

BP-16 Initial Rate Proposal

# Transmission Segmentation Study and Documentation

BP-16-E-BPA-06

December 2014





# TRANSMISSION SEGMENTATION STUDY

## TABLE OF CONTENTS

COMMONLY USED ACRONYMS AND SHORT FORMS .....	iii
1. OVERVIEW .....	1
2. DEFINING THE SEGMENTS .....	3
2.1 Generation Integration Segment .....	3
2.2 Network Segment.....	4
2.3 Southern Intertie Segment.....	5
2.4 Eastern Intertie Segment .....	6
2.5 Utility Delivery Segment .....	6
2.6 Industrial Delivery Segment .....	7
2.7 Ancillary Services Segment.....	7
3. ASSIGNING FACILITIES TO THE SEGMENTS .....	9
3.1 Multi-Segmented Facilities .....	10
3.2 Facilities Not Assigned to a Segment .....	11
4. DETERMINING AND ALLOCATING INVESTMENT AND HISTORICAL O&M EXPENSES TO THE SEGMENTS .....	13
4.1 Gross Investment in Existing Facilities .....	13
4.1.1 Transmission Plant.....	13
4.1.2 Intangible Investment.....	14
4.1.3 Land Investment.....	14
4.1.4 Ancillary Service Investment.....	15
4.1.5 General Plant Investment.....	15
4.2 Retirement of Existing Facilities and Installation of New Facilities .....	15
4.3 Operations and Maintenance (O&M) Expense .....	16
4.3.1 Historical Line and Station O&M Assignment to Segments .....	17
4.4 U.S. Army Corps of Engineers and U.S. Bureau of Reclamation Facilities .....	19

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## COMMONLY USED ACRONYMS AND SHORT FORMS

AAC	Anticipated Accumulation of Cash
ACNR	Accumulated Calibrated Net Revenue
AER step	Actual Energy Regulation study
AGC	Automatic Generation Control
ALF	Agency Load Forecast (computer model)
aMW	average megawatt(s)
AMNR	Accumulated Modified Net Revenues
ANR	Accumulated Net Revenues
AOP	Assured Operating Plan
ASC	Average System Cost
BAA	Balancing Authority Area
BiOp	Biological Opinion
BPA	Bonneville Power Administration
BPA-P	Bonneville Power Administration – Power
BPA-T	Bonneville Power Administration – Transmission
Btu	British thermal unit
CDD	cooling degree day(s)
CDQ	Contract Demand Quantity
CGS	Columbia Generating Station
CHWM	Contract High Water Mark
CNR	Calibrated Net Revenue
COE, Corps, or USACE Commission	U.S. Army Corps of Engineers Federal Energy Regulatory Commission
Corps, COE, or USACE	U.S. Army Corps of Engineers
COSA	Cost of Service Analysis
COU	consumer-owned utility
Council or NPCC	Northwest Power and Conservation Council
CP	Coincidental Peak
CRAC	Cost Recovery Adjustment Clause
CSP	Customer System Peak
CT	combustion turbine
CY	calendar year (January through December)
DDC	Dividend Distribution Clause
<i>dec</i>	decrease, decrement, or decremental
DERBS	Dispatchable Energy Resource Balancing Service
DFS	Diurnal Flattening Service
DOE	Department of Energy
DOP	Detailed Operating Plan
DSI	direct-service industrial customer or direct-service industry
DSO	Dispatcher Standing Order
EIA	Energy Information Administration
EIS	Environmental Impact Statement
EN	Energy Northwest, Inc.
EPP	Environmentally Preferred Power

ESA	Endangered Species Act
ESS	Energy Shaping Service
e-Tag	electronic interchange transaction information
FBS	Federal base system
FCRPS	Federal Columbia River Power System
FCRTS	Federal Columbia River Transmission System
FELCC	firm energy load carrying capability
FHFO	Funds Held for Others
FORS	Forced Outage Reserve Service
FPS	Firm Power and Surplus Products and Services (rate)
FY	fiscal year (October through September)
G&A	general & administrative
GARD	Generation and Reserves Dispatch (computer model)
GEP	Green Energy Premium
GMS	Generation Management Service
GRSPs	General Rate Schedule Provisions
GTA	General Transfer Agreement
GWh	gigawatthour
HDD	heating degree day(s)
HLH	Heavy Load Hour(s)
HOSS	Hourly Operating and Scheduling Simulator (computer model)
HYDSIM	Hydrosystem Simulator (computer model)
ICE	Intercontinental Exchange
<i>inc</i>	increase, increment, or incremental
IOU	investor-owned utility
IP	Industrial Firm Power (rate)
IPR	Integrated Program Review
IRD	Irrigation Rate Discount
IRM	Irrigation Rate Mitigation
IRMP	Irrigation Rate Mitigation Product
JOE	Joint Operating Entity
kcfs	thousand cubic feet per second
kW	kilowatt (1000 watts)
kWh	kilowatthour
LPP	Large Project Program
LDD	Low Density Discount
LLH	Light Load Hour(s)
LPTAC	Large Project Targeted Adjustment Charge
LRA	Load Reduction Agreement
Maf	million acre-feet
Mid-C	Mid-Columbia
MMBtu	million British thermal units
MNR	Modified Net Revenues
MRNR	Minimum Required Net Revenue
MW	megawatt (1 million watts)

MWh	megawatthour
NCP	Non-Coincidental Peak
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NFB	National Marine Fisheries Service (NMFS) Federal Columbia River Power System (FCRPS) Biological Opinion (BiOp)
NLSL	New Large Single Load
NMFS	National Marine Fisheries Service
NOAA Fisheries	National Oceanographic and Atmospheric Administration Fisheries
NORM	Non-Operating Risk Model (computer model)
Northwest Power Act	Pacific Northwest Electric Power Planning and Conservation Act
NPCC or Council	Pacific Northwest Electric Power and Conservation Planning Council
NPV	net present value
NR	New Resource Firm Power (rate)
NRFS	New Resource Flattening Service
NT	Network Transmission
NTSA	Non-Treaty Storage Agreement
NUG	non-utility generation
NWPP	Northwest Power Pool
OATT	Open Access Transmission Tariff
O&M	operation and maintenance
OATI	Open Access Technology International, Inc.
OMB	Office of Management and Budget
OPER step	operational study
OY	operating year (August through July)
PF	Priority Firm Power (rate)
PFp	Priority Firm Public (rate)
PFx	Priority Firm Exchange (rate)
PNCA	Pacific Northwest Coordination Agreement
PNRR	Planned Net Revenues for Risk
PNW	Pacific Northwest
POD	Point of Delivery
POI	Point of Integration or Point of Interconnection
POM	Point of Metering
POR	Point of Receipt
Project Act	Bonneville Project Act
PRS	Power Rates Study
PS	BPA Power Services
PSW	Pacific Southwest
PTP	Point to Point Transmission (rate)
PUD	public or people's utility district
RAM	Rate Analysis Model (computer model)

RAS	Remedial Action Scheme
RD	Regional Dialogue
REC	Renewable Energy Certificate
Reclamation or USBR	U.S. Bureau of Reclamation
REP	Residential Exchange Program
RevSim	Revenue Simulation Model (component of RiskMod)
RFA	Revenue Forecast Application (database)
RHWM	Rate Period High Water Mark
RiskMod	Risk Analysis Model (computer model)
RiskSim	Risk Simulation Model (component of RiskMod)
ROD	Record of Decision
RPSA	Residential Purchase and Sale Agreement
RR	Resource Replacement (rate)
RRS	Resource Remarketing Service
RSS	Resource Support Services
RT1SC	RHWM Tier 1 System Capability
RTO	Regional Transmission Operator
SCADA	Supervisory Control and Data Acquisition
SCS	Secondary Crediting Service
Slice	Slice of the System (product)
T1SFCO	Tier 1 System Firm Critical Output
TCMS	Transmission Curtailment Management Service
TOCA	Tier 1 Cost Allocator
TPP	Treasury Payment Probability
TRAM	Transmission Risk Analysis Model
Transmission System Act	Federal Columbia River Transmission System Act
Treaty	Columbia River Treaty
TRL	Total Retail Load
TRM	Tiered Rate Methodology
TS	BPA Transmission Services
TSS	Transmission Scheduling Service
UAI	Unauthorized Increase
ULS	Unanticipated Load Service
USACE, Corps, or COE	U.S. Army Corps of Engineers
USBR or Reclamation	U.S. Bureau of Reclamation
USFWS	U.S. Fish and Wildlife Service
VERBS	Variable Energy Resources Balancing Service (rate)
VOR	Value of Reserves
VR1-2014	First Vintage rate of the BP-14 rate period
WECC	Western Electricity Coordinating Council (formerly WSCC)
WIT	Wind Integration Team
WSPP	Western Systems Power Pool



1 **1. OVERVIEW**

2 The Bonneville Power Administration (BPA) segments its transmission facilities based  
3 on the services those facilities provide. Segments are groups of transmission facilities  
4 that serve a particular function or provide a specific service and therefore are appropriate  
5 to group together for ratesetting purposes. BPA began segmenting its transmission  
6 system in the 1979 rate case to demonstrate equitable allocation between Federal and  
7 non-Federal uses of the transmission system, as required by section 10 of the Federal  
8 Columbia River Transmission System Act, 16 U.S.C. § 838h.

9  
10 Segmentation involves three primary steps: defining the segments; assigning facilities to  
11 the segments; and determining the gross investment and historical operation and  
12 maintenance (O&M) expenses for the facilities in each segment. BPA uses this  
13 information to develop the segmented transmission revenue requirement. *See*  
14 *Transmission Revenue Requirement Study Documentation, BP-16-E-BPA-08A,*  
15 *tables 2.1 to 2.8.* The segmented revenue requirement is then used to set transmission  
16 rates. *See Transmission Rates Study and Documentation, BP-16-E-BPA-07.*

17  
18 Prior to segmenting its system for this rate period, BPA engaged the region in a  
19 comprehensive public process regarding its segmentation methodology. This process  
20 included a discussion about why BPA segments its system, the principles BPA considers  
21 to determine its segmentation methodology, an industry scan of how other transmission  
22 providers functionalize and allocate transmission costs, and collaboration with customers  
23 to identify and evaluate different segmentation methodologies. The process culminated  
24 in a white paper that BPA used as an input to develop the segmentation methodology  
25 used in this study. *See Tenney et al., BP-16-E-BPA-16, § 3.*

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## 2. DEFINING THE SEGMENTS

Defining the segments is the first step in the segmentation process. BPA defines the segments based on applicable legal, policy, and technical principles and requirements. The definitions set forth below incorporate those principles and requirements.

For the FY 2016–2017 rate period, BPA has divided its transmission system into the following segments: (1) Generation Integration, (2) Network, (3) Southern Intertie, (4) Eastern Intertie, (5) Utility Delivery, (6) Direct Service Industry (DSI) Delivery, and (7) Ancillary Services. This study also identifies facility investment in general plant that supports the transmission system, such as communications equipment, buildings, and vehicles. *See* § 4.1.5.

### 2.1 Generation Integration Segment

The Generation Integration segment consists of facilities that connect the Federal generating plants to BPA’s transmission facilities. Generation Integration facilities are the same type of facilities that BPA requires other entities to provide to interconnect non-Federal generators. Because the purpose of these facilities is to interconnect Federal generation with BPA’s transmission system, the costs associated with these facilities are assigned to and recovered through BPA’s power rates.

This segment includes:

- generator step-up transformers, which transform voltage from the generation level to the transmission level;
- transmission lines and equipment between the generator and the first substation at which the power enters the Network segment; and
- substation terminal equipment, such as disconnect switches and circuit breakers, associated with integrating Federal generation installed and assigned to the Generation Integration segment prior to the development of the Direct

1 Assignment Guidelines in the late 1990s. (BPA is revising the guidelines, which  
2 will be renamed the Facility Ownership and Cost Assignment Guidelines.) None  
3 of this equipment has been installed (excluding replacements) at Federal  
4 generating plants since the guidelines were developed. Under the guidelines,  
5 BPA would likely allocate the costs of this equipment to the Network segment if  
6 it were constructed today for new generation. *See* Tenney *et al.*, BP-16-E-  
7 BPA-16, §§ 8 to 10.  
8

## 9 **2.2 Network Segment**

10 The Network segment is the core of BPA's transmission system. The facilities in this  
11 segment transmit power from Federal and non-Federal generation sources or interties to  
12 the load centers of BPA's transmission customers in the Pacific Northwest or to other  
13 segments (*e.g.*, an intertie or delivery segment). The Network segment provides several  
14 benefits to BPA and its customers, including displacement (local generation flowing to  
15 load instead of the remote generation that is scheduled to serve that load), bulk power  
16 transfers, voltage regulation, and increased overall reliability resulting from alternative  
17 resource and transmission pathways. The costs of the Network segment are recovered  
18 through the Formula Power Transmission rate, the Integration of Resources rate, the  
19 Network Integration rate, the Advanced Funding rate, the Use of Facilities (UFT) charge,  
20 and the Point-to-Point rate.  
21

22 This segment includes:

- 23 • transmission lines and equipment that allow the transfer of energy between the  
24 interconnection points with generators and the interconnection points with  
25 customers' transmission facilities and other BPA segments;

- transmission lines and equipment that interconnect BPA’s facilities with customers’ facilities that have been determined to be BPA’s responsibility to build and own based on the Direct Assignment Guidelines, and that are not included in any of the other segments; and
  - facilities included in the Network segment in the BP-14 Segmentation Study, even if they would be directly assigned under the Direct Assignment Guidelines.
- Id.* § 9.

### **2.3 Southern Intertie Segment**

The Southern Intertie segment is a system of transmission lines used primarily to transmit power between the Pacific Northwest and California. Segmenting the Southern Intertie separately from the Network recognizes BPA’s contractual obligations regarding assignments of cost for the construction and ongoing use of Southern Intertie facilities. BPA recovers the costs of the Southern Intertie segment through the Southern Intertie rates.

This segment includes:

- the 1,000-kV direct-current (DC) line from the Celilo converter station near The Dalles, Oregon, to the Nevada-Oregon border, including the Celilo converter station equipment and the terminal equipment in the Big Eddy substation supporting the DC line;
- the multiple 500-kV alternating-current (AC) lines from north-central Oregon to the California-Oregon border and all associated terminals, including BPA’s share of PacifiCorp’s Alvey-Dixonville-Meridian line, except for (1) one of the 500-kV AC lines from Grizzly substation to Malin substation in central Oregon and associated terminals (owned by Portland General Electric Company), and (2) the

1 Meridian-Captain Jack-Malin line, Summer Lake-Malin line, and Meridian-  
2 Captain Jack line, and associated terminals (owned by PacifiCorp); and  
3 • certain other facilities determined to support the facilities specified above,  
4 including one of the 500-kV AC lines between John Day and Big Eddy  
5 substations, a 500-kV AC line between Coyote Springs and Slatt substations, a  
6 500-kV AC line between Slatt and John Day substations, and the dynamic braking  
7 resistor at Chief Joseph substation.

8

9 **2.4 Eastern Intertie Segment**

10 The Eastern Intertie segment facilities provide a transmission path from Montana  
11 (primarily for the Colstrip generating project) to the Network segment. These facilities  
12 were built pursuant to the Montana Intertie Agreement, which provides that the costs  
13 associated with building and maintaining the facilities will be recovered from the parties  
14 to the agreement through the Townsend-Garrison transmission rate. This segment  
15 includes the double-circuit 500-kV system between Townsend and Garrison, Montana,  
16 and associated terminal equipment at Garrison substation. The costs associated with the  
17 Eastern Intertie are recovered through the Townsend-Garrison Transmission, Montana  
18 Intertie, and the Eastern Intertie rates.

19

20 **2.5 Utility Delivery Segment**

21 The Utility Delivery segment consists of substation facilities required to step down  
22 (reduce) transmission voltages to lower voltages usually associated with supplying power  
23 directly to utility distribution systems. Utility Delivery facilities are distinguished from  
24 Network facilities in that Utility Delivery facilities provide transformation down to the  
25 customer's distribution voltage, whereas Network facilities transmit power at voltages  
26 that the customer must step down before the power enters the customer's distribution

1 system. Utility Delivery facilities provide service to only a small subset of BPA's  
2 transmission customers. These facilities do not provide reliability benefits to the  
3 Network segment. BPA recovers the costs of these facilities through the Utility Delivery  
4 rate.

