



April 28, 2023

*Submitted via email.*

Suzanne Cooper, Senior VP Power Services  
Kim Thompson, VP of Requirements Marketing  
Bonneville Power Administration

Dear Suzanne and Kim:

The members of Northwest Requirements Utilities (NRU) appreciate this opportunity to submit the following comments in response to BPA's proposed approach to Transfer Service and Peak Net Requirements (PNR) for the Provider of Choice (PoC) contract. NRU represents the interests of its 57 member utilities located in 7 states throughout the region, all of which are BPA Load Following and Network Transmission customers, and that together represent roughly 30% of BPA's total Tier 1 preference load.

### **Transfer Service**

At its March 9<sup>th</sup> Workshop, BPA presented a revised approach to transfer service for non-federal resources. Previously, BPA proposed to direct assign all related transmission costs for non-federal resources purchased by preference customers served through transfer service. BPA's revised proposal is to roll into the Tier 1 cost pool the costs of transfer service for non-federal resources only for "physical, local" resources located in the balancing authority area (BAA) in which the transfer load is located.

NRU appreciates BPA's progress in recognizing the need to include transfer service for non-federal resources and agrees that this revised proposal represents an improvement over BPA's initial proposal. However, while BPA's revised proposal is an improvement over its initial approach, we believe that this latest proposal would fail to meet the needs of BPA's transfer customers.

NRU encourages BPA to reconsider the approach proposed in our February 24, 2023, comment submitted in coordination with PNGC and Idaho Falls Power, which consists of the following elements:

- Consistent with BPA's stated goal that similarly situated customers be treated consistently, we propose the formal adoption of a principle of "equitable treatment" for the PoC policy process.

- The implementation of annual and cumulative cost controls that include both dollar and MW caps for Transfer Service for non-federal resources, designed to insulate other power customers from transfer customers' resource decisions.
- An additional cost control in the form of a counterfactual analysis designed to ensure BPA is never financially responsible for more than it would be obligated to expend under federal service at the Tier 2 rate.
- Several additional commitments from BPA intended to provide additional assurance to transfer customers for the term of the PoC contract.

Further, NRU would like to acknowledge and support the Transfer Service comments submitted by WPAG on March 31<sup>st</sup>. Specifically, WPAG points out the inconsistency inherent in BPA's proposed approach with respect to transfer customers who may choose to integrate non-federal resources in BPA's BAA. Under BPA's proposed approach, transfer customers in BAAs adjacent to BPA's BAA utilizing non-federal resources located in BPA's BAA for above high water mark loads would pay for the same transmission twice, and effectively subsidize BPA's other transmission customers. This is because (i) transfer customers are responsible for the cost of transmission across BPA's transmission system; and (ii) transfer service is generally provided using NT transmission service under the host BAA's Open Access Transmission Tariff, which service is charged based on monthly peak load rather than the location of the designated network resource(s) serving such load. This serves to highlight just one of the many seemingly unintended and inequitable outcomes of BPA's proposed approach, all of which would be eliminated if BPA were to adopt the approach recommended in NRU's February 24<sup>th</sup> comments.

Finally, though those same comments made reference to the 2021 NRU Transfer Service Study, in response to repeated stakeholder inquiry we believe there is additional merit in once again highlighting the nearly \$3.7 billion in avoided costs that Transfer Service has provided to BPA and the region to date. Attached is the NRU Transfer Service Study for reference.

## **Conclusion**

In closing, NRU encourages BPA to reconsider its proposal for non-federal transfer service and asks that BPA staff carefully consider both these latest comments as well as the February 24<sup>th</sup> proposal submitted by NRU, PNGC, and Idaho Falls Power. Thank you once again for your time and attention.

Sincerely,

Matthew A. Schroettig  
Director of Operations and General Counsel  
Northwest Requirement Utilities



## Appendix

### NRU Comments - April 28, 2023

#### 2021 NRU TRANSFER STUDY

In 2021, NRU updated the 2004 General Transfer Agreements Regional Cost-Benefit Study (2004 Transfer Study), originally conducted by Idaho Consumer-Owned Utilities Association. The 2004 Transfer Study showed the significant benefits of utilizing transfer service through third-party transmission owners, as opposed to Bonneville Power Administration (BPA) developing new transmission lines to directly connect customers. Because transfer service has such wide-reaching benefits for BPA's power and transmission customers, NRU updated the 2004 Transfer Study to quantify the ongoing value and considerable avoided costs associated with transfer service in today's dollars.

**The 2021 NRU Transfer Study found transfer service saves more than \$3.7 billion in total avoided capital costs that would have been associated with building new transmission and annually avoids nearly \$350 million worth of operations, maintenance, interest, and amortization costs. These are real dollars and benefits for all BPA power and transmission customers. The entire region, including all users of the BPA power and transmission system, benefit from this cost-savings approach to serving preference customers that are not directly connected to BPA's system.**

This study bolsters NRU's support for BPA continuing its transfer service policy largely as it functions today and, by doing so, providing certainty and durability regarding transfer service for customers. While service quality associated with transfer service is difficult to address because customers lack contractual rights with the 3<sup>rd</sup>-party transmission provider, transfer customers are willing to utilize transfer service because they recognize the overall benefits of transfer service that are shared by all of BPA's customers and the region.

#### TRANSFER STUDY FACTS AND 2021 NRU STUDY CONCLUSIONS

- As of 2020, 83 of BPA's 134 customers with long-term power sales agreements had at least one transfer point of delivery, and 55 customers were served solely by transfer service.
- BPA's transfer service annual budget is approximately \$90 million. But, transfer service annual costs pale in comparison to avoided cost savings from not building transmission lines.
- NRU's 2021 study estimates that BPA and its customers avoid nearly \$3.7 billion in total capital costs and \$350 million in annual costs for operations, maintenance, interest, and amortization.
- Avoided costs are costs BPA and its customers would have incurred to build transmission lines to serve its customers and would be included in rates had the agency not utilized transfer service, providing a significant benefit to the region.
- This study supports NRU's policy position that the post-2028 BPA contracts should retain transfer service largely as it operates today.

