BPA initiated the NOS on April 15, 2008. PTSA agreements were offered to customers that submitted valid Transmission Service Requests (TSR) on OASIS prior to May 15, 2008. At the close of NOS on June 16, 2008, BPA received signed PTSA agreements from 28 customers. These agreements obligate customers to purchase long-term transmission service consistent with their Transmission Service Agreements provided that certain conditions are met. In total these agreements reflect long-term service commitments for 6,410 MW. BPA filed tariff revisions regarding the NOS procedures with the Federal Energy Regulatory Commission on March 31, 2008, and FERC issued an order substantially approving the filing on June 13, 2008.

Following the close of NOS, BPA removed NOS-eligible TSRs for which customers did not sign a PTSA from the long-term TSR queue and determined that BPA had sufficient ATC (Available Transfer Capability) to enable 1,782 MW of the 6,410 MW of service without the construction of expansion facilities.

The PTSA obligates BPA to take the following actions:

- At BPA's expense, conduct a Cluster Study to determine system impacts and to identify new facilities, modifications, or upgrades to BPA's network in order to provide the requested service. BPA completed the Cluster Study on November 1, 2008.
- Evaluate the estimated cost and benefits of proposed expansion facilities consistent with the Commercial Infrastructure Finance Policy (CIFP). BPA completed the CIFP evaluation on January 5, 2009.
- Decide whether BPA can construct the necessary expansion facilities and transmission service "can reasonably be provided under the applicable PTP or NT rate schedule" (rolled-in rate determination).
- Fund NEPA studies for evaluating the environmental impacts of new facilities that satisfy the rolled-in rate determination, including preliminary engineering and design work necessary to carry out the environmental reviews. This was scheduled for CAB decision on January 30, 2009.
- Where BPA determines that transmission service cannot be provided under the applicable PTP or NT rate schedule at the rolled-in rate, BPA must notify the affected customers no later than February 13, 2009.
- For each project, BPA has the right to choose any alternatives considered in the NEPA review, including the no build alternative. BPA must complete NEPA reviews no later than 36 months from posting of the rolled-in rate determination, which results in a target date for completion of NEPA review no later than Feb. 16, 2012.
- If BPA decides to build the necessary facilities, BPA will finance and construct new facilities.

**Timeframe for the decision:**

Written notification must be provided to each customer holding a PTSA no later than February 13, 2009.

**2008 Network Open Season Cluster Study Summary:**

*The following figure shows how the PTSA were grouped for identifying flow gate impacts, proposed facilities and costs:*

## PTSA Grouping

Grouping	PTSA	Demand
Authorize -- Pre NOS (no new facilities required)	4 PTSA	55 MW
Authorize—Post NOS† (no new facilities required)	43 PTSA	1,727 MW
West of McNary Reinforcement	45 PTSA	2,023 MW
I-5 Corridor Reinforcement	2 PTSA	150 MW
Little Goose Area Reinforcement	5 PTSA	200 MW
West of McNary & West of Garrison RAS±	1 PTSA	91 MW
Harney Area Reinforcement	28 PTSA	775 MW
Northern Intertie Reinforcement	2 PTSA	100 MW
West of McNary & LaGrande Area Reinforcements‡	2 PTSA	54 MW
West of McNary & I-5 Corridor Reinforcements	6 PTSA	495 MW
West of McNary & Little Goose Area Reinforcements	13 PTSA	640 MW
West of McNary & I-5 & Little Goose Area Reinforcements	2 PTSA	100 MW
<b>NOS -- TSR Groupings</b>	<b>153 PTSA</b>	<b>6,410 MW</b>

† Includes one PTSA split into two partial TSR's

± Includes one PTSA with a partial TSR (parent PTSA in West of McNary)

‡ Includes one PTSA with a partial TSR (parent PTSA in West of McNary)



## Agency Decision Framework Analysis – 2008 Network Open Season

New facilities that are necessary to enable service to all PTSAs in the Cluster Study are as follows:

- A. West of McNary Reinforcement (WOMR)
  - a. Group One:
    - i. McNary-John Day 500-kV (79 miles)
    - ii. McNary-Ross 345-kV sag upgrade
    - iii. Big Eddy-Ostrander 500-kV sag upgrade
    - iv. John Day-Big Eddy 500 kV No. 2 reconductor
    - v. 230-kV shunt capacitor addition at Jones Canyon
    - vi. RAS addition at McNary – McNary 500/230 kV transformer outage
  - b. Group Two:
    - i. New 500-kV Station (Z)
    - ii. Big Eddy-Station Z 500-kV (28 miles)
- B. I-5 Corridor Reinforcement
  - a. New 500-kV Station (Castle Rock)
  - b. Castle Rock-Troutdale 500-kV (70 miles) or Castle Rock-Pearl 500-kV (90 miles)
- C. Little Goose Area Reinforcement
  - a. New 500-kV Station-Lower Monumental 500-KV (40 miles)
- D. West of Garrison Remedial Action Scheme (RAS)
  - a. RAS addition at Garrison – generation tripping
- E. Harney Area Reinforcement
  - a. Harney-Malin 500-kV (179 miles)
- F. Northern Intertie Reinforcement
  - a. Monroe-Echo Lake 500-kV No. 2 (33 miles)
- G. LaGrande Area Reinforcement
  - a. McNary-LaGrande 230-kV (83 miles)
  - b. LaGrande-Brownlee 230-kV (79 miles)

The following summarizes estimated direct costs for new facilities identified in the 2008 NOS cluster study:

## Project Cost and Schedule

### Estimated Direct Costs Only (no overheads)

<b>Project-Description</b>	<b>Estimated Total Cost (\$k) / Confidence Level</b>	<b>Proposed Energ. Date</b>
McNary-John Day + Other Upgrades	\$246,545 / High	Dec-12
Station Z + Big Eddy-Station Z	\$115,658 / Medium	Feb-13
I-5 Corridor Reinforcement Total	\$341,996 / Medium	Sep-15
Little Goose Area Reinforcement Total	\$99,435 / Medium	Sep-13
West of Garrison RAS	\$2,300 / Low	Sep-11
Harney Area Reinforcement Total	\$359,589 / Low	Sep-14
Northern Intertie Reinforcement Total	\$225,301 / Low	Sep-15
LaGrande Area Reinforcement Total	\$131,989 / Low	Sep-14
<b>Total</b>	<b>\$1,522,813</b>	

Notes:

1. Estimated costs in FY08 dollars.
2. Energization dates assume rolled-in rate determination is made in Feb. 2009.

## Agency Decision Framework Analysis – 2008 Network Open Season

The following figure presents the forecasted schedule of direct capital costs for each project included in the recommendation. Costs include work for NEPA:

	A Project Description	B Direct Cost \$M	C Loadings	D AFUDC	E Total Cost	F Energ. Date	FY Annual Direct Costs - \$M						
							2009	2010	2011	2012	2013	2014	2015
1	WOMR	362	83	48	493	Feb-13	18	102	105	123	14	0	0
2	I-5 Corridor Reinforcement Total	342	79	43	464	Sep-15	2	12	7	85	85	75	75
3	Little Goose Area Reinforcement Total	99	23	10	132	Sep-13	1	7	28	30	33	0	0
4	West of Garrison RAS	2	1	0.4	3	Sep-11	0	1	1	0	0	0	0
5	Total	805	185	102	1,092		21	122	142	238	132	75	75

### NOS Financial and Rate Impact Analysis:

A Net Present Value (NPV) and rate analysis was performed for the projects required to enable service in accordance with the CIFP. This analysis was organized as follows: 1) each project and the service enabled by the project was individually evaluated as an independent capital project; 2) all expansion projects necessary to enable service to all PTSA customers were evaluated; and 3) evaluations were performed for several scenarios identified in the Cluster Study.

The CIFP presentation is attached as an embedded document. Click on the icon to open the presentation:

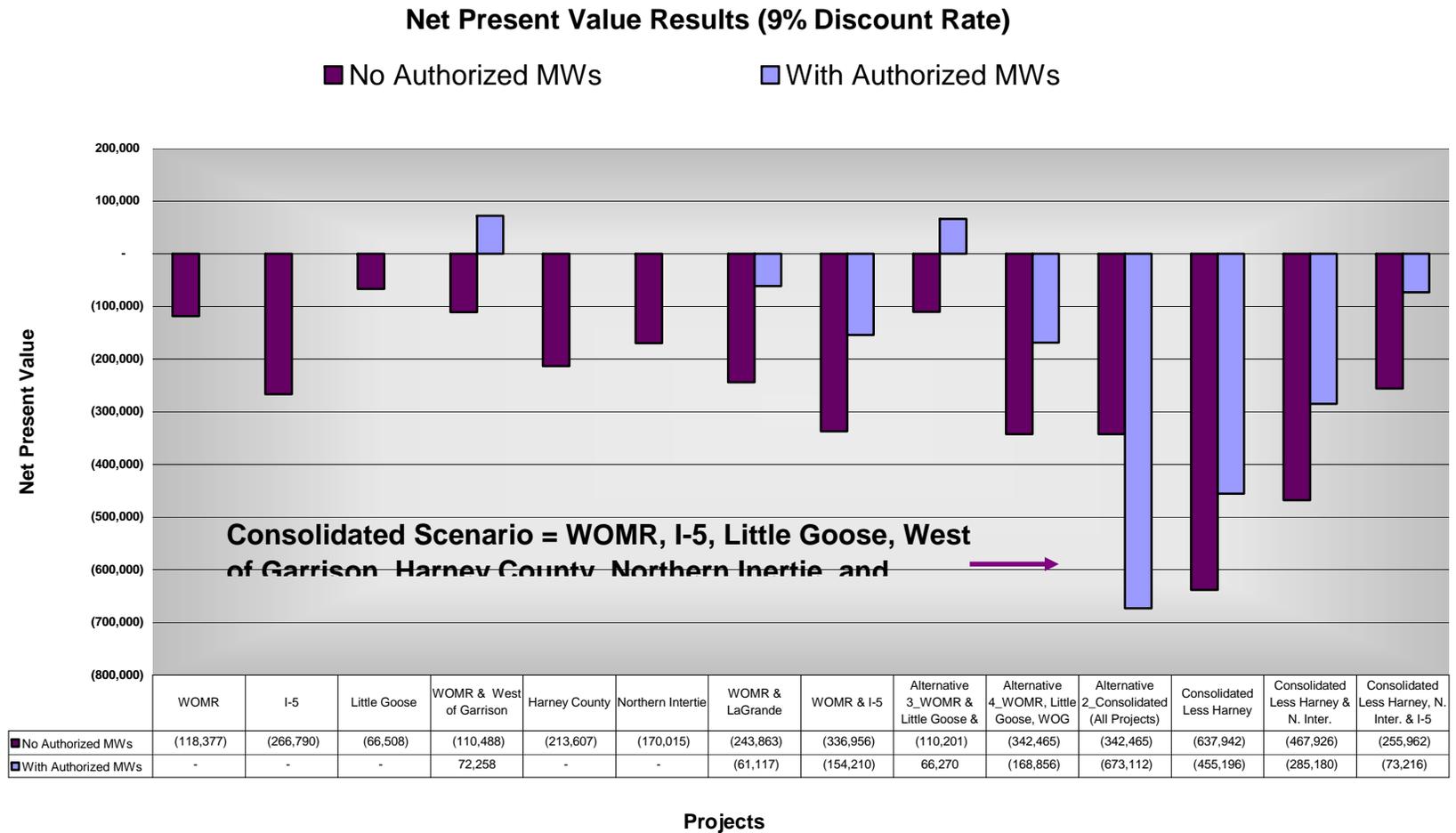
The following are the base point assumptions used in the NPV and rate analysis modeling:

- Discount rate of 9%.
- Overhead rate for NPV of \$2 million per project per construction year.
- Overhead rate for rate impact analysis only of 23%.
- 1% rate increase per year.
- 2% inflation rate.
- Reliability benefits identified in the Cluster Study were taken into account.
- Revenues begin at the start of the year after completion of expansion facilities.
- PTSAs were assumed to roll over for the life of the expansion facilities (all PTSAs have duration of more than five years).
- Project cost and revenues not adjusted for risk.
- Revenues from PTSAs for which service can be provided from existing ATC (1,782 MW, without constructing additional facilities) were not included in the NPV analysis but were included in the determination of rate impact.

None of the individual projects or analyzed scenarios resulted in a positive NPV. Inclusion of NOS revenues where service is provided from existing ATC (no new facilities required) results in slightly positive NPV for two scenarios—WOMR/West of Garrison and WOMR/Little Goose.

## Agency Decision Framework Analysis – 2008 Network Open Season

The following figure shows NPV results by project and for project consolidation:



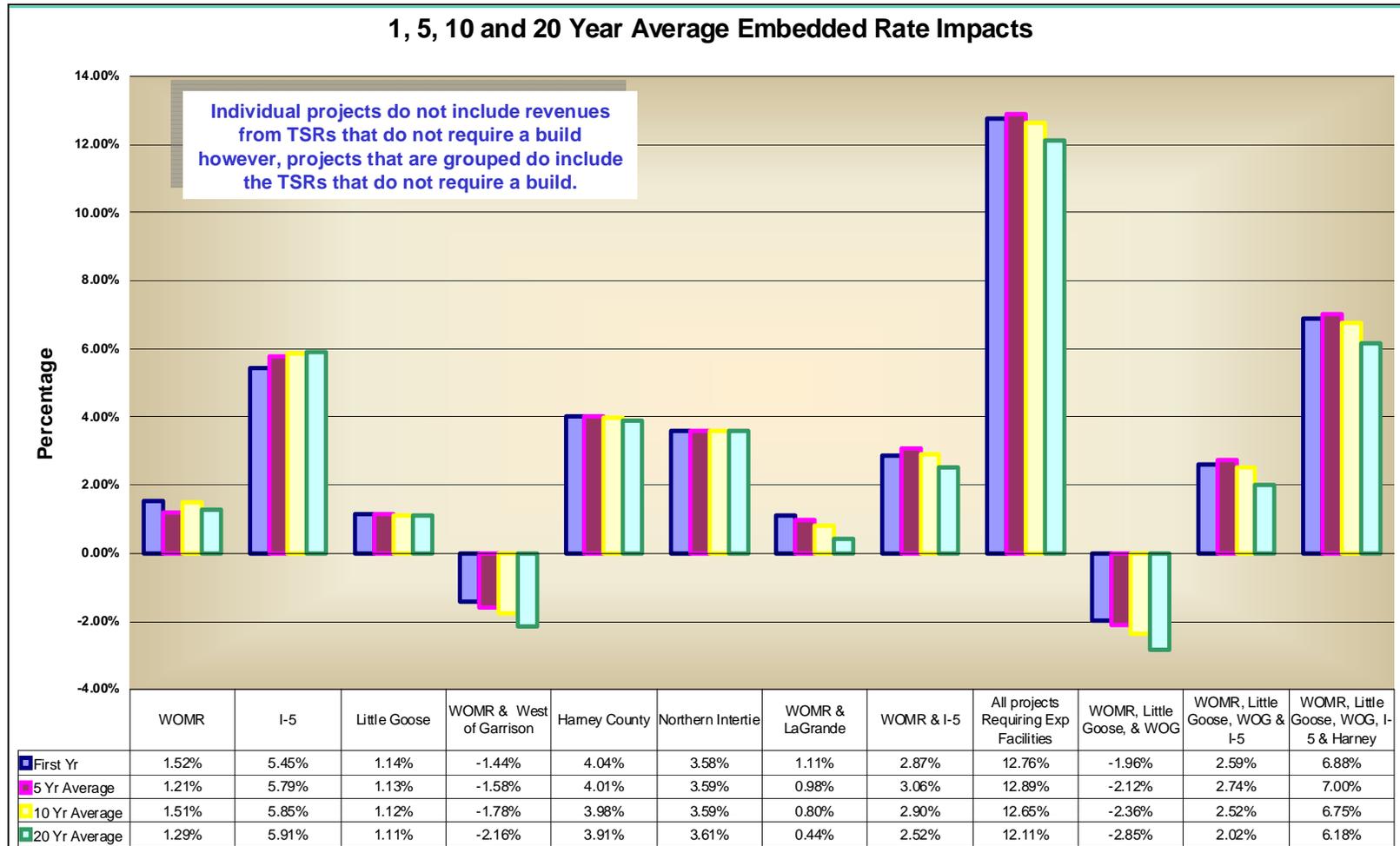
Note: "With Authorized" refers to requests that can be granted without a capital build and are included in the NPV calculation. "No Authorized" refers to only to the requests that require a capital build.

Rate Impact Analysis Results:

## Agency Decision Framework Analysis – 2008 Network Open Season

A rate impact analysis was performed for all projects and consolidation of projects. If BPA moved forward with all expansion facilities identified in the Cluster Study, customers would see an average 12 percent rate increase over a 20-year period.

The following figure shows rate impacts by project and project scenarios.



### Regional Economic Analysis

Regional economic analysis was conducted using a production/cost methodology to identify northwest regional economic benefits and effects due to the addition of all generation identified in the 2008 NOS (approximately 4,600 MW, mostly renewables) and associated transmission facilities. Section 8 of this ADF includes key results of this analysis.

**Preliminary Customer Comments**

See appendix summarizing customer comments below.

**5) Decision Evaluation Criteria:**

**A number of criteria have been identified and applied in the evaluation of the alternatives:**

**Business/Finance**

- a) Cost effectiveness using NPV analysis consistent with the CIFP analysis process and Agency financial assumptions;
- b) No more than a 2-3% rate impact for the combined expansion facilities over 20 years;
- c) Negligible to low stranded investment risk;
- d) Consistency with BPA's financial targets, rate case assumptions, and treasury payment probability;
- e) Acceptable impact on future capital adequacy;
- f) Can be financed using third-party lease program;
- g) No adverse impact on BPA's bond rating;
- h) Enhanced system operation by reducing reliance on curtailment calculators and remedial action schemes;
- i) Reliability benefits;
- j) Provide capacity for load growth and future commercial sales;
- k) Impact to future non-firm revenue;

**Legal:**

- a) Consistent with applicable statutes, BPA Tariff, and PTSA terms.
- b) Legal issues and potential legal risks associated with recommendations fully understood and mitigated to the extent possible.

**Environment:**

- a) Impact on the environment is considered. Decision to construct any facilities is subject to NEPA review.
- b) Recommendations not in conflict with fish and wildlife goals, energy efficiency goals, renewable resource development, and climate change response policy.