5  
6 This segment includes:

- 7 • step-down transformers, associated switching and protection equipment, and other  
8 transmission plant supporting the Utility Delivery function; and
- 9 • two short low-voltage lines, one from BPA's Albany substation to DOE's  
10 National Energy Technology Laboratory, and one from BPA's Hood River  
11 substation to Hood River Electric Cooperative.

## 12 13 **2.6 Industrial Delivery Segment**

14 This segment consists of transformers, switching equipment, protection equipment, and  
15 related transmission plant at the Intalco, Conkelley, and Trentwood substations necessary  
16 to step down transmission voltages to industrial voltages (*i.e.*, 6.9 or 13.8 kV) to supply  
17 power to direct-service industrial (DSI) customers. Because these facilities serve the  
18 distinct purpose of supplying power to DSI customers, BPA segments the facilities  
19 separately and allocates the cost to the Industrial Delivery segment. Customers that  
20 utilize these facilities pay Use-of-Facilities (UFT) rates.

## 21 22 **2.7 Ancillary Services Segment**

23 This segment consists of control equipment and associated communications equipment  
24 necessary for BPA to provide Scheduling, System Control, and Dispatch (SCD) service.  
25 Because this equipment serves the distinct purpose of supporting BPA's provision of

1 SCD services, BPA assigns it to the Ancillary Services segment and recovers its costs  
2 through the SCD rate.

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4 This segment includes:

- 5 • monitoring and supervisory control equipment;
- 6 • associated communications equipment; and
- 7 • control center hardware and software.

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### 3. ASSIGNING FACILITIES TO THE SEGMENTS

After the segments are defined, BPA's facilities are assigned to the various segments based on the definitions set forth in section 2. Appendix A to this study, which lists the facilities included in each segment, identifies:

- transmission facilities (lines and stations) assigned solely to one segment;
- multi-segmented transmission facilities assigned to several segments;
- depreciable land assigned by segment;
- ancillary service facilities assigned to the Ancillary Services segment; and
- general plant facilities.

The following resources are used to segment the facilities:

- One-line diagrams identify the location, interconnectivity, ownership, and characteristics of transmission lines, substations, breakers and transformers.
- Installation and maintenance records identify major equipment (*e.g.*, transformers, circuit breakers, and reactive equipment) installed or maintained by BPA. BPA uses these records to identify and associate specific equipment in the plant accounting records with the equipment identified on the one-line diagrams. This association is particularly useful in allocating investment at facilities that support more than one function and whose costs are allocated to more than one segment. Multi-segmented facilities that support more than one function are described in more detail in section 3.1.
- Agreements, such as those relating to the construction and operation of the Southern and Eastern Interties, specify how the costs for certain facilities should be allocated.

### 3.1 Multi-Segmented Facilities

Some facilities, referred to as multi-segmented facilities, support more than one segment.

For multi-segmented lines, investment is generally allocated to multiple segments according to percentages established by contract. Where the allocation of multi-segmented lines is not established by contract, BPA uses line mileage to develop percentages that reflect which segments the line supports. For example, if two miles of a 20-mile line are used to integrate Federal generation, and after two miles a tap off the line integrates a non-Federal generator into the Network, 10 percent of the line investment is segmented to Generation Integration and 90 percent is segmented to the Network.

For multi-segmented substations, the process is more involved. First, the segment definitions described in section 2 are used to determine the segments a substation supports. Then the investment in the substation is allocated to the applicable segments according to the following process:

1. The investment in major equipment in the substation (*e.g.*, circuit breakers, transformers, and reactive devices, all of which are tracked separately in the investment records) is grouped by type and voltage level. For example, a substation may have 230-kV equipment that supports the Network and Generation Integration segments and reactive devices that support only the Network. The investment in this substation is separated into two groups, a 230-kV shared group that is segmented to both Generation Integration and the Network (as described below) and a reactive group that is segmented entirely to the Network.
2. The investment in the common equipment for the substation, such as buildings and fences, is allocated to each group based on the investment in major

1 equipment. In the example above, if the 230-kV shared group is assigned  
2 80 percent of the investment in major equipment, it is also assigned 80 percent of  
3 the investment in common equipment.

4 3. The total investment in each shared group is then allocated to the segments the  
5 group supports based on the number of terminals in each segment. A terminal  
6 connects a transmission line, power transformer, or reactive device to substation  
7 bus work so that power can flow. A terminal typically consists of a power circuit  
8 breaker (or circuit switcher), disconnect switches, and protective relaying. All  
9 terminals rely on the equipment in the shared group to transmit power between  
10 the lines, transformers, and reactive devices to which they are connected at the  
11 substation. Therefore, the cost of the shared group is assumed to be shared  
12 equally among the terminals. In the above example, if the 230-kV shared group  
13 supports four Network terminals and two Generation Integration terminals,  
14 two-thirds (four of six terminals) of the 230-kV shared group investment is  
15 allocated to the Network segment, and one-third (two of six) is allocated to the  
16 Generation Integration segment.

17  
18 As described further in section 4, the percentage of the total investment in each segment  
19 is used to allocate the historical O&M for each facility to the different segments.

20 Appendix A identifies the percentage of each facility allocated to each segment and the  
21 associated investment and historical O&M expenses assigned to the segment.

22

### 23 **3.2 Facilities Not Assigned to a Segment**

24 Some transmission facilities are not assigned to a particular segment because they cannot  
25 be identified with a particular type of service. For example, emergency equipment spares  
26 support most or all the segments and therefore are not assigned to a particular segment.

1 The plant investment associated with these facilities is allocated to all the segments on a  
2 pro rata basis. For example, if 80 percent of the directly assigned investment in station  
3 equipment is segmented to the Network segment, then 80 percent of the investment in  
4 station equipment that is not directly assigned is also segmented to the Network. Table 2,  
5 lines 4 and 18, shows the allocation of the investment in these facilities.

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1                   **4. DETERMINING AND ALLOCATING INVESTMENT AND**  
2                   **HISTORICAL O&M EXPENSES TO THE SEGMENTS**

3  
4       Once the segmentation of facilities is determined, the investment and historical O&M  
5       expenses by segment are calculated. As described below, the investment associated with  
6       each segment is developed by aggregating the investment of the facilities allocated to  
7       each segment. The historical O&M expenses are similarly aggregated by segment. The  
8       segmented investment and the historical O&M expenses are used in the Revenue  
9       Requirement Study to assign BP-16 forecast costs to each segment.

10  
11       The transmission segmented investment through September 30, 2013, is shown in table 2.  
12       Table 3a shows the segmented expected future plant investment. The historical O&M by  
13       segment for FY 2007 to FY 2013 is shown in table 4a.

14  
15       **4.1 Gross Investment in Existing Facilities**

16       BPA's gross investment is shown in table 1, and broken down in the associated chart.  
17       The investment related to (1) transmission plant, including leased assets, emergency  
18       stock, and intangibles, (2) depreciable land, and (3) general plant is identified and  
19       segmented in the segmentation process. These investments are described in more detail  
20       below. The gross investment is identified from BPA's investment records as of the most  
21       recently completed fiscal year (FY 2013).

22  
23       **4.1.1 Transmission Plant**

24       Transmission plant investments refer to investments in lines and substations, which are  
25       defined in FERC accounts 352 through 359, 390, and 391, and investment in some leased  
26       facilities (which are not classified by FERC account). See table 2. The total transmission  
27       plant, including leased facilities and without Projects Funded in Advance (PFIA), is

1 \$6.1 billion as of the end of FY 2013 (table 1, line 23). Transmission plant investment  
2 associated with specific facilities is allocated to segments based on the assignment of  
3 facilities to the segments as described in section 3.

#### 4 5 **4.1.2 Intangible Investment**

6 Intangible investments are BPA's share of participation in facilities owned by others  
7 (BPA's capacity rights). In each case the investment supports either the Network or the  
8 Southern Intertie segment. For the FY 2016–2017 rate period, the investments are  
9 segmented to one of these segments based on the segment each facility supports. As  
10 shown in table 2, line 29, BPA has \$9.6 million of intangible investments.

#### 11 12 **4.1.3 Land Investment**

13 Land owned by BPA is not depreciated, and therefore no amortized costs for land need to  
14 be segmented. However, BPA does have leased land that is depreciable (\$48.2 million,  
15 *see* table 2, lines 32-37) and therefore must be segmented. Most of this land  
16 (\$47.3 million, *see* table 2, line 34) is rights-of-way for transmission lines and is  
17 segmented according to the type of service provided by the associated transmission lines.  
18 For example, leased land that supports a transmission line segmented to the Network  
19 segment is allocated to that segment. *See* table 2.

20  
21 BPA also has depreciable leased land (\$0.67 million, *see* table 2, line 35) associated with  
22 radio stations that is not assigned to a specific segment because communication facilities  
23 like radio stations generally support all the segments. Therefore, the depreciation  
24 associated with this leased land is pro-rated to the segments based on the total of the line  
25 and station investment allocated to each segment.

1 **4.1.4 Ancillary Service Investment**

2 BPA has \$167.5 million in ancillary service investment. *See* table 2, line 41. This  
3 investment includes equipment designated as control equipment (\$77.9 million, line 43),  
4 hardware and software at the control centers supporting scheduling and dispatch  
5 (\$45.7 million, line 46), and communications equipment supporting Supervisory Control  
6 and Data Acquisition (SCADA) (\$43.9 million, line 52). This investment is all allocated  
7 to the Ancillary Services segment.

8  
9 **4.1.5 General Plant Investment**

10 General plant investment is associated with equipment of a general nature (FERC  
11 accounts 390 through 398, with some amounts identified in FERC accounts 352, 353,  
12 and 356). *See* table 2. BPA’s telecommunications system facilities (such as radio  
13 stations), maintenance buildings, and vehicles are examples of general plant investment.  
14 Through FY 2013, BPA’s general plant investment (less Projects Funded In Advance  
15 (PFIA)) was \$866 million. *See* table 1, line 27. General plant investment is not allocated  
16 to the segments in this study. In the Transmission Revenue Requirement Study, the  
17 depreciation cost associated with this investment is treated as an overhead expense and  
18 allocated pro rata to the segments based on the segmented O&M expenses. *See*  
19 Transmission Revenue Requirement Study Documentation, BP-16-E-BPA-08A, ch. 4.

20  
21 **4.2 Retirement of Existing Facilities and Installation of New Facilities**

22 As this study is being prepared, BPA has the actual investment figure for facilities in  
23 place as of the end of FY 2013. To estimate the investment that will be in place during  
24 the FY 2016–2017 rate period, this figure is adjusted to remove investment in facilities  
25 expected to be retired or sold, and to include the forecast of facilities expected to be

1 installed, after the end of FY 2013 and before the end of FY 2017. Table 3a summarizes  
2 the expected station and line investment by segment for fiscal years 2014 through 2017.

3  
4 New facility investment is identified from BPA's Integrated Program Review (IPR)  
5 process. No specific facilities are identified for retirement in this study. However, as  
6 discussed in the Transmission Revenue Requirement Study, the expected investment in  
7 new station facilities has been reduced based on historical ratios of retired equipment to  
8 new replacement equipment. Transmission Revenue Requirement Study Documentation,  
9 BP-16-E-BPA-08A, ch. 2.

#### 10 11 **4.3 Operations and Maintenance (O&M) Expense**

12 This study includes historical O&M expenses from plant record data for the last seven  
13 fiscal years (2007 through 2013). O&M expenses are categorized into three groups  
14 (*see* table 4b):

- 15 • O&M on lines and substations,
- 16 • scheduling and system operations allocated to the Ancillary Services segment,  
17 and
- 18 • marketing and business support (overhead).

19  
20 The O&M expenses on lines and substations include substation operations, various  
21 transmission maintenance programs, technical training, vegetation management, and  
22 environmental expenses such as pollution controls. These expenses are segmented  
23 according to the facilities supported (section 4.3.1). The seven-year historical line and  
24 substation O&M expenses average \$144.5 million annually (*see* table 4a, line 16). The  
25 segmented historical costs are used to allocate the projected future O&M costs. *See*  
26 Transmission Revenue Requirement Study Documentation, BP-16-E-BPA-08A, ch. 2.



1 Scheduling costs and system operations costs are for staff and technology associated with  
2 reserving, scheduling, monitoring, controlling, and dispatching the transmission system.  
3 The seven-year average historical scheduling and dispatch cost is \$42.2 million. *See*  
4 table 4a, line 18. Rate period forecast scheduling and system operations costs are directly  
5 assigned to the Ancillary Services segment and recovered through the SCD service rate.  
6 *See* Transmission Revenue Requirement Study Documentation, BP-16-E-BPA-08A,  
7 ch. 2.

8  
9 Marketing and business support costs are associated with general business functions,  
10 including sales and contract management, billing, business strategy, legal support, aircraft  
11 services, and general administration and executive services. The seven-year historical  
12 marketing and support costs average \$43.2 million. *See* table 4a, line 18. Rate period  
13 forecast costs are allocated pro rata on a net plant basis based on the directly assigned  
14 investment. *See* Transmission Revenue Requirement Study Documentation, BP-16-E-  
15 BPA-08A, ch. 2.

#### 17 **4.3.1 Historical Line and Station O&M Assignment to Segments**

18 The following process is used to segment historical O&M expenses:

- 19 1. Historical O&M expenses are identified by fiscal year and category, as  
20 shown in table 4b. Categories are expense programs within BPA's  
21 transmission business line, such as substation operations and transmission  
22 line maintenance.
- 23 2. Approximately one-third of the historical O&M expenses are associated  
24 with a specific line, substation, or metering location (*i.e.*, facility type).  
25 These expenses, identified as direct O&M expenses, are allocated to  
26 segments in the same proportion as was the investment in the specific

1 facility. Thus, if certain O&M expenses are associated with a given  
2 substation, and 60 percent of the substation investment was allocated to  
3 the Network, 60 percent of those O&M expenses are allocated to the  
4 Network. If the investment in a substation is entirely allocated to one  
5 segment, then the O&M is also entirely allocated to that segment. The  
6 allocation of O&M for each facility is identified in Appendix A. The  
7 direct O&M expenses are then aggregated by category and facility type.  
8 *See table 4c.*

- 9 3. Non-direct O&M expenses (that is, expenses not identified with a specific  
10 facility) are aggregated by category and allocated to the facility types  
11 (transmission lines, substations, or metering locations) in the same  
12 proportions as the direct O&M expenses. For example, if 80 percent of  
13 direct O&M expenses for substation maintenance are assigned to  
14 substations, then 80 percent of non-direct O&M expenses for substation  
15 maintenance are assigned to substations. Technical training and  
16 environmental analysis have no direct O&M expense, and are allocated to  
17 facility type in the same proportions as the total direct O&M expenses for  
18 each facility type. Thus, for example, since about 14.5 percent of direct  
19 expenses are allocated to transmission lines, 14.5 percent of technical  
20 training expenses are allocated to transmission lines. Transmission line  
21 maintenance, vegetation management and right-of-way maintenance  
22 non-direct O&M expenses are allocated entirely to transmission lines.
- 23 4. The sum of the non-direct O&M expense for each facility type is shown in  
24 table 4c, row 15. These amounts are allocated to the segments in the same  
25 proportion as the direct expenses for each facility type. For example,  
26 93 percent of direct O&M expenses for transmission lines was allocated to

1 the Network. Therefore, 93 percent of non-direct O&M expenses for  
2 transmission lines is allocated to the Network. See table 4a, lines 4, 7,  
3 and 13.