## ASSUMPTIONS AND INPUTS

The Transfer Study Cost Benefit Analysis is intended to be an update to the 2004 study and follows the vast majority of assumptions and inputs that were used in the original study. Here's where changes were made:

**Inflation:** Inflation was assumed to be 2% annually from 2000 to 2020 and applied throughout this analysis.

**Transfer Points of Delivery:** BPA-Transfer Services provided an updated list of transfer PODs that included 29 new PODs and 16 removed PODs since 2004. According to BPA-Transfer Services, the reason for new and removed PODs can vary greatly.

**Transmission Line Construction Costs:** The transmission line assumptions from 2004 were applied and updated for inflation and BPA cost overheads. The BPA-GIS staff provided the distances that were used to calculate the line mileage for all new PODs.

**Transmission Line Administrative and General, Operations and Maintenance:** The O&M and A&G cost assumption from 2004 was used and multiplied by the transmission line miles and updated for inflation.

**Substation Construction Costs:** For existing PODs, the substation assumptions from 2004 were applied and updated for inflation and BPA cost overheads. For new PODs, the average cost across all PODs from 2004 were applied and updated for inflation and BPA cost overheads.

**Substation Administrative and General, Operations and Maintenance:** The O&M and A&G cost assumption from 2004 was used and updated for inflation.

**Transmission and Substation Interest and Amortization:** The 2004 analysis used the Handy-Whitman Index to calculate annual I&A, which is considered the utility industry standard. This analysis used the same Handy-Whitman Index assumption of 0.43 due to the offsetting nature of aging existing facilities and the relatively large number of new Points of Delivery.

**BPA Construction Overhead Assumptions:** The 2004 analysis applied a sensitivity of BPA construction overhead costs to the final substation and transmission construction amounts. This analysis imbedded the BPA overhead of 41% to each individual substation and transmission construction amounts.