**Public Interest:**

- a) Customers, merchants, transmission providers, elected officials, other stakeholders and media perspectives understood and taken into account.
- b) Provide enhanced ability for region to meet Renewable Portfolio Standards;
- c) Provide for wind diversity;
- d) Provide regional benefits to customers and consumers in the BPA balancing authority and western interconnection.

**BPA's People and Processes:**

- a) Demonstrated ability to carry out work necessary to complete NEPA and to construct projects in accordance with the capital program.
- b) Acceptable impact on BPA people and culture objectives;
- c) Supports Agency workforce/workplace goals for leadership, talent, motivation/alignment and positive work environment:
- d) Recommendation consistent with BPA internal policies, procedures, and internal controls.

## **6) Key Risks:**

### EXECUTION RISK

- a) **BPA may be unable to complete NEPA review or offer conditional firm service within 36 months of the rolled-in rate determination as required by the PTSA. A customer has the right to terminate its PTSA in this circumstance, which could alter the assumptions upon which the rolled-in rate determination was based. There is MODERATE to HIGH risk that NEPA will not be completed in 36 months of the rolled-in rate determination, and a low to moderate probability that at least one customer may terminate its PTSA for BPA's failure to complete NEPA on schedule.**
  - Mitigation: I-5 has an estimated 36 to 48-month NEPA timeline. It may be possible to amend the PTSA once BPA determines the NEPA schedule.
- b) **Commodity and construction costs could increase, resulting in a rate impact higher than anticipated. This is a MODERATE risk with a low probability that the rate impact will be significantly higher.**
  - Mitigation: Estimates include low to high confidence adjustments based on plan of service (high confidence=10% margin; moderate confidence=25% margin; low confidence=50% margin). There is some likelihood that with declining commodity prices, project costs could be overstated. Sensitivity analysis shows less than a one percent rate impact for 50 percent cost overrun.
- c) **BPA will have significant sunk costs for NEPA review and preliminary engineering and design required to complete NEPA if BPA decides not to go forward with construction once NEPA review begins, because these costs will be expensed. There is MODERATE risk that at least one of the proposed projects will not proceed on the proposed schedule, resulting in sunk costs.** NEPA work has a limited shelf life before it must be revisited. Mitigation: None. This is a cost that all BPA ratepayers bear that is not unique to NOS. NEPA cost for the recommended alternative (Alternative 4) is estimated at \$16 million.
- d) **Customers holding PTSAs could default which would impact future revenues. Security held by BPA is not sufficient to fully protect BPA ratepayers from rate impacts due to default. There is moderate risk for increased rate impact with high probability that at least one customer may default.**
  - Mitigation: The amount of risk BPA ratepayers will bear is unique to each project, the number of customers that will take service over the projects, and the long-term financial viability of the participating customers. Some projects enable service for multiple customers over critical paths required for load service. Other projects are for service to a single customer connecting new generation to the network. Sensitivity analysis shows that a 15 percent loss of revenue due to default by customers would result in a rate impact of 5.7 percent.
- e) **BPA cost of third-party capital could increase causing unanticipated upward rate pressure. There is MODERATE risk that an increase in capital costs will lead to upward rate pressure with a low probability that BPA will be unable to mitigate the impact.**
  - Mitigation: The master lease program is set up to help minimize these effects. Treasury borrowing could be an alternative for some portion of the capital requirement.

- f) **Cluster study planning analysis could include inaccurate assumptions, resulting in flawed identification of expansion facilities needed to enable service. Projects may not provide sufficient capacity to enable service. There is a LOW to moderate risk that the plans of service are inadequate for with a low probability that service cannot be enabled.**
  - Mitigation: External review by Columbia Grid and NTTG has confirmed that plans of service are electrically feasible, do not result in adverse consequences for the western interconnection, and will provide sufficient capacity to enable service.
- g) **Major unanticipated changes in interconnected system topology, load, and generator dispatch patterns could significantly alter Cluster Study results. There is LOW risk that the topology and other changes will occur, and a low overall probability that this will occur.**
  - Mitigation: Planning will continue to conduct sensitivity analyses to evaluate risks that could alter flows and plans of service.
- h) **External policies for conditional firm, reliability, and ATC could impact the way existing network facilities are managed, the availability of ATC, and the need and timing for proposed projects. There is LOW risk and low probability that policy changes will result in changes to the plans of service.**
  - Mitigation: BPA is an active participant in FERC, NERC, and WECC efforts to define new reliability and commercial rules for transmission management. While changes in criteria and process are inevitable, TS does not believe that any such changes will result in significant modification to the Cluster Study results.
- i) **Customers may not roll over service at the end of their contract term, reducing the total revenue assumed in the determination of NPV and rate impact. The base case analysis assumes that all contracts with duration of five years or longer will roll over. There is LOW risk and moderate probability that one or more customers will choose not to roll over their contract at the end of the contract term.**
  - Mitigation: A significant portion of the requested transmission service is associated with the interconnection of new generators. This increases the likelihood that transmission service will be acquired at least for the life of the generating facility. The average duration for all PTSA commitments is thirteen years. Sensitivity analysis has been conducted to evaluate impact on revenue that would result from reduced rollovers.
- j) **Customers may elect to defer their service commencement date (start date) for up to five years. If the customer defers the commencement of service, BPA will extend the contract end date and the customer must still purchase transmission service for the full requested service duration. Deferral delays when revenues are received. There is LOW risk that deferrals will affect rates, and a high probability that this will occur.** Sensitivity analysis has been conducted to evaluate the NPV and rate impact under circumstance where all PTSA are deferred for 5 years (worst case outcome). The rate impact is negligible (approximately 0.2 percent over 20 years).
  - Mitigation: None.

## **7) Alternatives Considered:**

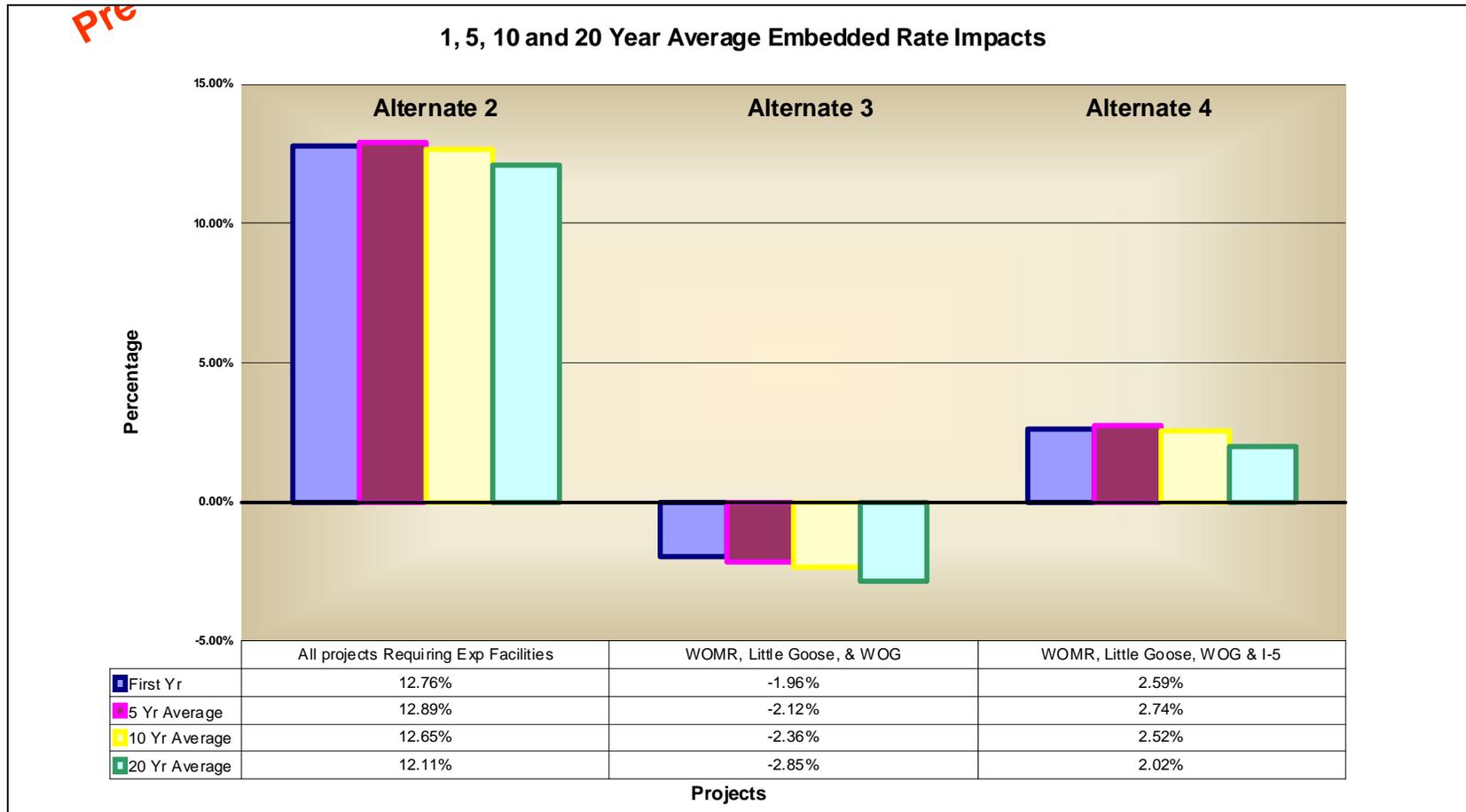
- I. Alternative #1: Do not move forward with any of the required expansion facilities at rolled-in rates, and notify customers that BPA is terminating all signed PTSAs and will process their TSRs in accordance with the Tariff.