#### 4 **4.4 U.S. Army Corps of Engineers and U.S. Bureau of Reclamation Facilities**

5 The investment and annual O&M expenses for the U.S. Army Corps of Engineers  
6 (Corps) and U.S. Bureau of Reclamation (Bureau) facilities that function as part of  
7 BPA's transmission system are included in the transmission revenue requirement, even  
8 though BPA does not own these facilities. The total Corps and Bureau expenses  
9 allocated to transmission were identified in the BP-16 generation inputs settlement,  
10 attachment 3. The segmentation of these expenses is based on an analysis of the Corps  
11 and Bureau facilities summarized in table 5. As shown, 97.3 percent of the expenses are  
12 segmented to the Network and 2.7 percent of the expenses are segmented to Utility  
13 Delivery.  
14

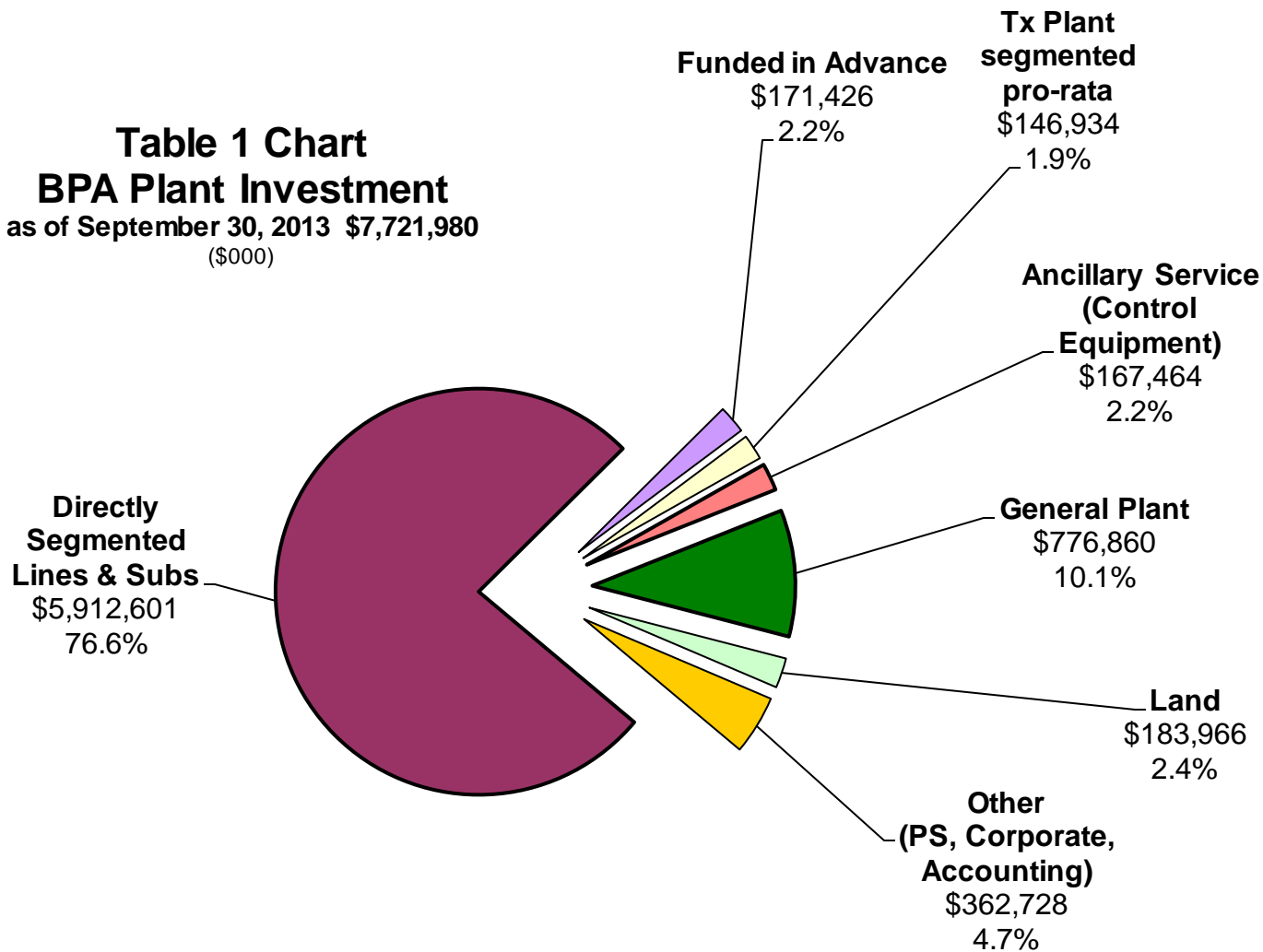
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**Table 1**  
**BPA Investment Summary, through September 30, 2013**  
**(\$000)**

A <u>Category</u>	B <u>Total</u>	C <u>Funded in Advance</u>	D <u>PFIA Stations</u>	E <u>PFIA Lines</u>
1 TRANSMISSION PLANT IN SERVICE	5,770,568	127,081	75,289	51,792
2 MASTER LEASE	328,268			
3 LEASED ASSETS	125,086			
4 CAPITAL LEASES	20,353			
5 EMERGENCY MINIMUM STOCK	11,014		-	-
6 INTANGIBLES	9,559		-	-
7 FEE LAND IN SERVICE	135,965	238	25,371	110,356
8 DEPRECIABLE FEE LAND	48,346	107	716	47,524
9 GENERAL PLANT IN SERVICE	910,093	44,001		
10 Corporate Plant in Service	132,063			-
11 PS Plant in Service	53,167			
12 Accounting Adjustments (Lagging Projects)	177,498			
<b>13 Grand Total</b>	<b>7,721,980</b>	<b>171,426</b>		
<b><u>Transmission Plant</u></b>		<b><u>Segmented</u></b>	<b><u>Unsegmented</u></b>	<b><u>Ancillary Service</u></b>
14 Substations	3,093,047			
15 Metering Locations	14,048			
<b>16 Total Stations</b>	<b>3,107,095</b>	3,091,570	15,524	
<b>17 Total Lines</b>	<b>2,827,230</b>	2,802,183	25,046	
18 Other Transmission Plant	101,886		101,886	
19 Emergency minimum stock	11,014		11,014	
20 Intangibles	9,559	9,559		
21 Communication Equipment (397)	3,129		2,752	377
22 Control Equipment (353.1)	77,855			77,855
<b>23 TPLNT (inc Leases) less PFIA</b>	<b>6,137,767</b>	<b>5,903,312</b>	<b>156,222</b>	<b>78,232</b>
<b><u>General Plant</u></b>				
24 Communication Equipment (397)	441,649		398,100	43,549
25 Control Equipment (353.1, 391.2, 391.3)	45,683			45,683
26 Other General Plant	378,760		378,760	
<b>27 GPLNT less PFIA</b>	<b>866,092</b>		<b>776,860</b>	<b>89,232</b>
<b><u>Subtotals</u></b>				
28 Communication Equipment (397)	444,778		400,852	43,926
29 Control Equipment (353.1, 391.2, 391.3)	123,538			123,538
<b>30 Total (incl. Dep Land GPlant)</b>			<b>779,612</b>	<b>167,464</b>

Table 1 Chart  
 BPA Plant Investment  
 (\$000)

**Table 1 Chart**  
**BPA Plant Investment**  
 as of September 30, 2013 \$7,721,980  
 (\$000)



**Table 2**  
 BPA Segmented Investment, through September 30, 2013  
 (\$000)

A	B <u>Generation Integration</u>	C <u>Network</u>	D <u>Southern Intertie</u>	E <u>Eastern Intertie</u>	F <u>Utility Delivery</u>	G <u>DSI Delivery</u>	H <u>Segmented Total</u>	I <u>Un- segmented</u>
<b>1 Substations</b>	61,762	2,356,545	595,820	24,402	26,844	26,196	<b>3,091,570</b>	15,524
2 Other Facilities								101,886
3 Emergency Stock								11,014
4 Unseg. Allocation	2,566	97,891	24,750	1,014	1,115	1,088	<b>128,424</b>	(128,424)
<b>5 Subtotal</b>	<b>64,328</b>	<b>2,454,436</b>	<b>620,571</b>	<b>25,416</b>	<b>27,959</b>	<b>27,284</b>	<b>3,219,994</b>	-
FERC Account Summary								
6 Account 352							323,639	
7 Account 353							2,884,966	
8 Account 354							4,871	
9 Account 355							1,195	
10 Account 356							3,746	
11 Account 358							59	
12 Account 359							866	
13 Account 390							101	
14 Account 391							484	
15 Leased (no account)							67	
<b>16 Substation total</b>							<b>3,219,994</b>	
<b>17 Lines</b>	17,872	2,491,881	197,990	94,271	169	-	<b>2,802,183</b>	25,046
18 Unseg. Allocation	160	22,273	1,770	843	2	-	<b>25,046</b>	(25,046)
<b>19 Subtotal</b>	<b>18,032</b>	<b>2,514,154</b>	<b>199,760</b>	<b>95,114</b>	<b>170</b>	-	<b>2,827,230</b>	-
FERC Account Summary								
20 Account 352							1,473	
21 Account 353							22,886	
22 Account 354							1,087,869	
23 Account 355							300,280	
24 Account 356							1,153,990	
25 Account 358							21,807	
26 Account 359							177,125	
27 Leased (no account)							61,801	
<b>28 Line total</b>							<b>2,827,230</b>	
<b>29 Intangibles (Account 303)</b>		4,085	5,473				<b>9,559</b>	

**Table 2**  
 BPA Segmented Investment, through September 30, 2013  
 (\$000)

A	B Generation Integration	C Network	D Southern Intertie	E Eastern Intertie	F Utility Delivery	G DSI Delivery	H Segmented Total	I Un- segmented
<b>30 Lines &amp; Subs Total</b>	<b>82,360</b>	<b>4,972,676</b>	<b>825,804</b>	<b>120,530</b>	<b>28,130</b>	<b>27,284</b>	<b>6,056,783</b>	<b>-</b>
<b>31 % of Segmented Total</b>	1.4%	82.1%	13.6%	2.0%	0.5%	0.5%	100.0%	
<b>32 Depreciable Land (Account 350)</b>								
<b>33 Substations</b>	-	46	-	-	-	-	46	
<b>34 Lines</b>	61	47,247	-	-	-	-	47,308	216
<b>35 Other Facilities</b>								670
<b>36 Unseg. Allocation</b>	12	727	121	18	4	4	886	(886)
<b>37 Subtotal</b>	<b>73</b>	<b>48,020</b>	<b>121</b>	<b>18</b>	<b>4</b>	<b>4</b>	<b>48,239</b>	<b>-</b>
<b>Other</b>							<b>Ancillary Services</b>	<b>General Plant</b>
<b>38 Control</b>							123,538	
<b>39 Communications</b>							43,926	400,852
<b>40 General Plant</b>								378,760
<b>41 Subtotal</b>							<b>167,464</b>	<b>779,612</b>
<b>FERC Account Summary</b>								
<b>42 Account 352</b>								44
<b>43 Account 353 (Ancillary service is control equipment only)</b>							77,855	(5)
<b>44 Account 356</b>								(2)
<b>45 Account 390</b>								193,943
<b>46 Account 391 (Ancillary service is control equipment only)</b>							45,683	1,696
<b>47 Account 392</b>								74,251
<b>48 Account 393</b>								1,318
<b>49 Account 394</b>								9,565
<b>50 Account 395</b>								31,996
<b>51 Account 396</b>								30,387
<b>52 Account 397 (Ancillary service is SCADA equipment only)</b>							43,926	400,852
<b>53 Account 398</b>								35,567
<b>54 Other total</b>							<b>167,464</b>	<b>779,612</b>
<b>55 Segmented Investment</b>	<b>82,433</b>	<b>5,020,695</b>	<b>825,925</b>	<b>120,547</b>	<b>28,134</b>	<b>27,288</b>	<b>167,464</b>	<b>779,612</b>



**Table 3a**  
 Future Plant in Service Summary  
 (\$000)

<b>A</b>	<b>B</b> <b>Generation</b> <b>Integration</b>	<b>C</b> <b>Network</b>	<b>D</b> <b>Southern</b> <b>Intertie</b>	<b>E</b> <b>Eastern</b> <b>Intertie</b>	<b>F</b> <b>Utility</b> <b>Delivery</b>	<b>G</b> <b>DSI Delivery</b>	<b>H</b> <b>Total</b>
<b>1 Stations</b>							
2 FY 2014	-	166,711	14,858	145	117	-	<b>181,831</b>
3 FY 2015	-	185,004	26,797	208	54	-	<b>212,064</b>
4 FY 2016	-	241,608	23,593	91	63	-	<b>265,355</b>
5 FY 2017	-	177,918	288,417	87	46	-	<b>466,468</b>
<b>6 Lines</b>							
7 FY 2014	-	97,992	3,129	-	-	-	<b>101,121</b>
8 FY 2015	-	147,123	1,762	-	-	-	<b>148,886</b>
9 FY 2016	-	182,584	1,754	-	-	-	<b>184,339</b>
10 FY 2017	-	129,702	34,336	-	-	-	<b>164,038</b>
<b>11 Lines &amp; Subs</b>							
12 FY 2014	-	264,704	17,987	145	117	-	<b>282,952</b>
13 FY 2015	-	332,127	28,560	208	54	-	<b>360,950</b>
14 FY 2016	-	424,192	25,347	91	63	-	<b>449,694</b>
15 FY 2017	-	307,620	322,753	87	46	-	<b>630,506</b>
<b>16 Other</b>							
	<b>Ancillary</b> <b>Services</b>	<b>General Plant</b>					
17 FY 2014	66,585	101,415					
18 FY 2015	52,109	116,239					
19 FY 2016	64,789	118,691					
20 FY 2017	40,038	119,561					



Table 3b  
Future Plant in Service Summary  
(\$000)

	Project	Total				Substation				Line				Ancillary & General Plant			
		FY 14	FY 15	FY16	FY 17	FY 14	FY 15	FY16	FY 17	FY 14	FY 15	FY16	FY 17	FY 14	FY 15	FY16	FY 17
38	SUB DC - UPGRADES & ADDITIONS (CELILO)	-	-	-	281,600	-	-	-	242,176	-	-	-	25,344	-	-	-	14,080
	<b>UPGRADES &amp; ADDITIONS PROJECTS</b>																
39	MISC UPS & ADDS	10,887	13,583	9,052	3,783	8,274	10,323	6,880	2,875	653	815	543	227	1,960	2,445	1,629	681
40	LINES - UPS & ADDS	1,815	2,007	3,772	1,613	1,379	1,525	2,866	1,226	109	120	226	97	327	361	679	290
41	LINE SWITCH UPGRADES	250	309	251	100	190	235	191	76	15	19	15	6	45	56	45	18
42	SUBS AC - UPS & ADDS	17,520	13,274	15,087	5,750	13,315	10,088	11,466	4,370	1,051	796	905	345	3,154	2,389	2,716	1,035
	<b>SUBS AC PROGRAM</b>																
43	SUB AC-CIRCUIT BRKR & SWTCH GR	14,023	7,957	15,639	16,519	14,023	7,957	15,639	16,519	-	-	-	-	-	-	-	-
44	SUB AC-TRANSFORMERS & REACTORS	3,101	15,208	7,473	7,359	3,101	15,208	7,473	7,359	-	-	-	-	-	-	-	-
45	SUB AC - CVT/PT/CT & ARRESTERS	1,644	1,862	1,692	1,553	1,644	1,862	1,692	1,553	-	-	-	-	-	-	-	-
46	SUB AC- SHUNT CAPACITORS	1,783	1,324	589	349	1,783	1,324	589	349	-	-	-	-	-	-	-	-
47	SUB AC - LOW VOLTAGE AUX.	6,897	3,230	4,436	3,950	6,897	3,230	4,436	3,950	-	-	-	-	-	-	-	-
48	SUB AC- BUS & STRUCTURES	919	982	1,398	2,885	919	982	1,398	2,885	-	-	-	-	-	-	-	-
49	LINES WOOD POLES SUSTAIN PROGRAM	33,020	44,892	54,407	50,208	-	-	-	-	33,020	44,892	54,407	50,208	-	-	-	-
50	LINES STEEL SUSTAIN PROGRAM	19,603	12,246	14,122	14,512	-	-	-	-	19,603	12,246	14,122	14,512	-	-	-	-
51	SUB DC- POWER ELCTRNC & SRS CAPS PROGRAM	1,907	8,245	7,885	380	1,907	8,245	7,885	380	-	-	-	-	-	-	-	-
52	SYSTEM TELECOMM - SUSTAIN PROGRAM	24,845	28,672	26,600	10,213	-	-	-	-	-	-	-	-	24,845	28,672	26,600	10,213
53	PSC PROGRAM	13,501	15,034	16,627	18,525	-	-	-	-	-	-	-	-	13,501	15,034	16,627	18,525
54	SPC PROGRAM	20,220	23,181	25,921	26,050	20,220	23,181	25,921	26,050	-	-	-	-	-	-	-	-
55	TEAP - TOOLS PROGRAM	1,307	1,333	1,360	1,387	-	-	-	-	-	-	-	-	1,307	1,333	1,360	1,387
56	TEAP Equipment	9,776	6,854	7,002	7,800	-	-	-	-	-	-	-	-	9,776	6,854	7,002	7,800
57	Misc. Facilities Replacements	39,820	24,020	36,420	14,835	-	-	-	-	-	-	-	-	39,820	24,020	36,420	14,835
58	PFA	4,000	5,000	5,000	5,000	3,400	4,250	4,250	4,250	600	750	750	750	-	-	-	-
59	Generator Interconnect	8,000	10,000	10,000	10,000	6,800	8,500	8,500	8,500	1,200	1,500	1,500	1,500	-	-	-	-
60	Radio Spectrum	200	-	-	-	-	-	-	-	-	-	-	-	200	-	-	-
61	Total Environment (PP&A)	5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	-	-	-	-	-	-	-	-
62	TSD Program Indirect	58,343	65,691	57,561	48,694	29,172	32,846	28,780	24,347	17,503	19,707	17,268	14,608	11,669	13,138	11,512	9,739
63	AFUDC	31,732	39,743	44,448	26,242	15,866	19,871	22,224	13,121	9,520	11,923	13,334	7,873	6,346	7,949	8,890	5,248
64	Corporate Overhead	58,343	65,691	57,561	48,694	29,172	32,846	28,780	24,347	17,503	19,707	17,268	14,608	11,669	13,138	11,512	9,739
65	<b>TOTALS:</b>	<b>450,953</b>	<b>529,297</b>	<b>633,174</b>	<b>790,105</b>	<b>181,831</b>	<b>212,064</b>	<b>265,355</b>	<b>466,468</b>	<b>101,121</b>	<b>148,886</b>	<b>184,339</b>	<b>164,038</b>	<b>168,000</b>	<b>168,348</b>	<b>183,480</b>	<b>159,599</b>