## NRU ANALYSIS

### BPA GTA Cost/Benefit Analysis Spreadsheet

			Line	Trans. Line	Substation	Line	Line	Substation	Substation
Customer	Point of Delivery	Transferor	Miles	Constr. Cost	Constr. Cost	A&G/O&M	I&A	A&G/O&M	I&A
Benton REA	Hom Rapids	Benton Pud	6	\$3,084,870	\$6,073,317	\$150,305	\$135,435	\$318,849	\$266,637
Benton REA	Columbia Crest	Benton Pud	2	\$925,461	\$6,989,575	\$45,092	\$40,631	\$366,953	\$306,863
Benton REA	Plymouth	Benton Pud	6	\$2,827,797	\$6,073,317	\$137,780	\$124,149	\$318,849	\$266,637
Benton REA	South Slope	Benton Pud	0	\$102,829	\$6,989,575	\$5,010	\$4,515	\$366,953	\$306,863
Benton REA	Sun Heaven No. 2	Benton Pud	12	\$5,912,667	\$6,073,317	\$288,085	\$259,584	\$318,849	\$266,637
Benton REA	Whitcomb Island	Benton Pud	1	\$462,730	\$6,989,575	\$22,546	\$20,315	\$366,953	\$306,863
Klickitat PUD	M.A. Collins	Benton Pud	14	\$6,940,957	\$6,073,317	\$338,187	\$304,729	\$318,849	\$266,637
Big Bend	Eitopia	Frank. PUD	16	\$8,226,320	\$6,073,317	\$400,814	\$361,160	\$318,849	\$266,637
Big Bend	North Pasco	Frank. PUD	7	\$3,599,015	\$4,990,881	\$175,356	\$158,008	\$262,021	\$219,115
Kittitas PUD #1	Jerico	Grant PUD	9	\$4,627,305	\$14,975,245	\$225,458	\$203,153	\$786,200	\$657,458
Kittitas PUD #1	Mattawa	Grant PUD	9	\$4,627,305	\$6,073,317	\$225,458	\$203,153	\$318,849	\$266,637
Big Bend	Schrag	Grant PUD	13	\$6,683,885	\$4,990,881	\$325,662	\$293,443	\$262,021	\$219,115
Glacier Elec.	Cut Bank	Northwestern	95	\$48,843,774	\$6,073,317	\$2,379,834	\$2,144,388	\$318,849	\$266,637
Missoula Elec.	Bitterroot	Northwestern	7	\$3,599,015	\$6,073,317	\$175,356	\$158,008	\$318,849	\$266,637
Missoula Elec.	Clinton	Northwestern	7	\$3,599,015	\$41,455,339	\$175,356	\$158,008	\$2,176,405	\$1,820,014
Missoula Elec.	Frenchtown	Northwestern	25	\$12,853,625	\$4,990,881	\$626,272	\$564,313	\$262,021	\$219,115
Missoula Elec.	Huson	Northwestern	16	\$8,226,320	\$4,990,881	\$400,814	\$361,160	\$262,021	\$219,115
Missoula Elec.	Lolo	Northwestern	10	\$5,141,450	\$4,990,881	\$250,509	\$225,725	\$262,021	\$219,115
Missoula Elec.	Miller Creek	Northwestern	15	\$7,712,175	\$4,990,881	\$375,763	\$338,588	\$262,021	\$219,115
Missoula Elec.	Milltown (Bonner)	Northwestern	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Missoula Elec.	Ovando	Northwestern	24	\$12,339,480	\$4,990,881	\$601,221	\$541,740	\$262,021	\$219,115
Missoula Elec.	Tarkio	Northwestern	18	\$9,254,610	\$4,990,881	\$450,916	\$406,305	\$262,021	\$219,115
Missoula Elec.	Petty Creek	Northwestern	12	\$6,169,740	\$6,073,317	\$300,611	\$270,870	\$318,849	\$266,637
Northern Lights	Thompson Falls	Northwestern	1	\$514,145	\$4,990,881	\$25,051	\$22,573	\$262,021	\$219,115
Northern Lights	Cherry Creek	Northwestern	2	\$1,028,290	\$11,494,225	\$50,102	\$45,145	\$603,447	\$504,631
Ravalli	Corvallis	Northwestern	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Ravalli	Darby	Northwestern	17	\$8,740,465	\$4,990,881	\$425,865	\$383,733	\$262,021	\$219,115
Ravalli	Grantsdale	Northwestern	16	\$8,226,320	\$4,990,881	\$400,814	\$361,160	\$262,021	\$219,115
Ravalli	Stevensville	Northwestern	38	\$19,537,510	\$4,990,881	\$951,934	\$857,755	\$262,021	\$219,115
Ravalli	Victor	Northwestern	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Vigilante	Bannock	Northwestern	16	\$8,226,320	\$4,990,881	\$400,814	\$361,160	\$262,021	\$219,115
Vigilante	Dell	Northwestern	85	\$43,702,325	\$4,990,881	\$2,129,325	\$1,918,663	\$262,021	\$219,115
Vigilante	Dillon	Northwestern	45	\$23,136,525	\$4,990,881	\$1,127,290	\$1,015,763	\$262,021	\$219,115
Vigilante	Dillon-Salmon	Northwestern	8	\$4,113,160	\$4,990,881	\$200,407	\$180,580	\$262,021	\$219,115
Vigilante	East Bench	Northwestern	12	\$6,169,740	\$4,990,881	\$300,611	\$270,870	\$262,021	\$219,115
Vigilante	Gates of the Mtn.	Northwestern	72	\$37,018,440	\$4,990,881	\$1,803,664	\$1,625,221	\$262,021	\$219,115
Vigilante	Lump Gulch	Northwestern	17	\$8,740,465	\$4,990,881	\$425,865	\$383,733	\$262,021	\$219,115
Vigilante	Point of Rocks	Northwestern	12	\$6,169,740	\$4,990,881	\$300,611	\$270,870	\$262,021	\$219,115
Vigilante	Silver Star	Northwestern	18	\$9,254,610	\$2,967,391	\$450,916	\$406,305	\$155,788	\$130,277
Vigilante	Toston	Northwestern	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Vigilante	Townsend	Northwestern	24	\$12,339,480	\$4,990,881	\$601,221	\$541,740	\$262,021	\$219,115
Vigilante	Whitehall	Northwestern	42	\$21,594,090	\$4,990,881	\$1,052,137	\$948,045	\$262,021	\$219,115
Okanogan Coop	Winthrop	OkanoganP.	12	\$6,169,740	\$2,864,600	\$300,611	\$270,870	\$150,391	\$125,765
Okanogan Coop	Twisp	OkanoganP.	31	\$15,938,495	\$4,990,881	\$776,577	\$699,748	\$262,021	\$219,115
Nespelem	Okanogan	OkanoganP.	1	\$514,145	\$12,110,646	\$25,051	\$22,573	\$635,809	\$531,694
Big Bend Elec.	Delight SU	Avista	37	\$19,023,365	\$4,990,881	\$926,883	\$835,183	\$262,021	\$219,115
Big Bend Elec.	Lee & Reynolds	Avista	9	\$4,832,963	\$6,989,575	\$235,478	\$212,182	\$366,953	\$306,863
Big Bend Elec.	Marengo	Avista	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Big Bend Elec.	Ralston	Avista	21	\$10,797,045	\$4,990,881	\$526,069	\$474,023	\$262,021	\$219,115
Big Bend Elec.	Ritzville	Avista	14	\$7,198,030	\$4,990,881	\$350,712	\$316,015	\$262,021	\$219,115
Big Bend Elec.	Roxboro	Avista	7	\$3,599,015	\$6,204,211	\$175,356	\$158,008	\$325,721	\$272,383
Cheney	Four Lakes/Inld	Avista	7	\$3,599,015	\$4,990,881	\$175,356	\$158,008	\$262,021	\$219,115
Cheney	Cheney	Avista	4	\$2,056,580	\$4,990,881	\$100,204	\$90,290	\$262,021	\$219,115
Chewelah	Chewelah	Avista	7	\$3,599,015	\$14,975,245	\$175,356	\$158,008	\$786,200	\$657,458
Clearwater	Brickens Corner	Avista	6	\$2,982,041	\$2,864,600	\$145,295	\$130,921	\$150,391	\$125,765
Clearwater	Craigmont	Avista	21	\$10,797,045	\$4,990,881	\$526,069	\$474,023	\$262,021	\$219,115
Clearwater	Julietta	Avista	22	\$11,208,361	\$6,073,317	\$546,109	\$492,081	\$318,849	\$266,637
Clearwater	Moscow	Avista	21	\$10,797,045	\$4,990,881	\$526,069	\$474,023	\$262,021	\$219,115
Clearwater	Orofino	Avista	8	\$4,113,160	\$41,455,339	\$200,407	\$180,580	\$2,176,405	\$1,820,014
Clearwater	Potlatch	Avista	28	\$14,138,987	\$4,990,881	\$688,899	\$620,744	\$262,021	\$219,115
Clearwater	Spalding	Avista	2	\$1,079,704	\$6,989,575	\$52,607	\$47,402	\$366,953	\$306,863
Clearwater	Sweetwater	Avista	25	\$12,853,625	\$4,990,881	\$626,272	\$564,313	\$262,021	\$219,115
Clearwater	Weippe	Avista	25	\$12,853,625	\$4,990,881	\$626,272	\$564,313	\$262,021	\$219,115
Fairchild AF Base	Fairchild North AFB	Avista	2	\$1,028,290	\$4,990,881	\$50,102	\$45,145	\$262,021	\$219,115
Fairchild AF Base	Fairchild South AFB	Avista	1	\$514,145	\$4,990,881	\$25,051	\$22,573	\$262,021	\$219,115
Idaho Co. L&P	Cottonwood Joint Use	Avista	20	\$10,180,071	\$4,990,881	\$496,008	\$446,936	\$262,021	\$219,115