## Agency Decision Framework Analysis – 2008 Network Open Season

- II. Alternative #2: Move ahead with NEPA work for all required expansion facilities as BPA has “reasonably determined” that it can provide service for all PTSAs under the PTP or NT rate.
- III. Alternative #3: Move ahead with NEPA for WOMR, Little Goose and West of Garrison expansion facilities, and notify customers whose service would be enabled by these projects that BPA has determined that service can “reasonably be provided” under the PTP or NT rate. In addition, notify all other customers that that expansion facilities required to enable service cannot be provided at the rolled-in rate, that the PTSA will terminate, and that BPA will process their TSRs in accordance with the Tariff.
- IV. Alternative #4: Move ahead with NEPA for WOMR, Little Goose, West of Garrison, and I-5 facilities, and notify customers whose service would be enabled by these projects that BPA has determined that service can “reasonably be provided” under the PTP or NT rate. In addition, notify all other customers that expansion facilities required to enable service cannot be provided at the rolled-in rate, that the PTSA will terminate, and that BPA will process their TSRs in accordance with the Tariff.

# Agency Decision Framework Analysis – 2008 Network Open Season

The following figure is a summary of rate impacts for the alternatives considered in this ADF:



## Agency Decision Framework Analysis – 2008 Network Open Season

### 8) Analysis of Alternatives:

The following analysis is based on the criteria outlined in Section 5 above. Refer to Section 5 for full explanation of each item.

Agency Decision Framework	<u>Alt #1</u> Do Not Proceed with NEPA for Any Expansion Facilities	<u>Alt #2</u> Proceed with NEPA for All Required Expansion Facilities	<u>Alt #3</u> Proceed with NEPA for WOMR, Little Goose and West of Garrison	<u>Alt #4</u> Proceed with NEPA for WOMR, Little Goose, West of Garrison and I-5
<b>Business/Finance</b>				
a) NPV	NPV is not applicable	Negative NPV of \$856 million	Negative NPV of \$116 million (does not include West of Garrison)	Negative NPV of \$351 million
b) No more than 2-3% rate impact	No rate impact	Rate impact over 20 years is a 12.1% increase. The rate impact excluding the requests included in the revenue requirement in the TR-10 Rate Case would be a 14.7% increase.	Rate impact over 20 years is a 2.6% decrease. The rate impact excluding the requests included in revenue requirement in the TR-10 Rate Case would be 0.4% decrease.	Rate impact over 20 years is a 1.5% increase. The rate impact excluding the requests included in revenue requirement in the TR-10 Rate Case would be 4% rate increase.
c) Stranded investment risk	None	Some projects (Harney and Little Goose) carry risk.	Some risk with Little Goose	Some risk with Little Goose
d) Consistent with Financial plan, targets and rate case.	WOMR and I-5 were included in the rate case and the financial plan. If we do not proceed with these projects, it would be inconsistent with the financial plan.	WOMR and I-5 were included in the rate case and the financial plan. If we proceed with all of the projects, the expansion costs would be significantly higher than planned in the targets and financial plan. There would be no affect on the rate case assumptions because none of these projects are expected to be in service during the FY10-11 rate period.	WOMR and I-5 were included in the rate case and the financial plan. If we do WOMR, Little Goose, and West of Garrison, there would be some impact to the financial plan and targets. There would be no affect on the rate case assumptions because none of these projects are expected to be in service during the rate period.	WOMR and I-5 were included in the rate case and the financial plan. If we proceed with WOMR, Little Goose, West of Garrison, and I-5 there would be some impact to the targets and financial plan. There would be no affect on the rate case assumptions because none of these projects are expected to be in service during the rate period.

## Agency Decision Framework Analysis – 2008 Network Open Season

Agency Decision Framework	<u>Alt #1</u> Do Not Proceed with NEPA for Any Expansion Facilities	<u>Alt #2</u> Proceed with NEPA for All Required Expansion Facilities	<u>Alt #3</u> Proceed with NEPA for WOMR, Little Goose and West of Garrison	<u>Alt #4</u> Proceed with NEPA for WOMR, Little Goose, West of Garrison and I-5
e) Capital adequacy	None	Would not have significant impact on capital access until all projects proceed. Defers a capital access solution. Proceeding with all projects presents significant concerns for capital access.	Has a neutral impact on borrowing authority compared to the 2010 OMB Budget Submission.	Stretches capital access beyond that anticipated in the 2010 OMB Budget Submission.
f) Third party lease		Not until the projects proceed to start construction and incur financing costs. If projects do not proceed, NEPA costs will be expensed.	Yes, third party lease is viable.	Yes, third party lease is viable.
g) BPA bond rating		No impact until plan to proceed with all projects – then likely negative impact	Likely no impact	Some concern, but likely no impact
h) Redispatch, Curtailment & RAS	Non-Firm and Firm curtailments on network likely to increase. Continued reliance on RAS	Initial reduction to Non-Firm curtailments on network likely to continue due to an increased set of firm obligations from PTSA. Continued reliance on RAS	Initial reduction to Non-firm curtailments on network likely to continue due to increased firm obligations from PTSA. Continued reliance on RAS	Initial reduction to Non-firm curtailments on network likely to continue due to increased firm obligations from PTSA. Continued reliance on RAS

## Agency Decision Framework Analysis – 2008 Network Open Season

Agency Decision Framework	<u>Alt #1</u> Do Not Proceed with NEPA for Any Expansion Facilities	<u>Alt #2</u> Proceed with NEPA for All Required Expansion Facilities	<u>Alt #3</u> Proceed with NEPA for WOMR, Little Goose and West of Garrison	<u>Alt #4</u> Proceed with NEPA for WOMR, Little Goose, West of Garrison and I-5
i) Reliability benefits	Does not improve reliability	<p>The present value benefits associated with a delay of non-NOS capital projects is \$13.5 million.</p> <p>If we build Big Eddy - Station Z (part of WOMR) then we would delay the following project from 2015 to 2018:</p> <ul style="list-style-type: none"> <li>• Station K (Pine Grove) and 3 series capacitors on Marion lines. Approximate estimated cost is \$110 million, which is a \$10 million PV benefit.</li> </ul> <p>If we build I-5, we will delay the following project from 2015 to 2020:</p> <ul style="list-style-type: none"> <li>• Line Reconductoring of Olympia-Chehalis, Chehalis-Longview tap #1 &amp; #3 and Longview tap to Longview. Approximate estimated cost \$20 million, which is a \$3.5 million PV benefit.</li> </ul>	<p>The present value benefits associated with a delay of non-NOS capital projects is \$10 million:</p> <p>If we build Big Eddy - Station Z (part of WOMR) then we would delay the following project from 2015 to 2018:</p> <ul style="list-style-type: none"> <li>• Station K (Pine Grove) and 3 series capacitors on Marion lines. Approximate estimated cost is \$110 million, which is a \$10 million PV benefit.</li> </ul>	<p>The present value benefits associated with a delay of non-NOS capital projects is \$13.5 million.</p> <p>If we build Big Eddy - Station Z (part of WOMR) then we would delay the following project from 2015 to 2018:</p> <ul style="list-style-type: none"> <li>• Station K (Pine Grove) and 3 series capacitors on Marion lines. Approximate estimated cost is \$110 million, which is a \$10 million PV benefit.</li> </ul> <p>If we build I-5 we will delay the following project from 2015 to 2020:</p> <ul style="list-style-type: none"> <li>• Line Reconductoring of Olympia-Chehalis, Chehalis-Longview tap #1 &amp; #3 and Longview tap to Longview. Approximate estimated cost is \$20 million, which is a \$3.5 million PV benefit.</li> </ul>

**Agency Decision Framework Analysis – 2008 Network Open Season**

Agency Decision Framework	<u>Alt #1</u> Do Not Proceed with NEPA for Any Expansion Facilities	<u>Alt #2</u> Proceed with NEPA for All Required Expansion Facilities	<u>Alt #3</u> Proceed with NEPA for WOMR, Little Goose and West of Garrison	<u>Alt #4</u> Proceed with NEPA for WOMR, Little Goose, West of Garrison and I-5
j) Future revenue (from current queue and additional ATC)	Does not enable additional sales	See comments under alternatives 3 and 4.	<p>Based on a preliminary Planning assessment, there are approximately 8 TSRs that were not in the 2008 NOS, with an associated demand of 475 MW that could be enabled by addition of the proposed NOS projects under Alternative #3. This result is based on preliminary analysis of the Pending Queue (from mid-December 2008). Following development of an ATC base case reflecting the NOS projects and PTSAs enabled, a sizable number of additional TSRs would likely be enabled.</p> <p>West of McNary post-NOS ATC = 681 MW</p> <p>West of Slatt post-NOS ATC = 295 MW</p>	<p>South of Allston is currently at 0 ATC. The <i>de minimis</i> bucket for this flowgate is also nearing 0 MW. Given the nature of the BPA network, 0 ATC at any one flowgate will limit future sales across the network, not just those primarily using I-5</p> <p>In addition to the information in alternative 3, planning is conducting further studies to determine the expected ATC from I-5 specific to the South of Allston and Paul-Allston flowgates.</p> <p>The short duration of the current requests (PTSA) for I-5 is why there is a negative NPV in the CIFP analysis. Additionally, the CIFP assumes that they will not roll-over (less than 5 years), however, we assume a high likelihood that they will rollover and that the increased ATC for South of Allston will enable future new service. For example, an initial assessment of the current transmission queue (post-NOS) shows 250 MW that could be enabled by I-5. These and other future use would mitigate rate pressures.</p>
k) Non-firm revenue	Continued impact to delivery of non-firm service along the I-5 corridor.			I-5 would reduce curtailment events impacting loss of service associated with non-firm service.