Table 4a  
 BPA Historical Operations and Maintenance (O&M)  
 FY 2007-2013 (Seven Years)  
 (Annual Average \$000)

A	B	C	D	E	F	G	H	
	<u>Generation Integration</u>	<u>Network</u>	<u>Southern Intertie</u>	<u>Eastern Intertie</u>	<u>Utility Delivery</u>	<u>DSI Delivery</u>	<u>Total</u>	
<b>Stations</b>								
1	Substations Direct Allocation	825	25,876	5,170	172	538	401	<b>32,982</b>
2	% Direct	2.50%	78.46%	15.68%	0.52%	1.63%	1.22%	100.00%
3	Unsegmented Allocation	152	4,765	952	32	99	74	6,074
4	Non-Direct Allocation	1,429	44,853	8,962	298	933	695	57,170
5	Metering Direct Allocation	15	256	-	-	43	-	<b>314</b>
6	% Direct	4.85%	81.40%	0.00%	0.00%	13.75%	0.00%	100.00%
7	Non-Direct Allocation	21	347	-	-	59	-	427
8	<b>Total Station O&amp;M</b>	<b>2,442</b>	<b>76,097</b>	<b>15,084</b>	<b>501</b>	<b>1,672</b>	<b>1,170</b>	<b>96,966</b>
9	Station Percent	2.5%	78.5%	15.6%	0.5%	1.7%	1.2%	100.0%
<b>Lines</b>								
10	Direct Allocation	57	6,035	371	54	1	-	<b>6,518</b>
11	% Direct	0.88%	92.59%	5.69%	0.83%	0.02%	0.00%	100.00%
12	Unsegmented Allocation	2	161	10	1	0	-	174
13	Non-Direct Allocation	358	37,788	2,322	338	7	-	40,813
14	<b>Total Line O&amp;M</b>	<b>416</b>	<b>43,984</b>	<b>2,703</b>	<b>393</b>	<b>9</b>	<b>-</b>	<b>47,505</b>
15	Line Percent	0.9%	92.6%	5.7%	0.8%	0.0%	0.0%	100.0%
16	<b>Lines &amp; Subs</b>	<b>2,858</b>	<b>120,082</b>	<b>17,787</b>	<b>895</b>	<b>1,681</b>	<b>1,170</b>	<b>144,472</b>
17	% of Segmented Total	2.0%	83.1%	12.3%	0.6%	1.2%	0.8%	100.0%
18	<b>Other</b>	<u>Overhead</u> 43,202	<u>Ancillary Services</u> 42,168					-

Table 4b  
BPA Historical Operations and Maintenance (O&M) Expenses  
FY 2007-2013 (Seven Years)  
Total O&M by Category

A	B <u>2007</u>	C <u>2008</u>	D <u>2009</u>	E <u>2010</u>	F <u>2011</u>	G <u>2012</u>	H <u>2013</u>	I <u>Average</u>	
<b>O&amp;M allocated to Lines and Stations</b>									
1	SUBSTATION OPERATIONS	17,151	18,712	19,168	20,239	21,286	21,947	21,750	20,036
2	HEAVY MOBILE EQUIPMENT MAINT	(179)	355	58	(79)	379	0	(125)	58
3	JOINT COST MAINTENANCE	181	207	142	97	58	146	123	136
4	NON-ELECTRIC MAINTENANCE	8,439	9,340	11,280	18,241	23,548	25,900	25,204	17,422
5	POWER SYSTEM CONTROL MAINT	8,248	10,328	10,271	11,579	11,958	12,637	17,623	11,806
6	ROW MAINTENANCE	5,798	6,787	7,003	7,965	10,386	5,243	7,298	7,212
7	SUBSTATION MAINTENANCE	19,706	25,154	25,522	23,809	25,522	28,056	27,726	25,071
8	SYSTEM MAINTENANCE MANAGEMENT	7,535	5,167	7,753	5,277	5,292	4,879	7,076	6,140
9	SYSTEM PROTECTION CONTRL MAINT	9,535	10,864	11,419	11,377	11,388	11,651	11,869	11,158
10	TECHNICAL TRAINING	2,180	2,149	2,466	2,588	2,530	2,443	2,211	2,367
11	TRANSMISSION LINE MAINTENANCE	17,442	20,182	21,983	21,076	22,921	24,984	26,572	22,166
12	VEGETATION MANAGEMENT	8,982	21,514	27,414	20,583	11,696	16,141	17,928	17,751
13	ENVIRONMENTAL ANALYSIS	45	86	67	48	21	10	0	40
14	POLLUTION PREVENTN & ABATEMENT	2,995	3,050	2,907	2,870	3,236	3,288	3,427	3,110
15	<b>Subtotal Lines and Stations</b>	<b>108,057</b>	<b>133,896</b>	<b>147,452</b>	<b>145,669</b>	<b>150,224</b>	<b>157,323</b>	<b>168,682</b>	<b>144,472</b>
<b>O&amp;M allocated to Ancillary Services</b>									
16	CONTROL CENTER SUPPORT	9,492	10,978	11,400	11,088	14,753	13,646	14,062	12,203
17	INFORMATION TECHNOLOGY	4,297	4,465	4,572	5,334	6,768	9,098	9,115	6,235
18	POWER SYSTEM DISPATCHING	9,614	10,268	11,138	11,724	11,649	12,089	12,155	11,234
19	TECHNICAL OPERATIONS	3,338	4,193	5,242	4,557	4,725	3,816	4,410	4,326
20	SCHED-AFTER-THE-FACT	209	1,243	310	218	156	236	236	373
21	SCHED-MANAGE SPRVISION & ADMIN	523	491	237	0	(11)	0	0	177
22	SCHED-PRE-SCHEDULING	448	360	261	188	240	216	240	279
23	SCHED-REAL-TIME SCHEDULING	3,531	3,815	3,492	3,677	3,950	3,758	3,879	3,729
24	SCHED-RESERVATIONS	578	871	790	2,241	3,850	4,064	4,160	2,365
25	SCHED-TECHNICAL SUPPORT	1,219	1,540	1,564	1,807	1,226	948	432	1,248
26	<b>Subtotal Ancillary Services</b>	<b>33,249</b>	<b>38,224</b>	<b>39,007</b>	<b>40,833</b>	<b>47,307</b>	<b>47,870</b>	<b>48,689</b>	<b>42,168</b>
<b>O&amp;M identified as Overhead</b>									
27	AIRCRAFT SERVICES	608	679	921	1,135	1,121	1,082	1,205	965
28	EXECUTIVE & ADMIN SERVICES	6,726	8,594	9,311	12,407	12,179	12,204	10,364	10,255
29	GENERAL ADMINISTRATIVE	12,295	10,679	6,453	5,339	10,191	13,995	9,199	9,736
30	LEGAL SUPPORT - EXPENSE	1,893	2,038	2,401	2,305	2,609	3,034	2,240	2,360
31	LOGISTICS SERVICES	5,436	4,040	3,756	4,120	3,532	4,839	4,710	4,348
32	MKTG BUSINESS STRAT & ASSESS	3,379	3,982	5,346	6,005	6,426	6,603	6,552	5,470
33	MKTG CONTRACT MANAGEMENT	2,895	3,530	3,556	3,880	4,058	4,442	4,498	3,837
34	MKTG INTERNAL OPERATIONS	220	137	0	0	2	(1)	0	51
35	MKTG TRANSMISSION BILLING	2,840	2,027	2,698	2,048	2,226	2,229	2,528	2,371
36	MKTG TRANSMISSION FINANCE	380	392	398	305	270	286	(6)	289
37	MKTG TRANSMISSION SALES	2,673	2,055	2,298	2,356	2,319	2,787	2,509	2,428
38	SECURITY ENHANCEMENTS EXPENSE	1,026	1,226	3,186	542	482	475	705	1,092
39	<b>Subtotal Overhead</b>	<b>40,372</b>	<b>39,379</b>	<b>40,324</b>	<b>40,443</b>	<b>45,417</b>	<b>51,975</b>	<b>44,504</b>	<b>43,202</b>
40	<b>Total Historical O&amp;M</b>	<b>181,678</b>	<b>211,499</b>	<b>226,783</b>	<b>226,945</b>	<b>242,948</b>	<b>257,169</b>	<b>261,875</b>	<b>229,842</b>

Table 4c  
 BPA Historical O&M Expenses FY 2007-2013 (Seven Years)  
 Allocation of Average Historical O&M  
 Lines, Substations, and Metering Locations  
 (\$000)

A	B	C			E	F	G			I
		Lines	Subs	Metering			Subtotal	Lines	Subs	
-										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
<b>Total</b>										

Notes:

1/ Non-direct ROW MAINTENANCE, TRANSMISSION LINE MAINTENANCE, and VEGETATION MANAGEMENT allocated to lines

Table 5  
U.S. Army Corps of Engineers and  
U.S. Bureau of Reclamation Project Segmentation

	A	B	C	D
		<b>Generation Integration</b>	<b>Network</b>	<b>Utility Delivery</b>
<b>1</b>	<b><u>BOR Project Transmission Facilities:</u></b>			
<b>2</b>	Columbia Basin (Grand Coulee) Project	180,591,020	82,101,305	2,447,740
<b>3</b>	Other Projects	14,288,361	2,774,736	0
<b>4</b>	<b>Total BOR Projects</b>	<b>194,879,381</b>	<b>84,876,042</b>	<b>2,447,740</b>
<b>5</b>	<b><u>COE Project Transmission Facilities:</u></b>			
<b>6</b>	Bonneville Project	<b>30,039,120</b>	<b>2,700,096</b>	<b>0</b>
<b>7</b>	<b>TOTAL ALL PROJECTS:</b>	<b>224,918,502</b>	<b>87,576,137</b>	<b>2,447,740</b>
<b>8</b>	<b>TOTAL TRANSMISSION ALLOCATION:</b>	<b>90,023,877</b>	97.30%	2.70%

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**Appendix A**  
**BP-16 Initial Proposal Segmentation Details**