## BPA GTA Cost/Benefit Analysis Spreadsheet

			Line	Trans. Line	Substation	Line	Line	Substation	Substation
Customer	Point of Delivery	Transferor	Miles	Constr. Cost	Constr. Cost	A&G/O&M	I&A	A&G/O&M	I&A
Idaho Co. L&P	East Grangeville	Avista	24	\$12,339,480	\$4,990,881	\$601,221	\$541,740	\$262,021	\$219,115
Idaho Co. L&P	Kamiah Joint Use	Avista	18	\$9,254,610	\$4,990,881	\$450,916	\$406,305	\$262,021	\$219,115
Idaho Co. L&P	Kooskia Joint Use	Avista	8	\$4,113,160	\$4,990,881	\$200,407	\$180,580	\$262,021	\$219,115
Inland P&L	Airway Heights	Avista	4	\$2,056,580	\$4,990,881	\$100,204	\$90,290	\$262,021	\$219,115
Inland P&L	Armstrong	Avista	16	\$8,226,320	\$6,073,317	\$400,814	\$361,160	\$318,849	\$266,637
Inland P&L	Chambers	Avista	5	\$2,570,725	\$4,990,881	\$125,254	\$112,863	\$262,021	\$219,115
Inland P&L	Cheney	Avista	4	\$2,056,580	\$4,990,881	\$100,204	\$90,290	\$262,021	\$219,115
Inland P&L	Four Lakes	Avista	4	\$2,056,580	\$4,990,881	\$100,204	\$90,290	\$262,021	\$219,115
Inland P&L	East Colfax	Avista	28	\$14,396,060	\$4,990,881	\$701,425	\$632,030	\$262,021	\$219,115
Inland P&L	Ewan	Avista	31	\$15,938,495	\$4,990,881	\$776,577	\$699,748	\$262,021	\$219,115
Inland P&L	Hallett & White	Avista	11	\$5,655,595	\$6,989,575	\$275,560	\$248,298	\$366,953	\$306,863
Inland P&L	Hangman	Avista	8	\$4,113,160	\$4,990,881	\$200,407	\$180,580	\$262,021	\$219,115
Inland P&L	Hayford	Avista	8	\$4,113,160	\$4,990,881	\$200,407	\$180,580	\$262,021	\$219,115
Inland P&L	Hoodoo	Avista	9	\$4,627,305	\$4,990,881	\$225,458	\$203,153	\$262,021	\$219,115
Inland P&L	Hopkins EU	Avista	7	\$3,599,015	\$4,990,881	\$175,356	\$158,008	\$262,021	\$219,115
Inland P&L	Mica	Avista	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Inland P&L	Milan	Avista	9	\$4,627,305	\$4,990,881	\$225,458	\$203,153	\$262,021	\$219,115
Inland P&L	Milan/Eloika Lake	Avista	3	\$1,388,191	\$6,989,575	\$67,637	\$60,946	\$366,953	\$306,863
Inland P&L	Moab	Avista	4	\$2,056,580	\$4,990,881	\$100,204	\$90,290	\$262,021	\$219,115
Inland P&L	Rosalia	Avista	9	\$4,627,305	\$4,990,881	\$225,458	\$203,153	\$262,021	\$219,115
Inland P&L	Spangle	Avista	18	\$9,254,610	\$4,990,881	\$450,916	\$406,305	\$262,021	\$219,115
Inland P&L	Gaffuey	Avista	22	\$11,311,190	\$2,864,600	\$551,120	\$496,595	\$150,391	\$125,765
Inland P&L	Irby	Avista	21	\$10,797,045	\$4,990,881	\$526,069	\$474,023	\$262,021	\$219,115
Inland P&L	Odessa	Avista	11	\$5,655,595	\$4,990,881	\$275,560	\$248,298	\$262,021	\$219,115
Inland P&L	Wagner Lake	Avista	23	\$11,825,335	\$2,864,600	\$576,170	\$519,168	\$150,391	\$125,765
Inland P&L	West Plains	Avista	5	\$2,673,554	\$6,989,575	\$130,265	\$117,377	\$366,953	\$306,863
Kootenai Elec.	Athol	Avista	11	\$5,655,595	\$4,990,881	\$275,560	\$248,298	\$262,021	\$219,115
Kootenai Elec.	Beck Road	Avista	2	\$771,217	\$6,989,575	\$37,576	\$33,859	\$366,953	\$306,863
Kootenai Elec.	CDA 15th Street	Avista	9	\$4,781,548	\$6,989,575	\$232,973	\$209,924	\$366,953	\$306,863
Kootenai Elec.	Dower EU	Avista	4	\$1,799,507	\$4,990,881	\$87,678	\$79,004	\$262,021	\$219,115
Kootenai Elec.	Hayden	Avista	3	\$1,748,093	\$6,989,575	\$85,173	\$76,747	\$366,953	\$306,863
Kootenai Elec.	Julia Street	Avista	7	\$3,753,258	\$6,989,575	\$182,871	\$164,779	\$366,953	\$306,863
Kootenai Elec.	O'Gara	Avista	9	\$4,627,305	\$4,990,881	\$225,458	\$203,153	\$262,021	\$219,115
Kootenai Elec.	Plummer Jnt Sub	Avista	25	\$12,853,625	\$4,990,881	\$626,272	\$564,313	\$262,021	\$219,115
Kootenai Elec.	Plesant View	Avista	3	\$1,542,435	\$4,990,881	\$75,153	\$67,718	\$262,021	\$219,115
Kootenai Elec.	Prairie	Avista	8	\$4,113,160	\$4,990,881	\$200,407	\$180,580	\$262,021	\$219,115
Kootenai Elec.	Rathdrum	Avista	2	\$1,028,290	\$4,990,881	\$50,102	\$45,145	\$262,021	\$219,115
Kootenai Elec.	Rockford	Avista	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Kootenai Elec.	Scarcello	Avista	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Kootenai Elec.	Setters	Avista	13	\$6,838,128	\$6,989,575	\$333,177	\$300,214	\$366,953	\$306,863
Kootenai Elec.	15th Street	Avista	4	\$2,056,580	\$4,990,881	\$100,204	\$90,290	\$262,021	\$219,115
Modern Elec.	4th & Harold	Avista	3	\$1,285,362	\$4,990,881	\$62,627	\$56,431	\$262,021	\$219,115
Modern Elec.	Locust & Millwood	Avista	3	\$1,542,435	\$4,990,881	\$75,153	\$67,718	\$262,021	\$219,115
Modern Elec.	Opportunity	Avista	3	\$1,285,362	\$4,990,881	\$62,627	\$56,431	\$262,021	\$219,115
Northern Lights	Athol	Avista	3	\$1,696,678	\$6,989,575	\$82,668	\$74,489	\$366,953	\$306,863
Northern Lights	Cabinet Gorge	Avista	7	\$3,599,015	\$14,975,245	\$175,356	\$158,008	\$786,200	\$657,458
Northern Lights	Noxon	Avista	2	\$1,028,290	\$4,990,881	\$50,102	\$45,145	\$262,021	\$219,115
Plummer	Plummer	Avista	3	\$1,542,435	\$4,990,881	\$75,153	\$67,718	\$262,021	\$219,115
Columbia River	Scapoose	PGE	1	\$514,145	\$4,990,881	\$25,051	\$22,573	\$262,021	\$219,115
Columbia River	Warren-Yankton	PGE	2	\$1,028,290	\$4,990,881	\$50,102	\$45,145	\$262,021	\$219,115
Columbia River	Armstrong	PGE	2	\$1,028,290	\$0	\$50,102	\$45,145	\$0	\$0
Columbia River	St. Helens	PGE	1	\$514,145	\$6,073,317	\$25,051	\$22,573	\$318,849	\$266,637
Columbia River	Scapoose OATT	PGE	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
WascoElec.	Endersby	No. Wasco	6	\$3,084,870	\$6,073,372	\$150,305	\$135,435	\$318,852	\$266,639
WascoElec.	Pine Hollow	No. Wasco	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
City of Ashland	Ashland	PAC	8	\$4,113,160	\$4,990,881	\$200,407	\$180,580	\$262,021	\$219,115
City of Ashland	Oak Knoll	PAC	74	\$38,046,730	\$4,990,881	\$1,853,766	\$1,670,366	\$262,021	\$219,115
City of Ashland	Mountain Ave.	PAC	5	\$2,570,725	\$4,990,881	\$125,254	\$112,863	\$262,021	\$219,115
Cowlitz	Ariel	PAC	12	\$6,169,740	\$4,990,881	\$300,611	\$270,870	\$262,021	\$219,115
Columbia Power	Ukiah	PAC	20	\$10,282,900	\$2,864,600	\$501,018	\$451,450	\$150,391	\$125,765
Umatilla Elec./CB	Pilot Rock	PAC	10	\$5,141,450	\$17,101,527	\$250,509	\$225,725	\$897,830	\$750,808
Umatilla Electric	Pendleton	PAC	3	\$1,542,435	\$13,620,506	\$75,153	\$67,718	\$715,077	\$597,981
Umatilla Electric	Hat Rock	PAC	12	\$6,169,740	\$10,360,217	\$300,611	\$270,870	\$543,911	\$454,845
Douglas Electric	Looking Glass	PAC	3	\$1,542,435	\$13,620,506	\$75,153	\$67,718	\$715,077	\$597,981
Klickitat PUD	Bingen	PAC	5	\$2,570,725	\$2,864,600	\$125,254	\$112,863	\$150,391	\$125,765
Benton REA	Tieton	PAC	11	\$5,449,937	\$6,989,575	\$265,539	\$239,269	\$366,953	\$306,863
Benton REA	White Swan	PAC	21	\$10,797,045	\$6,073,317	\$526,069	\$474,023	\$318,849	\$266,637
Central Electric	Pilot Butte	PAC	4	\$2,056,580	\$13,620,506	\$100,204	\$90,290	\$715,077	\$597,981
Lane Electric	Dorena	PAC	12	\$6,169,740	\$4,990,881	\$300,611	\$270,870	\$262,021	\$219,115
Emerald PUD	Creswell	PAC	6	\$3,084,870	\$6,073,317	\$150,305	\$135,435	\$318,849	\$266,637