## Agency Decision Framework Analysis – 2008 Network Open Season

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l) Ability to meet RPS requirements	None	Supports	Supports	I-5 does not add any additional support for RPS requirements that is not reflected in Alternative 3.
m) Wind diversity	None	Harney and Little Goose could bring more geographic diversity to the Northwest wind fleet.	Enables Little Goose	Enables Little Goose
n) Regional benefits	<p>Approximately \$72 million (\$84 million with Harney*) savings in thermal generation cost per year (2.5% savings in total average energy cost per year) starting in year 2015.</p> <p>With no transmission expansion, 20% increase in network flowgate loadings resulting in major congestion across WOM, WOS, WOJD, and South of Allston. However, very limited flowgate limit violations (flows exceeding 100%) noticed.</p> <p>* Harney wind generation would require radial transmission to Malin to access markets. Without the transmission connection, there are no realized benefits of Harney wind.</p>	<p>Additional \$10 million (over Alt #1) savings in thermal generation cost per year (3.2% savings in total average energy cost per year) starting in the year 2015. BPA flowgate loading levels reduced substantially (26 hours per year flowgate loadings exceed 90%).</p>	<p>Additional \$7 million (over Alt #1) savings in thermal generation cost per year (2.6% savings in total average energy cost per year) starting in the year 2015. BPA flowgate loading levels exceed the 90% loading levels for 577 hours; 528 hours on the I-5 flowgates.</p>	<p>Additional \$8 million (over Alt #1) savings in thermal generation cost per year (2.7% savings in total average energy cost per year) starting in the year 2015. Alternative 4 removes 80% of the flowgate loadings that exceeded 75% of the flowgate limits as compared to Alternative 1. I-5 reinforcement does provide for additional flow reduction across Paul-Allston and South of Allston. Three hours of flowgate loadings exceeded 90% as compared with 528 hours in Alternative 3</p>
o) Power Loss benefits (regional benefit)			42 MW per year which results in a regional benefit of \$13.9 million.	62 MW per year which results in a regional benefit of \$16.7 million.
<b>Legal</b>				

## Agency Decision Framework Analysis – 2008 Network Open Season

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a) Consistency with statutes, tariff & PTSA	Because certain groups of projects show a rate benefit, <i>i.e.</i> , WOMR/West of Garrison and WOMR/Little Goose, adopting this alternative instead of building at least those combinations of projects would be inconsistent with the OATT as revised by the NOS filing and with the PTSA. Both those documents obligate BPA to provide service to PTSA customers' TSRs if BPA determines that it can reasonably provide embedded cost service. It would be difficult to justify not proceeding to NEPA for the projects mentioned above when the CIFP projects a rate decrease as a result of building the projects and serving the TSRs enabled by such projects. It could also be argued that such a decision would be inconsistent with direction to provide transmission service under sections 4 and 6 of the Federal Columbia River Transmission System Act and 9(i)(3) of the Northwest Power Act.	The projected 12% rate increase resulting from construction of all projects raises a significant issue about whether BPA followed the OATT and PTSA, which require a reasonable determination that BPA can provide service at embedded cost rates. Given the OATT and PTSA requirement, there would need to be substantial justification outside the NOS process to proceed with such a projected rate increase, and there does not appear to be that justification.	This alternative is completely consistent with the OATT and PTSA requirement of a reasonable determination that service could be provided at embedded cost rates because the CIFP projects a rate decrease with this alternative. This alternative also is consistent with BPA's statutory obligations. A possible risk is that a customer with a TSR that would have been enabled by alternative #4 but not by this alternative could argue that BPA has not properly applied the CIFP allowance for expected future uses, such as RPS requirements and non-firm use of additional capacity on the I-5 corridor. FERC may be receptive to these arguments, but would not have authority to overturn BPA's decision. Those arguments could also be made to the 9 <sup>th</sup> Circuit, since the PTSA requires that we follow the CIFP. If BPA's record at the 9 <sup>th</sup> Circuit was adequate, the 9 <sup>th</sup> Circuit would probably uphold BPA's decision.	This alternative is likely consistent with the OATT and PTSA embedded cost rate determination requirement. BPA identifies good reasons to proceed with this alternative notwithstanding a small projected rate increase. A potentially significant risk with this alternative is a challenge from CEP because of not proceeding with the Harney project. The projected rate decrease of alternative #3 makes it easier to defend against a challenge from CEP. The rate impact model on p. 10 of this ADF shows that the projected rate increase with alternative #4 plus Harney is over 6%. A 6% projected rate increase with inclusion of Harney would likely enable BPA to resist a challenge from Harney.
<b>Environment</b>				

**Agency Decision Framework Analysis – 2008 Network Open Season**

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a) Environmental impact	None	Plans of service for projects other than those in Alternatives 3 and 4 have not been fully analyzed at this point. For recommended projects, please refer to comments under Alternatives 3 and 4.	For WOMR, some of the potential issues, in addition to cultural resources, include locating new right-of-way through rural-residential land including tribal allotment lands and the Columbia Gorge Scenic Area (CGSA) for Big Eddy-Substation Z. For purchasing new right-of-way in the CGSA two conditions must be met, (1) there are no alternatives, and (2) the project is as large as it needs to be. KEC does not anticipate any major issues with McNary-John Day. For Little Goose, a major issue should be locating the line to minimize impacts to agricultural interests as much as possible. KEC doesn't anticipate any issues with the West of Garrison RAS.	For I-5, much new right-of-way would be needed through rural and urban lands. Although the alternatives have not been identified, threatened and endangered species would be expected to be a major issue in locating any line between Castle Rock and the Pearl Substation. KEC expects multi-year surveys to be required for murrelet and the spotted owl, and there may be others. In addition, locating a new line through vineyard land in Yamhill and Washington counties will raise issues.
b) Aligns with environmental policies	Not applicable	Promotes new areas of wind development (specifically Harney, Little Goose, WOMR)	Does not include Harney, which could potentially be a new area of wind development.	Does not include Harney, which could potentially be a new area of wind development.
<b>Public Interests</b>				

**Agency Decision Framework Analysis – 2008 Network Open Season**

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a) General Public	If we do not proceed with any of these projects, BPA could be perceived as not supporting wind development in the region through interconnections (WOMR, I-5)	BPA will be seen as actively pursuing investment in infrastructure, but will likely be criticized for over spending. Given the obvious positive and potentially negative impacts early engagement of media in Portland, OR and Vancouver, WA is a must.	BPA will be seen to support wind in the region and still remain a cost-conscious government agency.	BPA will be seen to support wind in the region and still remain a cost-conscious government agency. Media could show BPA as an agent of economic development in these difficult years. Could also see EMF or other potential project impacts emerge in media as well. Because we might be turning dirt and putting steel and conductor in some densely populated Portland, OR and Vancouver, WA areas, early introduction of the I-5 project via the media is important.
b) Landowners	May see pushback from landowners who would have had wind turbines on their property (WOMR).	Massive number of landowners will be impacted and involvement with realty and public affairs staff will increase.	Few landowners will be impacted by construction, many support WOMR.	Large number of potential landowners along I-5 would be engaged, some may silently support; others may fight against property, visual, EMF or other impacts. There would be severe landowner challenges with I-5 if we keep western route alternatives on the table.

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c) Customers (see comments in section 5)	<p>Not supported. Customers strongly encouraged BPA to develop transmission infrastructure to meet load growth, allow for a diversified portfolio of new resources, support meeting RPS requirements, and reduce network congestion.</p> <p>NOS Customers indicate that they will accept transmission rate increases, consistent with average rate increases over the past 10 years (approximately 2% per year); to assure the transmission system is adequate.</p>	Not supported	Supported, however, public power wants LaGrande project as well.	Supported however, public power wants LaGrande project as well.
d) Environmental Advocates	Reaction could be mixed, some will be neutral as we will not negatively impact wildlife, land, etc., but others may argue that BPA is not supporting the wind projects that need these facilities to interconnect.	Mixed reactions anticipated, we would not know which advocacy groups would not support until environmental review is underway and alternatives are identified. Could be environmental opposition to Harney.	Some support, some criticism as with alternative #2.	Some support, some criticism as with alternative #2.  Environmental advocates may raise fish concerns for I-5.