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Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<u>Generation Integration Facilities</u>				
	Owner	Investment (\$)	O&M (\$)	Multi %
<b>Transmission Lines</b>				
1	ANDERSON RANCH-MOUNTAIN HOME NO 1	4,449,861	7,766	
2	BIG CLIFF-DETROIT PH NO 1	181,340	1,732	
3	BIG CLIFF-DETROIT PH NO 2	181,340	522	
4	BLACK CANYON-EMMETT NO 1	307,180	4,002	
5	BONNEVILLE PH 1-NORTH BONNEVILLE NO 1	85,578	264	
6	BONNEVILLE PH 1-NORTH BONNEVILLE NO 2	86,775	41	
7	BONNEVILLE PH 2-NORTH BONNEVILLE NO 3	98,469	271	
8	BONNEVILLE PH 2-NORTH BONNEVILLE NO 4	1,214,223	338	
9	CHANDLER TAP TO GRANDVIEW-RED MOUNTAIN NO 1	163,062	1,659	
10	CHIEF JOSEPH PH-CHIEF JOSEPH NO 1	68,924	405	
11	CHIEF JOSEPH PH-CHIEF JOSEPH NO 2	89,376	388	
12	CHIEF JOSEPH PH-CHIEF JOSEPH NO 3	82,433	190	
13	CHIEF JOSEPH PH-CHIEF JOSEPH NO 4	78,094	105	
14	CHIEF JOSEPH PH-CHIEF JOSEPH NO 5	475,202	264	
15	CHIEF JOSEPH PH-CHIEF JOSEPH NO 6	439,561	860	
16	COLUMBIA GENERATING STATION-ASHE NO 1	330,593	157	
17	COLUMBIA GENERATING STATION-ASHE NO 2	76,075	253	
18	COUGAR-THURSTON NO 1	123,688	1,585	5%
19	DETROIT PH-DETROIT NO 1	42,262	2,493	
20	DETROIT PH-DETROIT NO 2	42,262	465	
21	DETROIT-SANTIAM NO 1	1,916,208	3,296	
22	DWORSHAK PH-DWORSHAK NO 1	1,302,296	979	
23	GREEN PETER-LEBANON NO 1	357,224	4,339	35%
24	HILLS CREEK-LOOKOUT POINT NO 1	297,360	5,732	19%
25	ICE HARBOR-FRANKLIN NO 1	587,534	8,510	
26	ICE HARBOR-FRANKLIN NO 2	15,726	34	3%
27	ICE HARBOR-FRANKLIN NO 3	133,963	109	9%
28	JOHN DAY PH-JOHN DAY NO 1	485,647	427	
29	JOHN DAY PH-JOHN DAY NO 2	485,647	479	
30	JOHN DAY PH-JOHN DAY NO 3	485,647	401	
31	JOHN DAY PH-JOHN DAY NO 4	485,642	520	
32	LIBBY PH-LIBBY NO 1	278,220	850	
33	LIBBY PH-LIBBY NO 2	265,855	905	
34	LITTLE GOOSE PH-LITTLE GOOSE NO 1	290,246	342	
35	LOOKOUT POINT PH-LOOKOUT POINT NO 1	10,253	326	
36	LOWER GRANITE PH-LOWER GRANITE NO 1	433,123	701	
37	LOWER MONUMENTAL PH-LOWER MONUMENTAL NO 1	236,523	2,817	
38	MCNARY PH-MCNARY 3&4 NO 3	135,173	150	
39	MCNARY PH-MCNARY NO 1	76,683	203	
40	MCNARY PH-MCNARY NO 2	74,361	(1,249)	
41	MCNARY PH-MCNARY NO 5	101,717	127	
42	MCNARY PH-MCNARY NO 6	112,595	322	
43	THE DALLES PH-BIG EDDY NO 1	118,075	448	
44	THE DALLES PH-BIG EDDY NO 2	121,407	184	
45	THE DALLES PH-BIG EDDY NO 3	107,356	230	
46	THE DALLES PH-BIG EDDY NO 4	107,351	285	
47	THE DALLES PH-BIG EDDY NO 5	116,296	230	
48	THE DALLES PH-BIG EDDY NO 6	117,572	1,652	
49	<b>Subtotal Lines</b>	<b>17,871,998</b>	<b>57,111</b>	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<u>Generation Integration Facilities</u>				
Stations	Owner	Investment (\$)	O&M (\$)	Multi %
50	ALBENI FALLS SUBSTATION	365,644	6,150	25%
51	ASHE SUBSTATION	4,245,588	50,064	12%
52	BIG EDDY SUBSTATION	3,430,442	28,198	5%
53	BONNEVILLE POWERHOUSE #1	164,462	7,015	
54	CHIEF JOSEPH POWERHOUSE	102,351	11,025	
55	CHIEF JOSEPH SUBSTATION	8,068,407	170,936	25%
56	COLUMBIA GENERATING STATION SUBSTATION (ENERGY NORTHWEST)	31,314	0	
57	COUGAR SUBSTATION	255,378	8,877	
58	DETROIT SUBSTATION	1,062,141	31,036	
59	DWORSHAK POWERHOUSE	190,858	5,830	
60	DWORSHAK SUBSTATION	4,502,639	23,383	18%
61	FOSTER SUBSTATION	42,312	5,415	
62	FRANKLIN SUBSTATION	1,842,217	61,577	20%
63	GRAND COULEE 115 KV SWITCHYARD	75,243	2,065	
64	GRAND COULEE 230 KV SWITCHYARD	82,186	770	
65	GRAND COULEE 500 KV SWITCHYARD	413,567	9,152	
66	GREEN PETER SUBSTATION	257,380	5,368	
67	HANFORD NO.2 CONSTRUCTION SUBSTATION	75,446	3,993	
68	HILLS CREEK SUBSTATION	374,351	9,095	
69	HUNGRY HORSE POWERHOUSE	333,182	8,570	
70	HUNGRY HORSE SWITCHYARD	89,046	0	
71	ICE HARBOR POWERHOUSE	187,633	3,799	
72	JOHN DAY POWERHOUSE	276,948	185	
73	JOHN DAY SUBSTATION	10,714,315	73,792	24%
74	LIBBY POWERHOUSE	112,091	3,663	
75	LIBBY SUBSTATION(BPA)	2,936,321	66,577	33%
76	LITTLE GOOSE POWERHOUSE	489,782	1,746	
77	LITTLE GOOSE SUBSTATION	2,496,610	19,014	20%
78	LOOKOUT POINT POWERHOUSE	28,750	384	
79	LOOKOUT POINT SUBSTATION	553,632	7,518	25%
80	LOST CREEK POWERHOUSE	53,123	495	
81	LOWER GRANITE POWERHOUSE	368,331	1,206	
82	LOWER GRANITE SUBSTATION	2,095,395	26,432	25%
83	LOWER MONUMENTAL POWERHOUSE	393,152	1,989	
84	LOWER MONUMENTAL SUBSTATION	2,255,228	13,916	12%
85	M McNARY POWERHOUSE	245,608	4,110	
86	M McNARY SUBSTATION	5,959,309	47,694	12%
87	MINIDOKA POWERHOUSE	147,898	8,063	
88	MOUNTAIN HOME SUBSTATION(BPA)	174,369	14,710	
89	NORTH BONNEVILLE SUBSTATION	4,146,013	62,961	37%
90	PALISADES POWERHOUSE	620,267	7,170	
91	ROZA POWERHOUSE	23,450	0	
92	SACA JA WEA SUBSTATION	187,186	455	1%
93	SANTIAM SUBSTATION	775,593	13,232	5%
94	THE DALLES POWERHOUSE	53,426	2,716	
95	WPPSS NO. 2 POWERHOUSE	463,746	9,481	
96	<b>Subtotal Stations</b>	<b>61,762,330</b>	<b>839,828</b>	
97	<b>Total Generation Integration</b>	<b>79,634,329</b>	<b>896,939</b>	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Transmission Lines	<u>Network Facilities</u>	Investment (\$)	O&M (\$)	Multi %
	Owner			
98	ABERDEEN TAP TO SATSOP PARK-COSMOPOLIS NO 1	1,597,354	3,937	
99	ACORD TAP TO GRANDVIEW-RED MOUNTAIN NO 1	256,732	0	
100	ADAIR TAP TO SALEM-ALBANY NO 2	51,854	163	
101	ADDY-COLVILLE NO 1	42,251	2,024	
102	ADDY-CUSICK NO 1	4,903,855	9,426	
103	ALBANY-BURNT WOODS NO 1	4,242,922	7,808	
104	ALBANY-EUGENE NO 1	6,655,116	20,247	
105	ALBANY-LEBANON NO 1	1,084,819	11,915	
106	ALBENI FALLS-PINE STREET NO 1	329,901	2,075	
107	ALBENI FALLS-SAND CREEK NO 1	11,194,113	19,473	
108	ALCOA-FELIDA NO 1	36,090	659	
109	ALLSTON-CLATSOP NO 1	2,810,270	24,291	
110	ALLSTON-DRISCOLL NO 1	1,423,237	6,575	
111	ALLSTON-DRISCOLL NO 2	2,451,351	27,520	
112	ALVEY 500/230 KV TIE LINE NO 1	347,565	324	
113	ALVEY-FAIRVIEW NO 1	9,278,276	68,571	
114	ALVEY-LANENO 1	1,378,137	5,278	
115	ALVEY-MARTIN CREEK NO 1	210,421	2,796	
116	ANACONDA-SILVER BOW NO 1	646,120	11,583	
117	ANTELOPE-FOSSIL (LEASED FACILITIES)	16,642,388	0	
118	ASHE TAP TO MIDWAY-HEW NO 2	83,431	1,011	
119	ASHE-HANFORD NO 1	5,509,091	3,997	
120	ASHE-MARION NO 2	84,482,812	110,388	
121	ASHE-SLATT NO 1	25,272,636	20,637	
122	ASHE-WHITE BLUFFS NO 1	1,215,881	1,589	
123	BADGER CANYON-REATA NO 1	352,148	1,510	
124	BADGER CANYON-RICHLAND NO 1	604,812	1,117	
125	BAKERS CORNER TAP TO LEXINGTON-LONGVIEW NO 1	260,047	0	
126	BALD MOUNTAIN TAP TO UNDERWOOD TAP	119,704	0	
127	BANDON SUBSTATION TRANSFORMER TIE 1	30,869	1,810	
128	BANDON-ROGUE NO 1	9,558,189	20,732	
129	BELFAIR TAP TO SHELTON-KITSAP NO 2	1,313	0	
130	BELL-ADDY NO 1	4,921,055	8,769	
131	BELL-BOUNDARY NO 1	6,153,516	22,984	
132	BELL-BOUNDARY NO 3	29,044,903	39,232	
133	BELLINGHAM-CUSTER NO 1	149,475	1,795	
134	BELL-LANCASTER NO 1	2,437,602	6,967	
135	BELL-TRENTWOOD NO 1	734,045	6,154	
136	BELL-TRENTWOOD NO 2	594,517	4,377	
137	BELL-USK NO 1	1,831,208	9,770	
138	BENTON-451B NO 1	247,991	1,703	
139	BENTON-DOE B3-S4 NO 1	162,956	1,367	
140	BENTON-FRANKLIN NO 1	7,189,560	3,222	
141	BENTON-FRANKLIN NO 2	606,950	10,547	
142	BENTON-OTHELLO NO 1	318,857	1,336	
143	BENTON-SCOOTENEY NO 1	936,782	12,141	
144	BERTELSEN-WILLOW CREEK NO 1	85,814	552	
145	BETTAS ROAD-COLUMBIA NO 1	792,557	1,544	
146	BIG EDDY-CHEMAWA NO 1	3,468,845	35,461	
147	BIG EDDY-CHENOWETH NO 1	885,593	3,907	
148	BIG EDDY-CHENOWETH NO 2	1,381,639	1,878	
149	BIG EDDY-DE MOSS NO 1	930,405	16,187	
150	BIG EDDY-MCLOUGHLIN 1&2 NO 1	4,965,983	12,215	
151	BIG EDDY-MCLOUGHLIN 1&2 NO 2	1,764,192	6,354	
152	BIG EDDY-OSTRANDER NO 1	11,925,415	20,220	
153	BIG EDDY-REDMOND NO 1	5,590,842	37,841	
154	BIG EDDY-SPRING CREEK NO 1	3,032,156	20,249	
155	BIG EDDY-THE DALLES FISHWAY HYDRO PLANT	2,955,999	0	
156	BIG EDDY-TROUTDALE NO 1	7,891,672	75,435	
157	BLUE RIVER TAP TO COUGAR-THURSTON NO 1	27,530	5,963	
158	BOARDMAN TAP TO MCNARY-JONES CANYON NO 1	61,136	268	
159	BOARDMAN-IONE NO 1	898,335	7,559	
160	BOARDMAN-TOWER ROAD NO 1	645,689	1,227	
161	BONNEVILLE PH 1-HOOD RIVER NO 1	4,101,114	24,173	
162	BONNEVILLE PH 1-NORTH CAMAS NO 1	453,835	5,232	
163	BONNEVILLE PH1-ALCOA 1&2	1,008,644	8,782	
164	BOTHELL-SAMMAMISH (PSE)	575,499	0	
165	BOTHELL-SNO-KING NO 1	415,901	129	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Transmission Lines	<u>Network Facilities</u>	Investment (\$)	O&M (\$)	Multi %
	Owner			
166	BOTHELL-SNO-KING NO 2	693,960	464	
167	BOUNDARY-NELWAY 1	263,960	2,894	
168	BOUNDARY-WANETA 1	117,328	313	
169	BOYER-TILLAMOOK NO 1	2,787,175	23,434	
170	BRASADA-HARNEY NO 1	3,101,653	42,607	
171	BRONX-SAND CREEK NO 1	2,622,656	1,459	
172	BUCKLEY-GRIZZLY NO 1	7,514,539	4,285	43%
173	BUCKLEY-MARION NO 1	20,369,871	17,796	50%
174	BURBANK TAP TO FRANKLIN-WALLA WALLA NO 1	2,665	105	
175	CALPINE-MCNARY NO 1	428,117	3,906	
176	CANAL-SECOND LIFT NO 1	25,231	222	
177	CANAL-SECOND LIFT NO 2	19,804	16	
178	CANBY TAP TO MALIN-HILLTOP NO1	2,144,365	2,624	
179	CARDWELL-COWLITZ NO 1	4,096,304	1,720	
180	CARLTON-MCMINNVILLE NO 1	463,769	421	
181	CARLTON-SHERWOOD NO 1	2,102,679	2,612	
182	CARLTON-TILLAMOOK NO 1	8,866,407	38,913	
183	CARSON TAP TO UNDERWOOD TAP	267,329	1,623	
184	CASCADE LOCKS TAP TO BONNEVILLE PH 1-HOOD RIVER NO 1	7,085	665	
185	CENTRALIA TAP TO CHEHALIS-COVINGTON NO 1	1,162	1,753	
186	CENTRALIA-MAY STREET NO 1	167,108	553	
187	CGS BACKUP BANK TAP TO BENTON - 451B NO 1	224,495	686	
188	CHEHALIS-CENTRALIA NO 1	5,113,105	3,746	
189	CHEHALIS-CENTRALIA NO 2	7,154,275	4,383	
190	CHEHALIS-COVINGTON NO 1	2,235,062	47,629	
191	CHEHALIS-MAYFIELD NO 1	1,576,880	11,562	
192	CHEHALIS-OLYMPIA NO 1	2,507,120	15,470	
193	CHEHALIS-RAYMOND NO 1	15,303,992	22,510	
194	CHEMAWA-SALEM ALUMINA NO 1	299,492	2,308	
195	CHEMAWA-SALEM NO 1	4,761,205	4,991	
196	CHEMAWA-SALEM NO 2	302,519	4,305	
197	CHENEY TAP TO SILVER LAKE-SUNSET	381,384	5,893	
198	CHENOWETH-GOLDENDALE NO 1	1,375,378	12,912	
199	CHIEF JOSEPH-EAST OMAK NO 1	5,148,496	18,435	
200	CHIEF JOSEPH-MONROE NO 1	23,730,487	82,890	
201	CHIEF JOSEPH-SICKLER NO 1	5,357,719	37,270	
202	CHIEF JOSEPH-SNOHOMISH NO 3	7,939,299	41,462	
203	CHIEF JOSEPH-SNOHOMISH NO 4	9,240,347	32,659	
204	CHRISTMAS VALLEY TAP TO BRASADA-HARNEY NO 1	1,640	30	
205	COLUMBIA FALLS-CONKELLEY NO 1	72,714	2,687	
206	COLUMBIA FALLS-FLATHEAD NO 1	756,209	2,614	
207	COLUMBIA FALLS-KALISPELL NO 1	411,651	4,248	
208	COLUMBIA FALLS-TREGO NO 1	1,606,188	27,015	
209	COLUMBIA-ELLENSBURG NO 1	6,426,552	7,498	
210	COLUMBIA-GRAND COULEE NO 1	1,417,945	22,790	
211	COLUMBIA-GRAND COULEE NO 3	1,722,738	14,095	
212	COLUMBIA-VALHALLA NO 1	207,161	3,541	
213	COLUMBIA-VALHALLA NO 2	534,449	3,186	
214	COLVILLE-BOUNDARY NO 1	4,878,645	5,718	
215	COLVILLE-REPUBLIC NO 1	10,330,859	26,821	
216	CONNELL TAP TO BENTON-SCOOTENEY NO 1	190,017	1,941	
217	COSMOPOLIS-ABERDEEN NO 1	6,928	156	
218	COUGAR-THURSTON NO 1	2,159,286	27,674	95%
219	COVINGTON SUBSTATION TIE NO 2	17,720	247	
220	COVINGTON-BETTAS ROAD NO 1	1,742,283	19,215	
221	COVINGTON-CRESTON SCL NO 1	398,640	3,172	
222	COVINGTON-DUWAMISH NO 1	752,610	3,792	
223	COVINGTON-MAPLE VALLEY NO 2	1,129,206	12,738	
224	COVINGTON-WHITE RIVER NO 1	216,902	3,721	
225	COWLITZ TAP TO CHEHALIS-COVINGTON NO 1	736,747	5,962	
226	COYOTE SPRINGS-SLATT NO 1	2,352,112	3,944	88%
227	CRESTON-BELL NO 1	8,238,831	17,468	
228	CRESWELL TAP TO ALVEY-MARTIN CREEK NO 1	92,141	0	
229	CUSTER-INGLEDOW NO 1	7,036,672	2,556	
230	CUSTER-INGLEDOW NO 2	1,768,518	3,518	
231	CUSTER-INTALCO NO 1	497,585	2,615	
232	CUSTER-INTALCO NO 2	531,003	1,828	
233	DAVIS CREEK TAP TO MILE-HI-ALTURAS	208,342	5,012	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Transmission Lines	<u>Network Facilities</u>	Investment (\$)	O&M (\$)	Multi %
	Owner			
234	DE MOSS-FOSSIL NO 1	1,809,709	31,673	
235	DEXTER TAP TO LOOKOUT POINT-ALVEY NO 1	27,559	949	
236	DISCOVERY-CHENOWETH NO 1	8,490	199	
237	DOE B3-S4-WHITE BLUFFS NO 1	557,626	1,727	
238	DORENA TAP TO ALVEY-MARTIN CREEK NO. 1	221,415	2,500	
239	DRAIN-ELKTON NO 1	843	0	
240	DRAIN-OAKLAND NO 1	843	0	
241	DRISCOLL-ASTORIA NO 1	4,149,463	2,498	
242	DRISCOLL-NASELLE NO 1	4,096,106	24,575	
243	DRISCOLL-WAUNA NO 1	28,015	95	
244	DRUMMOND - MACKS INN NO 1	563,741	28,258	
245	DUTCH CANYON TAP TO ST JOHNS-ST HELENS NO 1	139	247	
246	DWORSHAK PH-OROFINO NO 1	205,764	773	
247	DWORSHAK-TAFT NO 1	22,069,794	30,468	
248	EAST ELLENSBURG TAP TO COLUMBIA-ELLENSBURG NO 1 (KITTTAS C	356,552	682	
249	EAST OMAK TAP TO GRAND COULEE-FOSTER CREEK NO 1	5,127,081	3,236	
250	EAST OMAK-OROVILLE NO 1	13,684	4,185	
251	EAST OMAK-TONASKET NO 2	13,691	2,485	
252	ECHO LAKE - MAPLE VALLEY NO 1 & 2	11,222,945	18,121	
253	ECHO LAKE-MONROE NO 1	4,938,957	10,132	
254	ELBE TAP TO ALDER-LAGRANDE NO1,2	1,867,188	4,493	
255	ELLENSBURG-MOXEE NO 1	4,540,019	19,283	
256	ELTOPIA TAP TO SMITH CANYON-REDD	415,578	1,061	
257	EUGENE-ALDERWOOD NO 1	3,965,075	7,479	
258	EUGENE-ALVEY NO 2	913,760	8,153	
259	EUGENE-BERTELSEN NO 1	58,755	1,704	
260	EUGENE-LANE NO 1	111,977	3,624	
261	FAIRMOUNT-PORT ANGELES NO 1	1,878,901	8,087	
262	FAIRMOUNT-PORT ANGELES NO 2	1,529,338	12,948	
263	FAIRVIEW-BANDON NO 1	1,682,809	15,803	
264	FAIRVIEW-BANDON NO 2	2,199,172	7,466	
265	FAIRVIEW-ROGUE NO 1	6,893,302	21,293	
266	FIDALGO-LOPEZ ISLAND NO 3	1,929,609	1,612	
267	FIDALGO-LOPEZ ISLAND NO 4	4,794,685	0	
268	FIDALGO-LOPEZ ISLAND NO 5	13,833,755	1,085	
269	FILBERT TAP TO FOREST GROVE-MCMINNVILLE NO 1	290,501	446	
270	FLATHEAD-HOT SPRINGS NO 1	3,257,393	14,310	
271	FORDS PRAIRIE TAP TO CHEHALIS-CENTRALIA NO 2	23,009	162	
272	FOREST GROVE-MCMINNVILLE NO 1	1,632,477	8,916	
273	FOREST GROVE-TILLAMOOK NO 1	8,810,255	12,312	
274	FOSTER TAP TO GREEN PETER-LEBANON NO 1	254,650	4,872	
275	FOUR LAKES TAP TO SUNSET-EAST COLFAX	238,110	3,583	
276	FRANKLIN-BADGER CANYON NO 1	1,733,993	3,040	
277	FRANKLIN-BADGER CANYON NO 2	2,166,381	5,089	
278	FRANKLIN-HEDGES NO 1	296,680	1,443	
279	FRANKLIN-RUBY STREET NO 1	1,347,949	1,985	
280	FRANKLIN-WALLA WALLA NO 1	6,177,770	8,528	
281	FROMAN TAP TO ALBANY-LEBANON NO 1	592,229	525	
282	GARRISON-ANACONDA NO 1	5,153,222	21,355	
283	GARRISON-TAFT NO 1	86,218,545	60,229	
284	GARRISON-TAFT NO 2	86,218,545	31,430	
285	GLADE TAP TO BENTON-FRANKLIN NO 2	716	0	
286	GOSHEN-DRUMMOND NO 1	16,291,283	44,509	
287	GRAND COULEE-BELL NO 3	4,308,352	50,250	
288	GRAND COULEE-BELL NO 5	4,113,496	17,592	
289	GRAND COULEE-BELL NO 6	104,017,288	18,427	
290	GRAND COULEE-CHIEF JOSEPH NO 1	1,626,847	8,719	
291	GRAND COULEE-CHIEF JOSEPH NO 2	1,968,429	8,267	
292	GRAND COULEE-CHIEF JOSEPH NO 3	4,100,432	6,376	
293	GRAND COULEE-CRESTON NO 1	1,479,628	9,653	
294	GRAND COULEE-FOSTER CREEK NO 1	800,764	7,035	
295	GRAND COULEE-HANFORD NO 1	12,282,324	35,011	
296	GRAND COULEE-OKANOGAN NO 2	1,713,694	40,618	
297	GRAND COULEE-SCHULTZ NO 1	31,696,784	54,507	
298	GRAND COULEE-SCHULTZ NO 2	30,625,010	16,673	
299	GRAND COULEE-WESTSIDE(AVA) NO 1	2,238,122	15,221	
300	GRANDE ROND-BOYER NO 1	1,337,310	4,750	
301	GRANDVIEW-RED MOUNTAIN NO 1	1,700,292	8,275	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Transmission Lines	<u>Network Facilities</u> Owner	Investment (\$)	O&M (\$)	Multi %
302	GREEN BLUFF TAP TO BELL-TRENTWOOD NO 2	268,903	3,247	
303	GREEN PETER-LEBANON NO 1	666,893	8,101	65%
304	GRIZZLY-SUMMER LAKE NO 1	14,696,081	16,635	43%
305	GROUSE CREEK-TECOMA (LEASED FACILITIES)	1,919,106	0	94%
306	HANFORD-WAUTOMA NO 1	3,298,689	2,533	
307	HANFORD-WAUTOMA NO 2	2,850,843	2,933	
308	HARRISBURG TAP TO ALBANY-EUGENE NO 1	15,159	161	
309	HARVALUM-BIG EDDY NO 1	2,717,106	5,218	
310	HAT ROCK TAP TO MCNARY-WALLULA	117,346	446	
311	HATTON TAP TO CONNELL TAP	913,143	2,810	
312	HATWAI-DWORSHAK NO 1	6,688,529	30,213	
313	HAWKINS-ALVEY NO 1	205,310	5,598	
314	HEBO TAP TO BOYER-TILLAMOOK NO 1	1,872	219	
315	HEDGES TAP TO FRANKLIN-BADGER CANYON NO 2	197,981	316	
316	HEYBURN-ADELAIDE NO 1	3,956,550	3,184	
317	HIDEAWAY TAP TO HAWKINS-ALVEY NO 1	505	113	
318	HILLS CREEK-LOOKOUT POINT NO 1	1,242,208	23,947	81%
319	HILLTOP-WARNER NO 1	4,824,687	4,263	
320	HOLCOMB TAP TO CHEHALIS-RAYMOND NO 1	343,953	236	
321	HOLCOMB-NASELLE NO 1	1,912,715	18,236	
322	HOOD RIVER-THE DALLES NO 1	3,502,756	3,737	
323	HORN BUTTE TAP TO TOWER ROAD-ALKALINO 1	339,950	313	
324	HORSE HEAVEN-HARVALUM NO 1	750,152	8,291	
325	HORSE RANCH TAP TO MONROE-SNOHOMISH NO 1&2	79,180	412	
326	HOT SPRINGS 500-230KV TIE NO 1	37,012	201	
327	HOT SPRINGS-RATTLESNAKE NO 1	6,631,847	42,176	
328	HUNGRY HORSE-COLUMBIA FALLS NO 1	4,979,851	1,157	
329	HUNGRY HORSE-CONKELLEY NO 1	981,905	1,591	
330	ICE HARBOR-FRANKLIN NO 2	554,825	1,202	97%
331	ICE HARBOR-FRANKLIN NO 3	1,331,565	1,085	91%
332	JACKSON TAP TO CANAL-SECOND LIFT NO. 2	54,669	789	
333	JOHN DAY-BIG EDDY NO 2	5,737,346	7,983	
334	JOHN DAY-MARION NO 1	17,485,758	45,354	
335	JONES CANYON-SANTIAM NO 1	5,427,621	34,485	
336	JUNCTION CITY TAP TO ALBANY-EUGENE NO 1	2,182	194	
337	KALISPELL-KERR NO 1	1,388,419	28,137	
338	KEELER-ALLSTON NO 1	5,141,827	21,639	
339	KEELER-FOREST GROVE NO 1	975,253	46,624	
340	KEELER-FOREST GROVE NO 2	621,323	9,276	
341	KEELER-OREGON CITY NO 2	1,405,479	9,347	
342	KELLER TAP TO GRAND COULEE-OKANOGAN NO 2	4,885,125	17,815	
343	KENNEWICK TAP TO FRANKLIN-BADGER CANYON NO 2	38,892	604	
344	KERR SUB TIE TO US ITS MP CO.115KV	77,150	720	
345	KITSAP-BANGOR NO 1	637,130	5,707	
346	KITSAP-STATION X NO 1	262,419	0	
347	KLONDIKE SCHOOLHOUSE-JOHN DAY NO 1	9,759,776	2,121	
348	LA PINE-CHILOQUIN NO 1	2,528,246	16,397	
349	LA PINE-FORT ROCK NO 1	6,761,746	8,966	
350	LANCASTER-NOXON NO 1	5,555,532	32,436	
351	LANE-WENDSON NO 1	3,845,376	31,492	
352	LANE-WENDSON NO 2	2,282,762	38,578	
353	LANGLOIS TAP TO BANDON-ROGUE NO 1	26,655	356	
354	LATHAM TAP TO ALVEY-MARTIN CREEK NO 1	1,045,461	1,058	
355	LEXINGTON-DELAMETER NO 1	145,989	0	
356	LEXINGTON-LONGVIEW NO 1	1,016,084	5,257	
357	LEXINGTON-LONGVIEW NO 2	438,091	27,009	
358	LIBBY-BONNERS FERRY NO 1	25,790,220	100,596	
359	LIBBY-CONKELLEY NO 1	9,627,742	43,269	
360	LITTLE GOOSE-LOWER GRANITE NO2	11,712,702	5,722	
361	LITTLE GOOSE-LOWER GRANITE NO1	8,498,964	9,719	
362	LONGVIEW-ALLSTON NO 1	333,525	6,981	
363	LONGVIEW-ALLSTON NO 2	69,437	6,529	
364	LONGVIEW-ALLSTON NO 3	1,078,592	4,756	
365	LONGVIEW-ALLSTON NO 4	658,953	18,638	
366	LONGVIEW-BAKERS CORNER (COWLITZ PUD LINE)	32,177	150	
367	LONGVIEW-CHEHALIS NO 1 & 3	2,945,500	30,561	
368	LONGVIEW-COWLITZ NO 1	552,482	3,505	
369	LONGVIEW-WASHINGTON WAY NO 1	629,897	0	



Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Transmission Lines	<u>Network Facilities</u> Owner	Investment (\$)	O&M (\$)	Multi %
370	LOOKOUT POINT-ALVEY NO 1	841,529	12,253	
371	LOOKOUT POINT-ALVEY NO 2	695,638	7,785	
372	LOPEZ ISLAND-DECATUR NO 1	773,159	0	
373	LOST RIVER-SPAR CANYON NO 1	5,518,064	56,996	
374	LOWER GRANITE-HATWAI NO 1	8,301,795	20,227	
375	LOWER MONUMENTAL-ASHE NO 1	11,094,886	23,627	
376	LOWER MONUMENTAL-HANFORD NO 1	6,499,644	10,843	
377	LOWER MONUMENTAL-LITTLE GOOSENO 1	3,302,542	13,378	
378	LOWER MONUMENTAL-LITTLE GOOSENO 2	3,347,265	5,643	
379	LOWER MONUMENTAL-MCNARY NO 1	9,987,407	24,356	
380	LYNCH CREEK TAP TO CANYON-LAGRANDE NO 1,2	1,053,417	2,931	
381	MACKS INN-MADISON NO 1	3,769,816	20,203	
382	MALIN-HILLTOP NO 1	6,545,826	27,403	
383	MAPLE VALLEY-DUWAMISH NO 1	73,304	1,236	
384	MAPLE VALLEY-MASSACHUSETTS NO 1	23,317	116	
385	MARION-ALVEY NO 1	4,456,110	17,990	50%
386	MARION-LANE NO 1	8,003,594	41,729	
387	MARION-SANTIAM NO 1	619,487	1,700	
388	MARTIN CREEK TAP TO ALVEY-FAIRVIEW NO 1	11,094	316	
389	MARTIN CREEK-DRAIN NO 1	463,630	9,985	
390	MAUPIN-ANTELOPE (LEASED FACILITIES)	894,251	0	
391	MAUPIN-TYGH VALLEY NO 1	562,433	2,147	
392	MCCULLOUGH TAP TO COWLITZ-LAGRANDE NO 1,2	459,238	5,090	
393	MCNARY-BADGER CANYON NO 1	7,775,605	6,320	
394	MCNARY-BOARDMAN NO 1	777,180	2,040	
395	MCNARY-COYOTE SPRINGS NO 1	2,077,323	7,697	
396	MCNARY-FRANKLIN NO 2	1,743,743	10,051	
397	MCNARY-HORSE HEAVEN NO 1	13,284,119	3,369	
398	MCNARY-JOHN DAY NO 2	135,879,520	5,635	
399	MCNARY-JONES CANYON NO 1	1,657,299	8,393	
400	MCNARY-ROSS NO 1	12,835,129	49,928	
401	MCNARY-ROUNDUP NO 1	1,508,622	14,037	
402	MIDWAY-BENTON NO 1	3,115,724	3,904	
403	MIDWAY-BENTON NO 2	1,944,282	3,808	
404	MIDWAY-GRANDVIEW NO 1	1,254,400	11,413	
405	MIDWAY-MOXEE NO 1	1,385,757	11,337	
406	MIDWAY-POTHOLES NO 1	765,882	18,143	
407	MIDWAY-ROCKY FORD NO 1	1,620,448	7,625	
408	MIDWAY-VANTAGE NO 1	9,948,980	24,426	
409	MILTON TAP TO WALLA WALLA-PENDLETON NO 1	2,236,170	1,288	
410	MINIDOKA PH-UNITY NO 1	2,146,839	19,488	
411	MINIDOKA SUB TAP TO DUFN43	1,099,937	189	
412	MIST TAP TO ALLSTON-DRISCOLL NO 2	9,302	740	
413	MONROE-CUSTER NO 1	20,992,448	45,919	
414	MONROE-CUSTER NO 2	8,704,892	30,502	
415	MONROE-NOVELTY HILL NO.1	1,736,161	0	
416	MONROE-SNOHOMISH NO 1 & 2	617,784	2,193	
417	MOSSYROCK-CHEHALIS NO 1	1,070,923	6,665	
418	MOUNTAIN AVENUE TAP TO (PACIFICORP) ASHLAND-OAK KNOLL	699,916	1,662	
419	MOXEE-ROZA NO 1	23,832	8,028	
420	MT SI-TANNER NO 1	6,243,005	1,951	
421	MT. VERNON TAP TO LOOKOUT POINT-ALVEY NO 2	68,601	2,074	
422	MURRAY-CUSTER NO 1	3,333,607	17,316	
423	NAPAVINE-ALLSTON NO 1	8,567,669	13,475	
424	NASELLE-TARLETT NO 1	2,514,187	21,971	
425	NASELLE-TARLETT NO 2	3,823,152	12,465	
426	NESPELEM TAP TO GRAND COULEE-OKANOGAN	579	0	
427	NINE MILE TAP TO FRANKLIN-WALLA WALLA NO 1	40,788	88	
428	NORTH BONNEVILLE-MIDWAY NO 1	8,013,158	78,251	
429	NORTH BONNEVILLE-ROSS NO 1	2,635,550	6,737	
430	NORTH BONNEVILLE-ROSS NO 2	1,843,674	31,530	
431	NORTH BONNEVILLE-TROUTDALE NO1	2,888,783	12,654	
432	NORTH BONNEVILLE-TROUTDALE NO2	2,881,488	5,749	
433	NORTH CAMAS-OAK PARK NO 1	113,773	1,321	
434	NORTH CAMAS-SIFTON NO 1	357,536	1,114	
435	NORTH MOUNTAIN-SNOHOMISH NO 1	149,405	453	
436	NOXON-HOT SPRINGS NO 1	3,019,998	34,207	
437	NOXON-LIBBY NO 1	2,845,525	51,822	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Transmission Lines	<u>Network Facilities</u> Owner	Investment (\$)	O&M (\$)	Multi %
438	OLYMPIA 500-230 TIE LINE 1	992,129	0	
439	OLYMPIA-GRAND COULEE NO 1	18,419,294	95,480	
440	OLYMPIA-SATSOP NO 2	3,893,068	4,691	
441	OLYMPIA-SHELTON NO 1	343,650	0	
442	OLYMPIA-SHELTON NO 2	1,573,722	5,618	
443	OLYMPIA-SHELTON NO 3	3,225,852	4,568	
444	OLYMPIA-SHELTON NO 4	3,113,703	6,761	
445	OLYMPIA-SHELTON NO 5	8,300,352	7,426	
446	OLYMPIA-SOUTH ELMA NO 1	1,011,330	7,223	
447	OLYMPIA-ST CLAIR-S TACOMA NO 1	10,472,082	14,781	
448	OREGON CITY-CANBY PGE NO 1	400,736	2,494	
449	OREGON CITY-CHEMAWA NO 1	35,890	0	
450	OREGON CITY-CHEMAWA NO 2	2,867,294	13,780	
451	OSTRANDER-MCLOUGHLIN NO 1	1,415,214	2,089	
452	OSTRANDER-PEARL NO 1	2,001,443	7,972	
453	OSTRANDER-TROUTDALE NO 1	7,253,609	19,212	
454	PALISADES-CATTLE CREEK NO 1	19,506,750	23,324	
455	PALISADES-SWAN VALLEY NO 1	1,276,790	13,517	
456	PARKER TAP TO EUGENE-ALDERWOOD NO 1	9,970	94	
457	PAUL D. JOHNSON TAP TO ROSS-VANCOUVER SHIPYARD NO. 1	180,120	0	
458	PAUL-ALLSTON NO 2	9,278,477	37,295	
459	PAUL-NAPAVINE NO 1	1,699,815	8,414	
460	PAUL-OLYMPIA NO 1	3,514,676	8,687	
461	PAUL-SATSOP NO 1	30,139,100	15,581	
462	PEARL-KEELER NO 1	2,245,471	7,194	
463	PEARL-MARION NO 1	5,744,117	69,476	
464	PEARL-SHERWOOD NO. 1 & 2	1,503,457	1,422	
465	PILOT BUTTE-LA PINE NO 1	1,474,753	14,215	
466	PINE HOLLOW TAP TO THE DALLES-TYGH VALLEY NO 1	15,441	325	
467	POMEROY TAP TO TUCANNON RIVER-NORTH LEWISTON NO 1	29,550	470	
468	PONDEROSA-PILOT BUTTE NO 1	4,369,374	9,695	
469	PORT ANGELES-SAPPHO NO 1	2,983,920	26,366	
470	POTHOLES-GRAND COULEE NO 1	1,377,363	7,130	
471	POTLATCH TAP TO SHELTON-FAIRMOUNT NO 1	6,824	230	
472	POWERLINE TAPS TO DIAMOND HILL-COBURG	81,433	0	
473	PRIEST RIVER TAP TO ALBENI FALLS-SANDCREEK NO 1	297,117	2,261	
474	PROSSER TAP TO GRANDVIEW-RED MOUNTAIN NO 1	720,575	10,079	
475	RADAR TAP (USBR) TO SCOOTENEY TAP	65,675	639	
476	RAINBOW VALLEY TAP TO LANE-WENDSON NO 1	152,368	2,476	
477	RALSTON TAP TO EAST COLFAX-LIND	532,216	1,736	
478	RATTLESNAKE-GARRISON NO 1	2,391,146	32,240	
479	RAVER TAP TO SCHULTZ-ECHO LAKE NO 1	922,569	1,018	
480	RAVER-COVINGTON NO 1	2,290,045	9,483	
481	RAVER-COVINGTON NO 2	1,295,592	5,969	
482	RAVER-ECHO LAKE NO 1	2,190,125	5,666	
483	RAVER-PAUL NO 1	12,744,114	37,193	
484	RAYMOND-COSMOPOLIS NO 1	10,746,393	14,862	
485	RAYMOND-HENKLE ST. NO 1	85,625	977	
486	RAYMOND-WILLAPA RIVER NO 1	387,668	5,978	
487	RED MOUNTAIN-RICHLAND NO 1	386,542	3,456	
488	RED MOUNTAIN-WHITE BLUFFS NO 1	1,222,907	3,030	
489	REDMOND SUBSTATION 230/115KV TIE NO 1	315,227	19	
490	REDMOND-BRASADA NO 1	169,035	4,698	
491	REDMOND-PILOT BUTTE NO 1	286,641	5,757	
492	REEDSPORT-FAIRVIEW NO 1	5,395,311	25,494	
493	RESTON-FAIRVIEW NO 2	1,801,177	15,245	
494	RIVERGATE-KEELER NO 1	512,780	2,194	
495	RIVERLAND-MIDWAY NO 1	21,591	1,432	
496	ROCK CREEK-JOHN DAY NO 1	6,249,974	5,305	
497	ROCKY FORD-GRAND COULEE NO 1	1,627,129	5,026	
498	ROCKY REACH-COLUMBIA NO 1	1,231,827	4,748	
499	ROCKY REACH-MAPLE VALLEY NO 1	15,011,139	103,319	
500	ROE'S CORNER TAP TO HEYBURN-ADELAIDE NO 1	1,116,651	1,171	
501	ROGUE-GOLD BEACH NO 1	3,485,431	2,653	
502	ROGUE-GOLD BEACH NO 2	4,805,288	10,116	
503	ROSS-ALCOA NO 2 & 4 (ROSS-ALCOA NO 2 SECTION)	136,560	567	
504	ROSS-ALCOA NO 3	1,252,366	1,076	
505	ROSS-CARBORUNDUM NO 1	104,720	1,237	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
	<u>Network Facilities</u>			
	Owner	Investment(\$)	O&M (\$)	Multi %
	<b>Transmission Lines</b>			
506	ROSS-LEXINGTON NO 1	2,619,691	12,378	
507	ROSS-RIVERGATE NO 1	558,459	20,428	
508	ROSS-ST JOHNS NO 1	1,623,577	12,464	
509	ROSS-VANCOUVER SHIPYARD NO 1	377,155	1,680	
510	ROUNDUP-LAGRANDE NO 1	2,419,806	23,052	
511	SACAJAWEA TAP TO ICE HARBOR-FRANKLIN NO 2	217,457	670	
512	SACAJAWEA TAP TO LOWER MONUMENTAL-MCNARY NO 1	2,108,920	983	
513	SACAJAWEA-SUN HARBOR NO 1	31,818	786	
514	SACHEEN-ALBENI FALLS NO 1	1,130,388	7,055	
515	SALEM-ALBANY NO 1	1,375,612	14,252	
516	SALEM-ALBANY NO 2	1,285,514	16,410	
517	SALEM-GRAND RONDE NO 1	5,126,215	9,474	
518	SAMMAMISH-MAPLE VALLEY NO 1	1,801,866	0	
519	SAND CREEK-BONNERS FERRY NO. 1 & 2	13,295,602	10,890	
520	SANTIAM SUBSTATION TRANSF BAYTAP TO SANTIAM-ALBANY NO 1	2,323,017	42	
521	SANTIAM-ALBANY NO 1	984,717	7,326	
522	SANTIAM-ALVEY 1 & 2	6,302,735	32,415	
523	SANTIAM-BETHEL NO 1	12,617,338	1,721	
524	SANTIAM-CHEMAWA NO 1	1,744,710	6,637	
525	SANTIAM-TOLEDO NO 1	8,340,579	43,796	
526	SATSOP PARK-COSMOPOLIS NO 1	1,124,071	10,524	
527	SATSOP-ABERDEEN NO 2	5,398,614	11,373	
528	SATSOP-ABERDEEN NO 3	2,402,175	6,029	
529	SATSOP-SHELTON NO 1	12,019,495	2,740	
530	SCHRAG TAP TO RUFF-WARDEN	701,079	2,534	
531	SCHULTZ-ECHO LAKE NO 1	65,603,696	32,444	
532	SCHULTZ-RAVER NO 1	27,130,703	16,267	
533	SCHULTZ-RAVER NO 3	10,273,142	17,208	
534	SCHULTZ-RAVER NO 4	12,045,265	11,124	
535	SCHULTZ-WAUTOMA NO 1	95,466,530	48,499	
536	SCOOTENEY TAP TO MIDWAY-BENTON NO 1	337,805	5,655	
537	SHELTON-FAIRMOUNT NO 1	4,529,817	23,334	
538	SHELTON-FAIRMOUNT NO 2	3,167,897	14,653	
539	SHELTON-FAIRMOUNT NO 3	3,179,420	10,326	
540	SHELTON-FAIRMOUNT NO 4	2,926,202	10,349	
541	SHELTON-KITSAP NO 2	9,376,899	5,286	
542	SHELTON-KITSAP NO 3	4,135,933	6,621	
543	SHELTON-KITSAP NO 4	4,003,145	6,771	
544	SHELTON-SOUTH BREMERTON NO 1	9,302,539	2,796	
545	SICKLER-SCHULTZ NO 1	11,725,105	11,110	
546	SIFTON TAP TO N. BONN-ROSS 2	222,180	93	
547	SIFTON TAP TO NORTH BONNEVILLE-ROSS NO 1	222,180	767	
548	SIFTON-FISHERS ROAD NO 1	55,704	785	
549	SIFTON-LACAMAS NO 1	354	1,034	
550	SIFTON-ROSS NO 1	344,041	938	
551	SILVERADO TAP TO PORT ANGELES-SAPPHO NO 1	458,627	15	
552	SLATT-BUCKLEY NO 1	21,181,550	26,889	
553	SLATT-JOHN DAY NO 1	4,830,181	16,607	93%
554	SNOHOMISH-BEVERLY PARK NO 3	328,629	768	
555	SNOHOMISH-BEVERLY PARK NO 4	379,809	419	
556	SNOHOMISH-BOTHELL NO 1	451,614	3,353	
557	SNOHOMISH-BOTHELL NO 2	148,752	687	
558	SNOHOMISH-EVERETT	417,659	843	
559	SNOHOMISH-MURRAY NO 1	429,756	7,846	
560	SNOHOMISH-PUD NO 9	2,362,466	854	
561	SNOHOMISH-PUD NO. 8	2,377,231	758	
562	SNO-KING TAP TO ECHO LAKE-MONROE NO 1	4,503,601	2,874	
563	SNO-KING-MAPLE VALLEY NO 1	1,845,243	778	
564	SNO-KING-MAPLE VALLEY NO. 2	651,009	306	
565	SOUTH ELMA-SATSOP PARK NO 1	209,546	2,050	
566	SOUTH FORK TAP TO FOREST GROVE-TILLAMOOK NO 1	9,989	0	
567	SOUTH TACOMA-SOUTHWEST NO 1	1,159,429	5,009	
568	SOUTH TACOMA-WHITE RIVER NO 1	339,175	5,642	
569	SPAR CANYON - ROUND VALLEY	1,264,435	6,747	
570	SPEARFISH TAP TO CHENOWETH-GOLDENDALE NO 1	113,617	2,225	
571	SPIRIT TAP TO COLVILLE-BOUNDARY NO 1	416,256	3,621	
572	SPRING CREEK-WINE COUNTRY NO 1	3,787,668	16,375	
573	ST HELENS-ALLSTON NO 1	5,186,672	10,999	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Transmission Lines	<u>Network Facilities</u> Owner	Investment (\$)	O&M (\$)	Multi %
574	ST JOHNS TAP TO KEELER-OREGONCITY NO 2	317,198	157	
575	ST JOHNS-KEELER NO 2	421,249	10,500	
576	ST JOHNS-ST HELENS NO 1	1,648,790	12,677	
577	SWAN VALLEY-GOSHEN NO 1	4,291,759	15,899	
578	SWAN VALLEY-TETON NO 1	2,751,164	15,773	
579	SWAN VALLEY-TETON NO 2	12,256,729	11,109	
580	SWIFT TAP TO ROSS-LEXINGTON NO 1	14,620	103	
581	TACOMA-COVINGTON NO 2	1,907,335	3,976	
582	TACOMA-COVINGTON NO 3	1,240,294	6,702	
583	TACOMA-COVINGTON NO 4	1,240,294	6,348	
584	TACOMA-RAVER NO 1&2	6,899,623	14,572	
585	TAFT-BELL NO 1	84,342,970	85,769	
586	TAFT-HOT SPRINGS NO 1	11,863,226	60,597	
587	TAHKENITCH-GARDINER NO 1	181,891	2,834	
588	TAHKENITCH-REEDSPORT NO 1	462,340	8,267	
589	TARGHEE TAP TO SWAN VALLEY-TETON NO 1	949,781	9,817	
590	TARGHEE-DRUMMOND NO 1	87,417	32,837	
591	THATCHER JUNCTION TAP TO FOREST GROVE-TILLAMOOK NO 1	1,689	0	
592	THE DALLES-DISCOVERY NO 1	221,839	9,624	
593	THURSTON-MCKENZIE NO 1	2,435,522	3,136	