## BPA GTA Cost/Benefit Analysis Spreadsheet

			Line	Trans. Line	Substation	Line	Line	Substation	Substation
Customer	Point of Delivery	Transferor	Miles	Constr. Cost	Constr. Cost	A&G/O&M	I&A	A&G/O&M	I&A
Emerald PUD	Powerline	PAC	13	\$6,683,885	\$6,073,317	\$325,662	\$293,443	\$318,849	\$266,637
Surprise Valley	Malin	PAC	0	\$0	\$36,464,457	\$0	\$0	\$1,914,384	\$1,600,899
Surprise Valley	Alturas	PAC	23	\$11,825,335	\$4,990,881	\$576,170	\$519,168	\$262,021	\$219,115
Surprise Valley	Austin	PAC	15	\$7,712,175	\$4,990,881	\$375,763	\$338,588	\$262,021	\$219,115
Surprise Valley	Cederville	PAC	18	\$9,254,610	\$4,990,881	\$450,916	\$406,305	\$262,021	\$219,115
Surprise Valley	Davis Creek	PAC	35	\$17,995,075	\$4,990,881	\$876,781	\$790,038	\$262,021	\$219,115
Surprise Valley	Lakeview	PAC	65	\$33,419,425	\$4,990,881	\$1,628,308	\$1,467,213	\$262,021	\$219,115
Tillamook	Mohler	PAC	9	\$4,627,305	\$4,990,881	\$225,458	\$203,153	\$262,021	\$219,115
Tillamook	Ganbaldi	PAC	13	\$6,683,885	\$6,073,317	\$325,662	\$293,443	\$318,849	\$266,637
Tillamook	Nehalem Tap	PAC	3	\$1,542,435	\$4,989,309	\$75,153	\$67,718	\$261,939	\$219,046
Hood River	Willard Johnson	PAC	0	\$0	\$6,989,575	\$0	\$0	\$366,953	\$306,863
Wasco Electric	Warm Springs	PAC	12	\$6,169,740	\$13,620,506	\$300,611	\$270,870	\$715,077	\$597,981
Canby Util. Board	Canby	PGE	5	\$2,570,725	\$6,073,317	\$125,254	\$112,863	\$318,849	\$266,637
Canby Util. Board	Twilight	PGE	5	\$2,570,725	\$4,990,881	\$125,254	\$112,863	\$262,021	\$219,115
West Oregon	Patton Valley	PGE	15	\$7,712,175	\$0	\$375,763	\$338,588	\$0	\$0
West Oregon	Pike	PGE	22	\$11,311,190	\$0	\$551,120	\$496,595	\$0	\$0
West Oregon	Pihl Road	PGE	14	\$7,198,030	\$0	\$350,712	\$316,015	\$0	\$0
West Oregon	Scoggins Valley	PGE	4	\$2,056,580	\$6,073,317	\$100,204	\$90,290	\$318,849	\$266,637
West Oregon	Olny	PAC	15	\$7,712,175	\$4,989,309	\$375,763	\$338,588	\$261,939	\$219,046
West Oregon	Necanicum	PAC	18	\$9,254,610	\$4,989,309	\$450,916	\$406,305	\$261,939	\$219,046
City of McCleary	McCleary	GraysHbr.	4	\$1,902,336	\$6,989,575	\$92,688	\$83,518	\$366,953	\$306,863
Blaine	Blaine	Puget	9	\$4,627,305	\$13,620,506	\$225,458	\$203,153	\$715,077	\$597,981
Blaine	Semiahmoo	Puget	3	\$1,336,777	\$6,989,575	\$65,132	\$58,689	\$366,953	\$306,863
Orcus	Fidalgo #2, 3, & 4	Puget	35	\$17,995,075	\$4,990,881	\$876,781	\$790,038	\$262,021	\$219,115
Georgia Pacific	Georgia Pacific	Puget	24	\$12,339,480	\$6,073,317	\$601,221	\$541,740	\$318,849	\$266,637
Kittitas PUD #1	Teanaway	Puget	25	\$12,853,625	\$39,431,848	\$626,272	\$564,313	\$2,070,172	\$1,731,176
Sumas	Sumas	Puget	24	\$12,339,480	\$4,990,881	\$601,221	\$541,740	\$262,021	\$219,115
Lewis County	Skookumchuck Wind	Puget	1	\$719,803	\$6,989,575	\$35,071	\$31,602	\$366,953	\$306,863
Port of Seattle	North Main	Puget	TBD						
Port of Seattle	South Main	Puget	TBD						
Port of Seattle	North End	Puget	TBD						
Tanner	Ames Lake	Puget	13	\$6,683,885	\$13,620,506	\$325,662	\$293,443	\$715,077	\$597,981
Tanner	Luhr Beach	Puget	12	\$6,169,740	\$4,990,881	\$300,611	\$270,870	\$262,021	\$219,115
Tanner	North Bend	Puget	18	\$9,254,610	\$4,990,881	\$450,916	\$406,305	\$262,021	\$219,115
U.S. Navy	East Arlington	Snohomish	9	\$4,627,305	\$13,620,506	\$225,458	\$203,153	\$715,077	\$597,981