## Agency Decision Framework Analysis – 2008 Network Open Season

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e) Tribal	Mixed reaction among tribes. Potential land disturbances during construction that may negatively affect cultural resources or traditional cultural properties will be avoided. May face criticism from tribes pursuing renewable wind energy development.	Reactions vary among tribes. Wind integration perceived to help relieve river operations, support tribal renewable energy development. Potential land disturbances during construction may negatively affect cultural resources or traditional cultural properties. Concerns over effects on birds. Will increase tribal affairs involvement.	Mixed reactions, see alternative #2.	Mixed reactions, see alternative #2.
f) Administration DOE/OMB	Not proceeding would be inconsistent with federal stimulus package and national energy policy	Likely large support if we can demonstrate regional job impact as well as enabling green energy.	Likely large support if we can demonstrate regional job impact as well as enabling green energy.	Likely large support if we can demonstrate regional job impact as well as enabling green energy.
g) Congress	High degree of interest in meeting our NOS timeline as evidence of support for renewables	Premature to gauge support/opposition for specific projects, but we will need to conduct substantial outreach.	Premature to gauge support/opposition for specific projects, but we will need to conduct substantial outreach.  Need to be sure all major projects are in the federal budget.  Likely happy to see the infrastructure investment as a concept, but local opposition on specific routes could turn representatives.	Need to be sure all major projects are in the federal budget.  Likely happy to see the infrastructure investment as a concept, but local opposition on specific routes could turn representatives.
h) Treasury	N/A	Would have concerns about major third party financing initiative for \$1.5 billion.	Does not like non-Treasury financing, so not likely to look favorably on these projects.	Does not like non-Treasury financing, so not likely to look favorably on these projects.

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i) Rating Agencies	N/A	May appreciate that we will not take action until we know more about environmental exposure.	May have some concern about magnitude of third party financing.	May have some concern about magnitude of third party financing.
<b>BPA's People and Processes</b>				
a) Manageable workload	Not applicable	<p>Significant workload impact. New resources required.</p> <p>Public Affairs will require new resources to handle outreach to region, landowners, etc.</p> <p>See alternatives 3 &amp; 4 for additional project impacts to workload.</p>	<p>Manageable workload impact.</p> <p>For the McNary-John Day portion of WOMR, TEP already has an initial plan for materials and construction if the decision is made to proceed.</p>	<p>I-5 is a 6-7 year project and adds significant workload and may stress BPA capabilities. I-5 construction would not begin until WOMR completion.</p> <p>NEPA is three plus years at the start which provides time to determine the plan of action for materials and construction in the later years. TEP is considering doing more by contract in the NEPA and preliminary design phase. TEP will review the overall plan, and will consider other ways of managing this project. TEP is confident in its ability to execute to schedule and within budget.</p> <p>Public Affairs will require new resources to handle outreach to region, landowners, etc.</p>
b) Impact to BPA culture				BPA will assess the necessary work to prepare for a project that has significant political & social ramifications.

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c) Agency workforce goals		May impact other projects for 2009 by displacing priority assignments for key subject matter experts. BPA needs to assess its ability to secure supplemental labor where human capital shortfalls may exist.	BPA needs to assess its ability to secure supplemental labor where human capital shortfalls may exist.	May impact other projects for 2009 by displacing priority assignments by key subject matter experts.  BPA needs to assess its ability to secure supplemental labor where human capital shortfalls may exist.
d) Consistent with internal policies	Yes	Yes	Yes	Yes

### Financial Sensitivity Analysis:

- In the NOS analysis we looked at all the TSRs that were enabled due to the NOS process. The revenue associated with these TSRs enabled through the NOS process allowed Transmission Services to offer the region no rate increase for FY 2010-11.
- In addition there were several other sensitivities performed using the following assumptions:
  - Deferrals: Assume all PTSAs exercise the right to extend their commencement of service date five years.
  - Rollover: Assume all of the PTSAs do not roll over their contract. The term requested was modeled and there was no assumption to extend their contract.
  - Default: Assume 15% of the wind requests default and do not start their service.
  - Project Cost Increase: Assume the project costs will increase based on the confidence level that was identified by planning. High confidence level assumes no cost increase, Medium confidence level assumes a 25% cost increase and Low confidence level assumes a 50% cost increase.
  - Project Cost Decrease: Assume the all project costs will decrease by 10%.

## Agency Decision Framework Analysis – 2008 Network Open Season

The following table shows the rate impact with the above assumptions:

### 20 yr Variances

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Deferrals	N/A	0.22%	0.19%	0.17%
Rollover	N/A	7.28%	5.11%	6.76%
Default	N/A	1.42%	0.88%	1.09%
Project Cost Increase	N/A	1.20%	0.13%	0.31%
Project Cost Decrease	N/A	-0.35%	-0.06%	-0.14%

In addition to the alternatives, we ran a sensitivity including Harney with alternative #4. The result was a 6.2% rate impact compared to the 2.2% rate impact for alternative #4.

### 9) Recommendation:

Transmission Services is proposing Alternative 4 and requesting that the CAB approve funding for NEPA, preliminary engineering and design for the West of McNary Reinforcements (McNary-John Day and Big Eddy- Station Z), I-5 Reinforcement, Little Goose Reinforcement and the West of Garrison RAS for the following reasons:

- Alternative 4 would result in average rate pressure 1.5 to 2 percent—within the range that appears acceptable to customers.
- Alternative 4 enables service to 15 customers holding 74 PTSAs for a total of 3,699 MW.
- With the previously authorized service under NOS (using existing ATC) combined with Alternative 4, only four customers (CEP, Powerex, Horizon and PNGC), holding 33 PTSAs for 929 MW would not receive service at the rolled-in rate and under the 2008 NOS (Powerex and Horizon will receive some service through recommended projects). On a MW basis, approximately 85 percent of the TSRs for which PTSAs were signed in 2008 NOS will be enabled if BPA decides following NEPA to proceed with construction.
- Plans of service are sufficiently advanced for McNary-John Day, Big Eddy-Station Z, Little Goose and I-5 to have medium to high confidence in the cost estimates. While confidence in the West of Garrison RAS cost estimate is low, the total cost is not expected to exceed \$2 million. Cost variance on this project may be high on a percentage basis, but on an absolute basis, there is low potential for big, unexpected cost impacts.
- NEPA review and Preliminary Engineering for the McNary-John Day project was completed in 2002 and are being reevaluated to determine if a supplemental draft Environmental Impact Statement analysis is necessary. NEPA and Preliminary Engineering for Big Eddy-Station Z are estimated to take 24 months and cost \$6 million. NEPA and Preliminary Engineering for I-5 are estimated to take from 36 to 48 months to complete and cost approximately \$14 million. NEPA and Preliminary Engineering for Little Goose Reinforcement would likely take 18 months to complete and cost \$6.5 million. WOG RAS environmental review is expected to be minimal. The environmental review for WOG RAS will be packaged as a categorical exclusion.

## Agency Decision Framework Analysis – 2008 Network Open Season

- Little Goose expansion facilities will allow wind development to shift further east, potentially resulting in diversification of the wind fleet and a reduction in the balancing reserve requirement provided by the federal system.
- The WOMR, Little Goose and I-5 projects will result in additional capacity for future load growth and commercial use beyond what is required to enable service under the PTSA. West of McNary will result in 681 MW and West of Slatt will result in 295 MW of ATC.
- Alternative 4 carries minimal risk of stranded investment as service would be enabled for a large and diverse customer base (15 customers, 74 PTSA for 3,699 MW).
- Plans of service for WOMR, I-5 and Little Goose have been reviewed and endorsed by Columbia Grid.
- Economic modeling shows Northwest regional benefits of approximately \$8 million annually starting in the year 2015 due to better fuel utilization and reduced curtailments (Appendix II)
  - Based on the reduction of hours of congestion across BPA flowgates, the added O&M flexibility resulting from new transmission, and due to the likely increase of additional renewable resources to meet state RPS requirements, **the analysis recommends the proposed WOMR (McNary-JD, Big Eddy-Station Z), I-5, and Little Goose reinforcements.**

*Summary of PTSA enabled by recommendation by customer by project (\*\* indicates a partial offer that splits a PTSA):*

<b>WOMR</b>	45 PTSA	2,023 MW**
PPM Energy	8	200 MW
Pacificorp	1	38 MW
PBL – NT	3	176 MW
PPL EnergyPlus, LLC (EPLU)	1	50 MW
Lewis County PUD – NT	1	21 MW
Puget Sound Energy	1	27 MW
Wind Power Associates, LLC	3	60 MW
Snohomish	2	100 MW
Horizon Wind Energy, LLC	18	912 MW
PPM Energy	1	50 MW
enXco Development Corp	6	400 MW
<b>Little Goose</b>	5 PTSA	200 MW
Puget Sound Energy	5	200 MW
<b>WOMR &amp; Little Goose</b>	12 PTSA	640 MW
Puget Sound Energy	4	150 MW
PBL – Redirect	1	90 MW
PPM Energy	4	200 MW
Renewable Energy Systems	4	200 MW
<b>WOMR &amp; West of Garrison RAS</b>	1 PTSA	91 MW**
Alternity Wind Power	1	80 MW

## Agency Decision Framework Analysis – 2008 Network Open Season

<b>I-5</b>	2 PTSA	150 MW
TransAlta Energy Marketing	2	150 MW
<b>WOMR &amp; I-5</b>	7 PTSA	495 MW
PPM Energy	1	45 MW
Powerex	2	200 MW
TransAlta Energy Marketing	3	250 MW
<b>WOMR &amp; I-5 &amp; Little Goose</b>	2 PTSA	100 MW
PPM Energy	2	100 MW