594	TILLAMOOK-TRASK RIVER NO 1	358,808	850	
595	TIMBER TAP TO FOREST GROVE-TILLAMOOK NO 1	603,286	11,789	
596	TOLEDO-WENDSON NO 1	5,931,612	40,842	
597	TOWER ROAD-ALKALINO 1	430,310	2,043	
598	TRENTWOOD-VALLEY WAY NO 1	249,698	3,172	
599	TROJAN-ALLSTON NO 1	1,595,833	1,444	
600	TROJAN-ALLSTON NO 2	1,584,040	445	
601	TUCANNON RIVER-NORTH LEWISTON NO 1	11,818,725	15,343	
602	UNDERWOOD TAP NO 1	1,308,813	14,321	
603	UNITY-HEYBURN NO 1	549,469	5,546	
604	UNITY-WEST BURLEY NO 1	1,931,734	10,545	
605	USK-BOUNDARY NO 1	2,080,111	9,032	
606	VANTAGE-COLUMBIA NO 1	1,207,066	9,380	
607	VANTAGE-HANFORD NO 1	408,065	0	
608	VANTAGE-SCHULTZ NO 1	5,237,336	9,127	
609	VERA TAP TO TRENTWOOD-VALLEY WAY NO 1	225,518	2,435	
610	VICTOR TAP TO TARGHEE TAP	96,996	91	
611	WAGNER LAKE TAP TO WILBUR TAP	441,963	7,285	
612	WALLA WALLA-FREEWATER	1,331,932	1,449	
613	WALLA WALLA-PENDLETON NO 1	4,185,671	11,562	
614	WALLA WALLA-TUCANNON RIVER NO 1	19,810,996	15,345	
615	WALNUT CITY TAP TO FOREST-GROVE-MCMINNVILLE NO 1	210,249	3,319	
616	WAUTOMA-OSTRANDER NO 1	35,241,949	64,063	
617	WAUTOMA-ROCK CREEK NO 1	9,564,886	28,597	
618	WENDSON-TAHKENITCH NO 1	3,649,156	13,363	
619	WENDSON-TAHKENITCH NO 2	2,343,750	7,365	
620	WEST BURLEY-HEYBURN NO. 1 (LEASED FACILITY)	21,218	3,474	
621	WESTSIDE (AVA)-BELL NO 1	207,587	802	
622	WHITE BLUFFS-451B NO 1	1,025,555	817	
623	WHITE BLUFFS-RICHLAND NO 1	1,698,054	5,059	
624	WILLOW CREEK-HAWKINS #1	477,053	1,006	
625	WINE COUNTRY-MIDWAY NO 1	2,763,766	2,695	
626	WINTHROP TAP TO TWISP-OKANOGAN	702,769	8,175	
627	WNP1-ASHE NO 2	76,075	1,039	
628	<b>Subtotal Lines</b>	<b>2,491,881,183</b>	<b>6,035,124</b>	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Stations	<u>Network Facilities</u>	Investment(\$)	O&M (\$)	Multi %
	Owner			
629	ABERDEEN SUBSTATION	5,977,208	103,613	
630	ACORD SUBSTATION (BENTON REA)	22,142	0	
631	ADAIR SUBSTATION(BPA)	771,251	21,692	
632	ADDY SUBSTATION	7,221,024	55,953	70%
633	AFTON COGENERATION POWER PLANT	8,654	0	
634	AHSAHKA SUBSTATION	CPC 22,139	952	
635	AIRWAY HEIGHTS SUBSTATION	AVA 27,894	312	
636	ALBANY SUBSTATION	11,467,254	104,068	88%
637	ALBENI FALLS SUBSTATION	1,096,932	18,449	75%
638	ALCOA SUBSTATION	7,740,270	132,586	88%
639	ALDER METERING POINT	TPWR 27,765	281	
640	ALFALFA SUBSTATION	1,787,280	37,955	
641	ALKALI SUBSTATION	CBEC 61,692	322	
642	ALLSTON SUBSTATION	50,654,001	559,265	
643	ALTURAS SUBSTATION	PAC 21,364	340	
644	ALVEY SUBSTATION	23,034,748	228,758	74%
645	AMES LAKE SUBSTATION	TEC 30,075	1,055	
646	ANACONDA SUBSTATION	3,438,684	85,922	
647	ANGUS SUBSTATION (BENTON CO PUD)	15,475	329	
648	APPLEWAY SUBSTATION	AVA 18,816	437	
649	ARCO SUBSTATION (BPA/LREC)	32,413	646	
650	ARIEL SUBSTATION	CWPUD 35,332	457	
651	ARM RELIFT SUBSTATION	AVA 8,900	0	
652	ARMSTRONG SUBSTATION(INLAND POWER & LIGHT)	8,286	564	
653	ARTONDALE SUBSTATION	PLC 88,106	1,672	
654	ASHE SUBSTATION	31,209,146	368,015	88%
655	ASHLAND SUBSTATION	PAC 85,217	0	
656	ATHOL SUBSTATION(KOOTENAI ELEC COOP)	KEC/NLI 19,663	1,339	
657	AUSTIN SWITCHYARD	SVEC 13,635	1,101	
658	BADGER CANYON SUBSTATION	2,026,502	29,500	
659	BALD MOUNTAIN SUBSTATION	4,043,063	28,608	
660	BANDON SUBSTATION	4,085,324	57,378	84%
661	BANGOR SUBSTATION	USN 67,321	1,207	
662	BANNACK SUBSTATION	VEC 109,110	1,183	
663	BARRETT'S SUBSTATION(VIGILANTEELECTRIC)	VEC 28,520	0	
664	BAXTER SUBSTATION (BIG BEND)	BBEC 15,519	730	
665	BEACON SUBSTATION	AVA 1,931	0	
666	BEAVER BAY SUBSTATION (COWLITZ PUD)	24,843	123	
667	BEAVER SUBSTATION (PGE)	46,143	2,707	
668	BEAVER SUBSTATION(TILLAMOOK PUD)	61,093	4,656	
669	BELL SUBSTATION	73,650,098	972,008	
670	BELLINGHAM SUBSTATION(BPA)	11,711,269	34,676	
671	BELLINGHAM SUBSTATION(PUGET SOUND ENERGY)	2,432	788	
672	BENTON CITY SUBSTATION(BENTONCO PUD)	15,267	337	
673	BENTON SUBSTATION	7,772,465	81,409	
674	BERRIAN SUBSTATION	BPUD 25,904	464	
675	BERRYDALE SUBSTATION (CLP)	36,801	182	
676	BERTELSEN SUBSTATION	EWEB 59,277	192	
677	BETHEL SUBSTATION	PGE 12,410	280	
678	BETTAS ROAD SUBSTATION	5,183,108	13,364	
679	BEVERLY PARK SUBSTATION	SNPUD 86,702	1,364	
680	BIG EDDY SUBSTATION	10,857,639	89,248	14%
681	BIG FORK SUBSTATION (FEC)	6,087	0	
682	BIG HORN SUBSTATION (IBERDOLA)	19,558	4,210	
683	BIG PASCO	FPUD 13,215	368	
684	BIGLOW CANYON SUBSTATION	PGE 61,573	3,201	
685	BINGEN SUBSTATION(KLICKITAT CO PUD)	32,117	674	
686	BLACKROCK SUBSTATION	BREA 10,803	2,377	
687	BLAINE SUBSTATION	PSE 128,593	660	
688	BLAKESLEE JUNCTION SWITCHING STATION	1,082,385	0	
689	BLANTON ROAD SUBSTATION	FPUD 22,796	135	
690	BOARDMAN SUBSTATION	7,009,486	52,084	
691	BONNER SUBSTATION	MEC 45,980	782	
692	BONNERS FERRY SUBSTATION	1,689,233	32,486	73%
693	BOOTH BEND SUBSTATION	MWL 11,060	617	
694	BOUNDARY SUBSTATION	3,969,456	89,487	
695	BOX CANYON POWERHOUSE	POP 56,157	586	
696	BOYER SWITCHING STATION	PAC 21,947	4,521	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Stations	<u>Network Facilities</u> Owner	Investment(\$)	O&M (\$)	Multi %
697	BRASADA SUBSTATION (CENTRAL ELECTRIC COOPERATIVE)	492,476	15,710	
698	BREMERTON SUBSTATION (PSE)	57,828	199	
699	BREWSTER SUBSTATION	36,031	313	
700	BRIDGE SUBSTATION	4,925,792	54,436	
701	BRIDGEPORT BAR	16,007	1,723	
702	BRINCKEN'S CORNER SUBSTATION	922,405	14,429	
703	BROADMOOR SUBSTATION	57,308	222	
704	BROADVIEW SUBSTATION	123,479	128	
705	BROOKDALE SUBSTATION(ELMHURSTMUTUAL PWR & LIGHT)	82,392	1,127	
706	BROOKDALE SUBSTATION(TACOMA PUBLIC UTILITIES)	43,391	0	
707	BUCKLEY SUBSTATION	3,489,220	34,755	36%
708	BURBANK #2 METERING POINT	10,340	0	
709	BURBANK #3 METERING POINT	9,282	0	
710	BURLEY SUBSTATION(CITY OF BURLEY)	8,862	328	
711	CABINET GORGE SUBSTATION	51,098	1,002	
712	CALPINE SUBSTATION	25,548	12,827	
713	CANAL SUBSTATION	1,774,559	22,965	
714	CANBY SUBSTATION(BPA)	1,636,563	14,662	
715	CANBY SUBSTATION(PGE)	28,591	563	
716	CANBY SUBSTATION(SURPRISE VALLEY ELEC)	84,531	3,083	
717	CAPE HORN SUBSTATION	28,175	2,184	
718	CARDWELL SUBSTATION	2,286,790	51,693	
719	CARLIN SUBSTATION	7,918	98	
720	CARLSON SUBSTATION	29,249	0	
721	CARLTON SUBSTATION	6,294,326	75,862	
722	CARMEN POWERHOUSE	31,287	304	
723	CARSON SUBSTATION	2,593	1,201	
724	CASCADE STEEL SUBSTATION	87,356	1,539	
725	CATHLAMET SUBSTATION	101,018	2,381	
726	CEDARVILLE CITY SUBSTATION	22,896	0	
727	CEDARVILLE JUNCTION SUBSTATION	731,274	40,631	
728	CENTRAL FERRY SUBSTATION	1,352,132	31,366	
729	CENTRALIA MINES SUBSTATION	5,778	0	
730	CENTRALIA SUBSTATION	1,680,624	24,390	
731	CENTRALIA SWITCHING STATION	176,972	380	
732	CENTRALIA THERMAL POWERHOUSE	15,230	285	
733	CHALLIS SUBSTATION	65,343	0	
734	CHEHALIS SUBSTATION	15,921,614	274,082	
735	CHELATCHIE SUBSTATION	17,442	230	
736	CHEMAWA SUBSTATION	16,749,391	373,547	
737	CHEMICAL SUBSTATION	127,756	0	
738	CHENEY SUBSTATION	338,981	1,450	
739	CHENOWETH SUBSTATION	7,290,514	51,983	
740	CHERRY CREEK SUBSTATION	8,426	1,604	
741	CHESHIRE SUBSTATION (EPUD)	104,113	597	
742	CHEVRON SUBSTATION	20,231	921	
743	CHEWELAH SUBSTATION	26,994	547	
744	CHIEF JOSEPH SUBSTATION	23,535,065	498,609	72%
745	CHRISTMAS VALLEY SUBSTATION	36,342	1,762	
746	CITY VIEW SUBSTATION	29,453	736	
747	CLARK SUB	21,851	0	
748	CLARKSTON SUBSTATION	532,252	18,625	
749	CLATSKANIE SWITCHING STATION (CLATSKANIE PUD)	12,340	1,394	
750	CLATSOP SUBSTATION	2,415,469	102,996	
751	CLAYTON SUBSTATION	28,441	1,303	
752	CLINTON SUBSTATION (MISSOULA)	5,411	970	
753	COASTAL ENERGY GENERATING PLANT	10,371	2,049	
754	COEUR D'ALENE 15TH STREET SUBSTATION	37,103	335	
755	COFFIN BUTTE GENERATING PLANT	10,273	1,488	
756	COLD CREEK SUBSTATION	41,821	1,583	
757	COLLINS LAKE SUBSTATION	15,858	0	
758	COLLINS SUBSTATION	18,228	467	
759	COLUMBIA CREST SUBSTATION	15,608	330	
760	COLUMBIA FALLS SUBSTATION -- 115 YARD	3,436,193	106,266	
761	COLUMBIA FALLS SUBSTATION - 230 KV YARD	12,038,998	29,597	
762	COLUMBIA SUBSTATION	25,509,947	318,318	
763	COLVILLE SUBSTATION	4,151,056	69,469	
764	COMBINE HILLS II SUBSTATION (EURUS EGY)	47,138	2,095	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Stations	<u>Network Facilities</u>	Investment(\$)	O&M (\$)	Multi %
765	CONDON SUBSTATION	CBEC	41,086	782
766	CONDON WIND SUBSTATION(SEAWEST)	SEAWEST	72,793	8,826
767	CONKELLEY SUBSTATION		5,164,221	93,812
768	CONNELL SUBSTATION	BPA/FPUD	746,801	5,495
769	CORVALLIS SUBSTATION	RCEC	14,452	521
770	COSMOPOLIS SUBSTATION		1,392,400	50,661
771	COTTONWOOD METERING POINT(BPA)	AVA	54,681	327
772	COVINGTON SUBSTATION		36,751,175	1,135,295
773	COW CREEK SUBSTATION (UIUC)	UIUC	14,830	838
774	COWLITZ FALLS POWERHOUSE	LPUD	72,665	1,102
775	COWLITZ SUBSTATION(TACOMA PUBLIC UTILITIES)	TPWR	368,188	1,044
776	COWLITZ SUBSTATION(BPA)		2,703,529	33,505
777	COYOTE SPRINGS SUBSTATION	PGE	4,532,741	27,678
778	CRAIGMONT SUBSTATION	AVA	56,390	881
779	CRESTON SUBSTATION(BPA)	BPA/IPL	1,579,537	30,400
780	CRESWELL SUBSTATION	EPUD	31,204	785
781	CURLEW SUBSTATION	RREC	10,717	271
782	CUSICK SUBSTATION		1,806,564	21,718
783	CUSTER SUBSTATION		36,147,566	695,920
784	DARBY SUBSTATION	RCEC	23,882	990
785	DAY MT. SPOKANE	IPL	17,108	0
786	DAYTON SUBSTATION(BPA & COLUMBIA REA)	CREA	66,697	5,558
787	DAYTON SUBSTATION(MASON COUNTY)	M3PUD	42,516	568
788	DE MOSS SUBSTATION(BPA)		1,613,994	49,568
789	DECLO METERING POINT	SSE	43,494	752
790	DEER PARK SUBSTATION	BPA/IPL/AVA	461,637	11,537
791	DELENA SUBSTATION	CTPUD	60,981	2,263
792	DELIGHT SUBSTATION	BBEC	34,597	448
793	DELL SUBSTATION	VEC	30,156	1,009
794	DEXTER SUBSTATION (LANE ELECTRIC)	LEC	24,525	604
795	DILLARD SUBSTATION	EWEB	17,335	367
796	DILLON SUBSTATION	VEC	28,985	638
797	DILLON-SALMON SUBSTATION	NWE	110,343	841
798	DISCOVERY BAY SUBSTATION	JPUD	54,874	187
799	DISCOVERY SUBSTATION (N. WASCO PUD)	NW/PUD	124,219	5,126
800	DIVIDE SUBSTATION	VEC	22,748	306
801	DIXON SUBSTATION		3,481,862	25,568
802	DOE 251W SUBSTATION	DOE	12,982	215
803	DOE 451A SUBSTATION	DOE	11,839	142
804	DOE 451B SUBSTATION	DOE	21,042	5,674
805	DONALD NYS SUBSTATION	CRPUD	9,822	0
806	DOOLEY SUBSTATION (WINDY POINT)	WPP	164,759	3,982
807	DORENA SUBSTATION		195,315	13,648
808	DOVER SWITCHING STATION	NLI	18,324	207
809	DOWER SUBSTATION	KEC	30,249	191
810	DRAIN SUBSTATION		2,664,627	35,132
811	DREWSEY METERING POINT (IPCO)	IPC	6,039	509
812	DRISCOLL SUBSTATION		6,534,477	73,653
813	DROP PLANT PUMPING PLANT	YPWR	8,779	0
814	DRUMMOND MONTANA SUBSTATION	NWE	4,352	0
815	DRUMMOND SUBSTATION	BPA/FREC	10,885,405	135,178
816	DUCKABUSH SUBSTATION	M1PUD	37,560	3,185
817	DUTCH CANYON SUBSTATION	CRPUD	15,947	0
818	DWORSHAK SUBSTATION		20,299,284	105,419
819	EAGLE POINT METERING POINT	MWL	23,907	176
820	EAST BENCH SUBSTATION	VEC	29,447	568
821	EAST COLFAX SUBSTATION	AVA	6,054	486
822	EAST FOSSIL SUBSTATION	CBEC	50,617	345
823	EAST GREENACRES #1 METERING POINT	KEC	9,045	0
824	EAST GREENACRES #2 METERING POINT	AVA	7,420	0
825	EAST GREENACRES #3 METERING POINT	AVA	8,778	0
826	EAST HILLS SUBSTATION	BPA/SSE	537,847	8,626
827	EAST OMAK SUBSTATION		3,999,264	87,229
828	EAST PINE SUBSTATION	SCL	19,963	0
829	EAST SUBSTATION	TPUD	4,388	0
830	ECHO LAKE SUBSTATION		32,413,034	104,350
831	EGYPT SUBSTATION	IPL	29,691	162
832	EIGHT MILE CREEK METERING POINT	WREC	229,192	0