Alder Mutual	Alder	Tacoma	5	\$2,570,725	\$4,990,881	\$125,254	\$112,863	\$262,021	\$219,115
Eatonville	Lynch Creek	Tacoma	8	\$4,113,160	\$4,990,881	\$200,407	\$180,580	\$262,021	\$219,115
Elmhurst	Brookdale	Tacoma	3	\$1,542,435	\$4,990,881	\$75,153	\$67,718	\$262,021	\$219,115
Elmhurst	Franz Holmes	Tacoma	6	\$3,084,870	\$13,620,506	\$150,305	\$135,435	\$715,077	\$597,981
Elmhurst	Grazzini	Tacoma	11	\$5,655,595	\$6,989,575	\$275,560	\$248,298	\$366,953	\$306,863
Elmhurst	Haakenson	Tacoma	3	\$1,542,435	\$6,073,317	\$75,153	\$67,718	\$318,849	\$266,637
Elmhurst	McCullough	Tacoma	3	\$1,542,435	\$4,990,881	\$75,153	\$67,718	\$262,021	\$219,115
Lakeview	Lake Grove	Tacoma	7	\$3,599,015	\$6,073,317	\$175,356	\$158,008	\$318,849	\$266,637
Lakeview	Miller	Tacoma	4	\$2,262,238	\$6,989,575	\$110,224	\$99,319	\$366,953	\$306,863
Lakeview	Tyee	Tacoma	2	\$1,028,290	\$4,990,881	\$50,102	\$45,145	\$262,021	\$219,115
Lewis County	Elbe	Tacoma	11	\$5,655,595	\$4,990,881	\$275,560	\$248,298	\$262,021	\$219,115
Milton	Surprise Lake	Tacoma	7	\$3,599,015	\$6,073,317	\$175,356	\$158,008	\$318,849	\$266,637
OHOP	Lynch Creek	Tacoma	1	\$514,145	\$4,990,881	\$25,051	\$22,573	\$262,021	\$219,115
OHOP	Mashel Prairie	Tacoma	0	\$0	\$6,989,575	\$0	\$0	\$366,953	\$306,863
OHOP	Ohop	Tacoma	9	\$4,627,305	\$13,620,506	\$225,458	\$203,153	\$715,077	\$597,981
Parkland	Brookdale	Tacoma	5	\$2,570,725	\$4,990,881	\$125,254	\$112,863	\$262,021	\$219,115
Parkland	John Curtis	Tacoma	4	\$2,056,580	\$4,990,881	\$100,204	\$90,290	\$262,021	\$219,115
Penninsula	Artondale 1 & 2	Tacoma	4	\$2,056,580	\$4,990,881	\$100,204	\$90,290	\$262,021	\$219,115
Penninsula	Lodholm	Tacoma	2	\$1,028,290	\$4,990,881	\$50,102	\$45,145	\$262,021	\$219,115
Penninsula	Narrows	Tacoma	13	\$6,683,885	\$4,990,881	\$325,662	\$293,443	\$262,021	\$219,115
Penninsula	Purdy	Tacoma	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Penninsula	Minter	Tacoma	8	\$4,113,160	\$4,990,881	\$200,407	\$180,580	\$262,021	\$219,115
Penninsula	Gig Harbor	Tacoma	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Penninsula	Vaughn 1 & 2	Tacoma	7	\$3,599,015	\$4,990,881	\$175,356	\$158,008	\$262,021	\$219,115
Steilacoom	Lake Bay	Tacoma	8	\$4,113,160	\$4,990,881	\$200,407	\$180,580	\$262,021	\$219,115
Steilacoom	Steilacoom	Tacoma	6	\$3,084,870	\$4,990,881	\$150,305	\$135,435	\$262,021	\$219,115
Wells Rural	Carlin	NV Energy	175	\$103,396,748	\$13,841,237	\$5,037,840	\$4,539,427	\$726,665	\$607,672
Wells Rural	Maggie Ck.	NV Energy	6	\$3,545,031	\$12,110,646	\$172,726	\$155,638	\$635,809	\$531,694
Wells Rural	Grass Valley	NV Energy	137	\$80,885,799	\$6,989,575	\$3,941,030	\$3,551,129	\$366,953	\$306,863
Wells Rural	Jiggs-Lee	NV Energy	235	\$139,024,313	\$6,989,575	\$6,773,736	\$6,103,584	\$366,953	\$306,863
Wells Rural	Nevada Gold Ph.1	NV Energy	218	\$128,507,387	\$6,989,575	\$6,261,316	\$5,641,860	\$366,953	\$306,863
Wells Rural	Dry Hills	NV Energy	221	\$130,693,490	\$6,989,575	\$6,367,830	\$5,737,836	\$366,953	\$306,863
Harney Elec.	Winnemucca	NV Energy	75	\$44,312,892	\$4,359,799	\$2,159,074	\$1,945,469	\$228,889	\$191,408
Southern Idaho	See So. Id. Study	IPC/PAC	N/A	\$484,890,329	\$69,105,510	\$16,259,342	\$21,288,140	\$3,628,039	\$3,033,939
			<b>2,648</b>	<b>\$2,358,972,730</b>	<b>\$1,408,503,979</b>	<b>\$107,570,989</b>	<b>\$103,565,980</b>	<b>\$73,946,459</b>	<b>\$61,837,550</b>