### Summary of direct costs by project:

1. WOMR = \$362 million
2. Little Goose Reinforcement = \$99 million
3. I-5 = \$342 million
4. West of Garrison RAS = \$2.3 million

*Summary of timeline and costs associated with NEPA and preliminary engineering work for proposed projects (West of Garrison should entail minimal NEPA work):*

Project	2009	2010	2011	2012
Big Eddy-Station Z	\$1,200,000	\$3,800,000	\$1,000,000	
Little Goose	\$800,000	\$3,200,000	\$2,500,000	
I-5	\$1,500,000	\$6,000,000	\$4,000,000	\$2,500,000
Total = \$26,500,000	\$3,500,000	\$13,000,000	\$7,500,000	\$2,500,000

### Reasons for Not Proposing Alternative 2:

- An average rate increase of approximately 12 percent over 20 years would be required if BPA were to proceed with expansion facilities necessary to enable service to all customers holding a PTSA.
- BPA may not have the financial or staffing resources or the capability to simultaneously carry out (over five to six years) a program of this magnitude.
- Certain projects have unique characteristics and risks that have a direct bearing on whether it is prudent for BPA and its customers to proceed with NEPA expenditures at this time:
  - Harney Area Reinforcement: Based on data and comments supplied by CEP, the Harney project could open up a potential new wind development area for the region; however, the plan of service for this 179 mile, 500 kV transmission line provides few additional benefits. PTSA agreements that would be enabled are held by a single customer. In spite of the production cost and diversity benefits, the rate impacts on other customers are above an acceptable level. The plan of service for this expansion project is conceptual and cost estimate reliability is low. A sensitivity analysis was performed to look at the rate impact from

- Harney project by including it in Alternative #4. The resulting rate impact was 6.18% (over 20 years) which is likely outside the acceptable range.
- La Grande Area Reinforcement: This path is important for providing west to east transfer service to BPA customers in the Idaho Power Co. and potentially the PacifiCorp east balancing authorities. As BPA customer loads continue to grow in these areas facility expansion or other arrangements will be necessary to serve this load growth. Increasing capacity on the NW to Idaho path will require joint effort by the transmission owners on this path—Idaho Power, PacifiCorp, Avista and BPA. The La Grande area reinforcement would enable service to two customers, PNGC and Horizon Wind. These commitments are not sufficient in themselves to support inclusion of this project as part of this recommendation. Idaho Power and PacifiCorp are jointly planning a major new transmission project that will substantially increase capacity on the NW to Idaho path. BPA is evaluating whether it should purchase capacity in order to meet future needs of its customer. To the extent that new facilities or other arrangements are necessary for the Agency to meet its obligations to provide transfer service to its customers served over this path, BPA will undertake these arrangements as part of its obligation to it transfer service customers outside of an NOS construct. One proposal that may satisfy Public Power (Idaho transfer customers) may be to commit to an Agency study that would look at the full range of solutions---buying generation in Idaho, purchasing capacity on the Gateway project if and when built, purchasing capacity on a long-term or short-term basis from other transmission providers and building La Grande as part of a project with Idaho. A plan of action (process and timeline) to conduct a needs assessment and identify alternatives will be completed over a six-month period in a public process.
  - Northern Intertie Reinforcement: This path is important for bi-directional transfers between the Canada and the US. Seasonal constraints on this path periodically require active management resulting in curtailments. PTSA commitments received in the 2008 NOS process (100 MW) are not sufficient to warrant moving forward with expansion of the Northern Intertie at this time. Plan of service for this expansion is complex and not fully developed resulting in low confidence in cost estimates. Estimated rate impact for this project averages approximately 3.6 percent over 20 years. In order to fully realize benefits from this project, the I-5 expansion is necessary.

### Reasons for including I-5:

- I-5 enables additional transmission revenue when added to WOMR, Little Goose and West of Garrison (585 MW were used for the CIFP analysis).
- Regional economic analysis shows that an additional \$1 million per year savings in thermal generation cost.
- I-5 will result in reduced congestion on South of Allston and Paul-Allston of 525 hours compared to Alternative 3.
- I-5 will result in additional power loss benefits of \$2.8 million per year (additional 20 MW). This result is in addition to the benefits realized in Alternative 3.

### 10) Document & Communicate Final Decision:

*Proposed decision* will be submitted to customers for review and comment. Comments received will be presented to decision makers for final decision. Final decision will be communicated to PTSA contract holders by letter no later than February 13, 2009. A communication plan, internal talking points and notice of final decision will be prepared for distribution.

### APPENDIX I

#### Customer Comments – Informal comments received prior to the public disclosure (Jan. 15, 2009) of the BPA recommendation

- Mike Raschio (representing various clients)
  - Use incremental overhead for rate impact analysis. Using 23% overstates overhead as overhead is already included in transmission rates
  - Recommends WOMR, Little Goose and I-5 projects for NEPA
  - Recommends that revenue that would result from 50% of the post NOS requests be added to the revenue computation.
- NRU (Geoff Carr)
  - Recommends that La Grande project be included in NOS as this path is critical for transfer service which is an Agency responsibility
  - NRU “would also like to state a modest rate impact that would result from building the NOS projects is acceptable to NRU utilities” with exception of Harney County reinforcement project.
- Columbia Energy Partners (Peter Blood)
  - Must factor in synergies and efficiencies posed by Harney County project
  - Harney plan of service needs to be more fully vetted
  - Benefit resulting from CEP commitment to 30 year service duration needs to be included. In addition benefits must be factored into the analysis (reliability, diversity, flow gate relief, location, future uses, enablement of new wind area)
  - Add criterion for wind diversity and alternative plans of service.
- PNGC (Aleka Scott)
  - The La Grande interface is critical to load service to transfer customers in Idaho Power’s balancing authority. Firm service to transfer loads is an agency responsibility that needs to be factored into any construction plans for additional or upgraded transmission. BPA’s service to the customers in the Idaho Power balancing authority is already difficult. BPA should also work with Idaho Power to ensure firm service to transfer loads on the Idaho Power system.
  - PNGC Power would be willing to accept a modest embedded cost rate increase from building certain NOS projects. With the exception of the Northern Intertie project and the Harney project.
  - BPA’s analysis shows that the remaining NOS projects would provide a robust transmission system at a modest embedded cost increase. BPA should not limit itself to zero embedded cost rate increase when considering which NOS projects to move forward under a rolled-in rate regime.
- Western Montana G&T (Bill Drummond)
  - Supports inclusion of the La Grande project identified in the NOS process as part of the package of transmission upgrades that is recommended to the Administrator. The La Grande interface is critical to load service to Bonneville transfer customers in Idaho Power’s Balancing Authority. Firm service to transfer loads is a Bonneville obligation that needs to be included into any construction plans for additional or upgraded transmission. The transmission service requests served by the La Grande upgrade should be served at embedded rates and not subject to an incremental rate.
  - Several WMG&T members rely on transfer service and it is important to maintain access to Bonneville power over a non-federal transmission owner’s facilities. We recognize that the La Grande project will not likely directly benefit us and may result in a slightly higher Bonneville transmission rate. We are willing to accept that consequence, however, because we support the principle that new or upgraded federal facilities necessary to serve transfer customers are part of the federal backbone transmission system and therefore should be charged at embedded cost and not incremental rates.

**APPENDIX I (continued)**

**Customer Comments – Formal comments received during the public comment period (Jan. 15-30, 2009) on BPA’s recommendation**

- Snohomish PUD (Linda Finley)
  - Suggests a longer-term forward look to assess future load growth and benefits in the analysis
  - Modify Deposit of Escrow language so it works for Washington PUDs
  - Reconsider Monroe Echo Lake (Northern Intertie). Are there smaller projects that would meet the needs?
  - Be clear on how NOS 2009 will build on NOS 2008 requests
  
- Seattle City Light (Ray Camacho)
  - Reconsider Monroe Echo Lake (Northern Intertie). Include \$12 to \$24 Million /year in reliability benefits and reduced congestion
  - Reinforcement of above would reduce cost of replacement power for outages
  
- Powerex (Karen McDonald)
  - Provide additional information about rationale for determining which projects move forward at embedded costs rates
  - Provide NPV for projects that we are not moving forward at embedded costs rates
  - Reconsider Northern Intertie upgrades
  - Be clear about re-evaluation of projects in subsequent open seasons
  
- Columbia Energy Partners (Peter Blood)
  - Wants a more proactive planning process
  - Wants more transparency in decision criteria and rate impacts
  - One size fits all is unacceptable. Wants special consideration of project benefits
  - NOS timeline too long – do it quicker
  - Dedicate resources to Incremental Rate processes
  - Allow roll-over security between NOS 2008 and NOS 2009
  - Open the books on project costs and how they are determined and the financial analysis for NPV
  - Factor in the diversity of their project and regional RPS needs
  
- PNGC (Aleka Scott)
  - Support the recommendation for projects at embedded costs rates. Appreciates the further assessment of Le Grande path needs and seeking near-term and long-term solutions
  
- Iberdrola (Jan Korver)
  - IRI supports BPA’s recommendation to provide at embedded rates transmission service enabled by the following upgrades and reinforcements: West of McNary (McNary-John Day and Big Eddy-Station Z), Little Goose Area, West of Garrison (RAS) and I-5 Corridor.

## Agency Decision Framework Analysis – 2008 Network Open Season

- NRU (Megan Stratman)
  - Supports effort. Will participate in needs assessment of LaGrande upgrades
  - Supports periodic, regular NOS process. Extend NOS 2009 closing to end of June, 2009
  
- RNP (Cameron Yourkowski )
  - Supports the recommendation for moving recommended projects forward at embedded costs rates.
  - Consider economies of scale when sizing upgrades
  - Look at future needs more closely to inform future need for capacity
  - Supports needs assessment for LaGrande upgrades and evaluating all alternatives
  - Expand CIP analysis to include future non-firm uses, CO2 cost, variable generator diversity benefits
  - Do not terminate PTSA for Incremental Costs projects, keep open the option to keep them in the queue for subsequent NOS efforts

**APPENDIX II**

Regional Economic Analysis:

- Production Costs (Factors considered):
  - Is there a reduction in future short-run generation costs (production costs) resulting from system operation with the addition of all NOS generation?
  - What is the effect on BPA's internal flowgate loadings with the NOS generation additions?
  - Is there a reduction in production costs and internal flowgate loadings resulting from the addition of new transmission facilities?
- Assumptions:
  - PTSA's not associated with a new generator were assumed to be from an existing generator.
  - The analysis assumes that the Western Interconnection is operated as a 'single-owner' system.
  - Report analyzes a system dispatch based on variable resource costs
    - Variable costs for wind-powered electricity are assumed to be negligible - Dispatch considerations in the analysis do not encompass the need by generators to recover their capital costs, fixed operations and maintenance costs and so on, in their power prices.
  - Path loadings were considered high if there were hours at or above 75% of the path's limit.
    - The analysis assumes all lines and voltage support in service.
    - Under outage conditions which change flows and reduce flowgate limits, the production costs are expected to dramatically increase and the flexibility of hydro re-dispatch diminished.
  - The study assumes a 2002 moderate hydro condition.
- Observations:
  - Approximately \$8-\$10 million annually in thermal production variable cost savings.
    - Reduced thermal fuel utilization and reduced curtailments.
    - Savings have some stability across the future years (additional wind integration and/or increased thermal fuel cost will increase variable cost savings).
  - Congestion on BPA's network flowgates increases with the new generation requiring re-dispatch (mostly hydro but some thermal generation), but is mitigated by the proposed transmission reinforcements.
    - Proposed reinforcements would reduce congestion during transmission system outages, maintenance outages, and/or with additional renewable generation additions.
    - Proposed reinforcements would facilitate integrating most NOS generation, which is located near the existing transmission and hydro system.
- Conclusions:
  - The energy produced by the new generators will displace high-cost generation, much of which is located outside the Northwest. This makes it difficult to measure net economic impacts in the Northwest
  - Including NOS generation, renewables make up approximately 5.3% of total served energy in the Oregon and Washington.
    - Proposed reinforcements will facilitate delivery of additional renewable generation to Northwest customers, helping them meet Oregon and Washington Renewable Portfolio Standards.
    - Absent reinforcements, added renewables result in increased loadings (and subsequent congestion) on several Northwest paths.
- Recommendations:

- Based on the reduction of hours of congestion across BPA flowgates, the added O&M flexibility resulting from new transmission, and due to the likely increase of additional renewable resources to meet state RPS requirements, **the analysis recommends the proposed WOMR (McNary-JD, Big Eddy-Station Z), I-5, and Little Goose reinforcements.**
- Future NOS studies should consider:
  - the timing of when a price is put on carbon dioxide and how that is reflected in energy prices;
  - how that price impact affects choice of fuel and resource;
  - how the siting of new renewable resources may affect transmission planning;
  - at what level and location of renewable additions is the hydro system's existing re-dispatch capability exceeded, causing significantly higher re-dispatch costs;
  - The effects of smart grid infrastructure and transportation on policies and technologies for transmission planning.



## Department of Energy

Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

EXECUTIVE OFFICE

February 16, 2009

In reply refer to: TSP-TPP-2

To Our Customer, Constituents, Tribes and other Stakeholders:

In March 2008, the Bonneville Power Administration (BPA) embarked on a landmark process called Network Open Season (NOS). BPA, with help from stakeholders, designed the NOS process to meet several strategic objectives for BPA and the Pacific Northwest. NOS improves management of BPA's long-term transmission queue and provides a better understanding of market dynamics and what new infrastructure might be needed to support the evolving electrical needs of the region. At the close of the 2008 NOS on June 16, 2008, BPA had 153 requests from 28 customers for 6,410 MW of new long-term firm transmission service. Almost three-quarters of those requests are associated with wind generation, reflecting the region's momentum toward rapid development of renewable resources and the need to comply with state Renewable Portfolio Standards.

Throughout the process, BPA staff engaged participating customers and the region to ensure that stakeholders were aware of NOS and its potential impacts. BPA staff also submitted modified Open Access Transmission Tariff (OATT) language to the Federal Energy Regulatory Commission to implement NOS. The Commission approved the tariff revisions in June 2008, noting that "Bonneville's Open Season process and Precedent Agreement substantially conform to or are superior to *pro forma* OATT provisions." A number of stakeholders filed comments in favor of BPA's petition, and that regional support was duly noted by the Commission and greatly appreciated by BPA.

I believe that the 2008 NOS successfully achieved all that we set out to accomplish. At the close of the NOS offer period, BPA Transmission Services reevaluated its queue. The transmission service requests of customers eligible for NOS, but choosing not to participate, were removed. As a result, Transmission Services was able to offer 1,782 MW of new long-term service without constructing new facilities.

For NOS participants who signed their Precedent Transmission Service Agreements (PTSA) and provided Security, BPA staff completed the Cluster Study to assess the system impacts of all of the NOS participants' requests and identify the new facilities necessary to provide the requested service. The Cluster Study identified eight key areas of reinforcement on the BPA network that would be needed to serve all of the requests. BPA staff evaluated each of the eight reinforcement projects under BPA's Commercial Infrastructure Financing Proposal (CIFP) to understand the cost and rate pressures associated with those facilities. Each project also was further scrutinized against regional economic benefits and other criteria to understand what

projects bring the greatest benefit to the region while minimizing impact to transmission ratepayers.

Based on these studies and analysis, we believe that the following projects can reasonably be served by BPA at embedded cost transmission rates:

- McNary-John Day 500-kV transmission line
- Big Eddy-Station Z 500-kV transmission line and substation
- Little Goose 500-kV transmission line and substation
- I-5 Corridor 500-kV transmission line and substation
- West-of-Garrison remedial action scheme

These projects would allow us to provide almost 3,700 MW of new transmission service requested in the 2008 NOS, while creating new transmission paths and capacity to deliver power from new renewable resources east of the Cascades to urban loads west of the Cascades and to the head of the California interties.

On February 13 the United States House of Representatives and Senate passed the American Recovery and Reinvestment Act of 2009. President Obama is expected shortly to sign the Act into law. That Act includes a provision that increases BPA's ability to borrow from the U.S. Treasury by \$3.25 billion. The enactment of this authority provides greater comfort in moving forward with the expenditures necessary to prepare for a decision to initiate construction of the projects because it substantially increases my confidence that BPA will have adequate access to capital to build the projects should the agency decide to proceed with construction.

Accordingly, we now will be proceeding with the next steps for these five projects. For the McNary-John Day 500 kV line, BPA is reviewing the recently completed Supplement Analysis for the McNary-John Day project environmental impact statement prior to making a determination to build. For the other four of these projects BPA will begin a BPA-funded NEPA review. BPA will fund the preliminary engineering design and NEPA work associated with these projects. If BPA decides to proceed with necessary construction for any of the five projects following the NEPA process, the cost of such facilities will be included in future rate cases as costs to be recovered at embedded cost rates.

For those PTSAs associated with projects which cannot be offered at an embedded cost rate, BPA will be taking certain actions in accordance with the OATT. These steps include terminating the PTSA, releasing the customer's Security, and working with the customer, if so desired, to prepare environmental study agreements with the ultimate goal of offering service pursuant to the OATT.

The basis for my decision is explained in more detail in Attachment A to this letter.

The LaGrande Reinforcement identified in the NOS Cluster Study presents unique circumstances for BPA and customers. Although BPA has decided not to move forward with the LaGrande Reinforcement at embedded cost rates at this time, this project warrants additional assessment due to the unique combination of factors related to this project, including BPA's existing reliability obligations and new market-based requests received during the 2008 NOS. As a result, BPA will conduct a separate planning process to develop a more rigorous needs assessment for the Northwest to Idaho connection.

Again, I feel that we have successfully created and executed a process that showcases the benefits of innovation and collaboration of this region. Any new construction that results from the 2008 NOS will strengthen the transmission infrastructure of the Pacific Northwest and enable delivery of renewable generation to load, creating a positive impact to our regional economies. These results align with national policies and expectations related to transforming the nation's transmission infrastructure and can serve as a benchmark for similar projects across the country. The 2008 NOS has been a tremendous learning experience and establishes a solid foundation for future open seasons.

Sincerely,



Stephen J. Wright  
Administrator and Chief Executive Officer

3 Enclosures:

Attachment A: Rationale Supporting Determination of Rate Treatment Applicable to Projects  
Under 2008 Network Open Season

Attachment B: Customer Comments on 2008 Network Open Season Recommendation

Attachment C: Description of 2008 Network Open Season Project Moving Forward with NEPA