## TRANSFER SERVICE CUSTOMERS, POINTS OF DELIVERY, TRANSFEROR

Customer	Point of Delivery	Transferor
Benton REA	Hom Rapids	Benton Pud
Benton REA	Columbia Crest	Benton Pud
Benton REA	Plymouth	Benton Pud
Benton REA	South Slope	Benton Pud
Benton REA	Sun Heaven No. 2	Benton Pud
Benton REA	Whitcomb Island	Benton Pud
Klickitat PUD	M.A.Collins	Benton Pud
Big Bend	Eltopia	Frank.PUD
Big Bend	North Pasco	Frank. PUD
Kittitas PUD #1	Jericho	Grant PUD
Kittitas PUD #1	Mattawa	Grant PUD
Big Bend	Schrag	Grant PUD
Glacier Elec.	Cut Bank	Northwestern
Missoula Elec.	Bitterroot	Northwestern
Missoula Elec.	Clinton	Northwestern
Missoula Elec.	Frenchtown	Northwestern
Missoula Elec.	Huson	Northwestern
Missoula Elec.	Lolo	Northwestern
Missoula Elec.	Miller Creek	Northwestern
Missoula Elec.	Mittown (Bonner)	Northwestern
Missoula Elec.	Ovando	Northwestern
Missoula Elec.	Tarkio	Northwestern
Missoula Elec.	Petty Creek	Northwestern
Northern Lights	Thompson Falls	Northwestern
Northern Lights	Cherry Creek	Northwestern
Ravalli	Corvallis	Northwestern
Ravalli	Darby	Northwestern
Ravalli	Grantsdale	Northwestern
Ravalli	Stevensville	Northwestern
Ravalli	Victor	Northwestern
Vigilante	Bannack	Northwestern
Vigilante	Dell	Northwestern
Vigilante	Dillon	Northwestern
Vigilante	Dillon-Salmon	Northwestern
Vigilante	East Bench	Northwestern
Vigilante	Gates of the Mtn.	Northwestern
Vigilante	Lump Gulch	Northwestern
Vigilante	Point of Rocks	Northwestern
Vigilante	Silver Star	Northwestern
Vigilante	Toston	Northwestern
Vigilante	Townsend	Northwestern
Vigilante	Whitehall	Northwestern
Okanogan Coop	Winthrop	OkanoganP.
Okanogan Coop	Twisp	OkanoganP.
Nespelem	Okanogan	OkanoganP.
Big Bend Elec.	Delight SU	Avista
Big Bend Elec.	Lee & Reynolds	Avista
Big Bend Elec.	Marengo	Avista
Big Bend Elec.	Ralston	Avista
Big Bend Elec.	Ritzville	Avista
Big Bend Elec.	Roxboro	Avista
Cheney	Four Lakes/Inld	Avista
Cheney	Cheney	Avista
Chewelah	Chewelah	Avista
Clearwater	Brickens Comer	Avista
Clearwater	Craigmont	Avista
Clearwater	Juliatta	Avista
Clearwater	Moscow	Avista
Clearwater	Orofino	Avista
Clearwater	Potlatch	Avista
Clearwater	Spalding	Avista
Clearwater	Sweetwater	Avista
Clearwater	Weippe	Avista
Fairchild AF Base	Fairchild North AFB	Avista
Fairchild AF Base	Fairchild South AFB	Avista
Idaho Co. L&P	Cottonwood Joint	Avista
Idaho Co. L&P	East Grangeville	Avista

Customer	Point of Delivery	Transferor
Idaho Co. L&P	Kamiah Joint Use	Avista
Idaho Co. L&P	Kooskia Joint Use	Avista
Inland P&L	Airway Heights	Avista
Inland P&L	Armstrong	Avista
Inland P&L	Chambers	Avista
Inland P&L	Cheney	Avista
Inland P&L	Four Lakes	Avista
Inland P&L	East Colfax	Avista
Inland P&L	Ewan	Avista
Inland P&L	Hallett & White	Avista
Inland P&L	Hangman	Avista
Inland P&L	Hayford	Avista
Inland P&L	Hoodoo	Avista
Inland P&L	Hopkins EU	Avista
Inland P&L	Mica	Avista
Inland P&L	Milan	Avista
Inland P&L	Milar/Eloika Lake	Avista
Inland P&L	Moab	Avista
Inland P&L	Rosalia	Avista
Inland P&L	Spangle	Avista
Inland P&L	Gaffney	Avista
Inland P&L	Irby	Avista
Inland P&L	Odessa	Avista
Inland P&L	Wagner Lake	Avista
Inland P&L	West Plains	Avista
Kootenai Elec.	Athol	Avista
Kootenai Elec.	Beck Road	Avista
Kootenai Elec.	CDA 15th Street	Avista
Kootenai Elec.	Dower EU	Avista
Kootenai Elec.	Hayden	Avista
Kootenai Elec.	Julia Street	Avista
Kootenai Elec.	O'Gara	Avista
Kootenai Elec.	Plummer Jnt Sub	Avista
Kootenai Elec.	Plesant View	Avista
Kootenai Elec.	Prairie	Avista
Kootenai Elec.	Rathdrum	Avista
Kootenai Elec.	Rockford	Avista
Kootenai Elec.	Scarcello	Avista
Kootenai Elec.	Setters	Avista
Modern Elec.	4th & Harold	Avista
Modern Elec.	Locust & Millwood	Avista
Modern Elec.	Opportunity	Avista
Northern Lights	Athol	Avista
Northern Lights	Cabinet Gorge	Avista
Northern Lights	Noxon	Avista
Plummer	Plummer	Avista
Columbia River	Scapoose	PGE
Columbia River	Warren-Yankton	PGE
Columbia River	Armstrong	PGE
Columbia River	St. Helens	PGE
Columbia River	Scapoose OATT	PGE
WascoElec.	Endersby	No. Wasco
WascoElec.	Pine Hollow	No. Wasco
City of Ashland	Ashland	PAC
City of Ashland	Oak Knoll	PAC
City of Ashland	Mountain Ave.	PAC
Cowlitz	Ariel	PAC
Columbia Power	Ukiah	PAC
Umatilla Elec./CB	Pilot Rock	PAC
Umatilla Electric	Pendleton	PAC
Umatilla Electric	Hat Rock	PAC
Douglas Electric	Looking Glass	PAC
Klickitat PUD	Bingen	PAC
Benton REA	Tieton	PAC
Benton REA	White Swan	PAC
Central Electric	Pilot Butte	PAC
Lane Electric	Dorena	PAC
Emerald PUD	Creswell	PAC
Emerald PUD	Powerline	PAC
Surprise Valley	Malin	PAC

Customer	Point of Delivery	Transferor
Surprise Valley	Alturas	PAC
Surprise Valley	Austin	PAC
Surprise Valley	Cedarville	PAC
Surprise Valley	Davis Creek	PAC
Surprise Valley	Lakeview	PAC
Tillamook	Mohler	PAC
Tillamook	Ganbaldi	PAC
Tillamook	Nehalem Tap	PAC
Hood River	Willard Johnson	PAC
Wasco Electric	Warm Springs	PAC
Canby Util. Board	Canby	PGE
Canby Util. Board	Twilight	PGE
West Oregon	Patton Valley	PGE
West Oregon	Pike	PGE
West Oregon	Phi Road	PGE
West Oregon	Scoggins Valley	PGE
West Oregon	Olney	PAC
West Oregon	Necanicum	PAC
City of McCleary	McCleary	GraysHbr.
Blaine	Blaine	Puget
Blaine	Semiahmoo	Puget
Orcas	Fidalgo #2, 3, & 4	Puget
Kittitas PUD #1	Teanaway	Puget
Sumas	Sumas	Puget
Lewis County	Skookumchuck	Puget
Port of Seattle	North Main	Puget
Port of Seattle	South Main	Puget
Port of Seattle	North End	Puget
Tanner	Ames Lake	Puget
Tanner	Luhr Beach	Puget
Tanner	North Bend	Puget
U.S. Navy	East Arlington	Snohomish
Alder Mutual	Alder	Tacoma
Eatonville	Lynch Creek	Tacoma
Elmhurst	Brookdale	Tacoma
Elmhurst	Franz Holmes	Tacoma
Elmhurst	Grazzini	Tacoma
Elmhurst	Haakenson	Tacoma
Elmhurst	McCullough	Tacoma
Lakeview	Lake Grove	Tacoma
Lakeview	Miller	Tacoma
Lakeview	Tyee	Tacoma
Lewis County	Elbe	Tacoma
Milton	Surprise Lake	Tacoma
OHOP	Lynch Creek	Tacoma
OHOP	Mashel Prairie	Tacoma
OHOP	Ohop	Tacoma
Parkland	Brookdale	Tacoma
Parkland	John Curtis	Tacoma
Penninsula	Artdonale 1 & 2	Tacoma
Penninsula	Lodholm	Tacoma
Penninsula	Narrows	Tacoma
Penninsula	Purdy	Tacoma
Penninsula	Minter	Tacoma
Penninsula	Gig Harbor	Tacoma
Penninsula	Vaughn 1 & 2	Tacoma
Steilacoom	Steilacoom	Tacoma
Wells Rural	Carlin	NV Energy
Wells Rural	Maggie Ck.	NV Energy
Wells Rural	Grass Valley	NV Energy
Wells Rural	Jiggs-Lee	NV Energy
Wells Rural	GoldRush Ph.1	NV Energy
Wells Rural	Dry Hills	NV Energy
Harney Elec.	Winnemucca	NV Energy
Southern Idaho	See So. Id. Study	IPC/PAC