Appendix A  
BP-16 Initial Proposal Segmentation Details

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Stations	<u>Network Facilities</u>	Investment(\$)	O&M (\$)	Multi %
833	ELBE SUBSTATION	LPUD	27,620	1,674
834	ELLENSBURG SUBSTATION	BPA/ELN	1,239,887	84,173
835	ELM STREET SUBSTATION	OTEC	14,496	1,217
836	ELMA SUBSTATION	BPA/GHPUD	686,902	18,081
837	ELMAR SUBSTATION	MEC	33,016	776
838	ELMO SUBSTATION(MVP)	MVP	48,586	374
839	ELTOPIA BRANCH CANAL POWERHOUSE	SCBID	14,336	113
840	ELTOPIA SUBSTATION (BIG BEND)	BBEC	24,590	244
841	ELY SUBSTATION	BPUD	35,905	324
842	EMERGENCY OPERATING FACILITY	ENW	44,194	3,256
843	ENDERSBY SUBSTATION	WEC	9,311	1,383
844	ENERGIZER SUBSTATION (KPUD)	KPUD	147,359	6,237
845	ENTERPRISE SUBSTATION	WHPUD	21,193	180
846	EUGENE SUBSTATION		6,092,578	59,747
847	EUREKA SUBSTATION (LINCOLN ELEC)	LINC	37,497	1,740
848	EVERGREEN PUMP STATION	QCBID	24,923	939
849	EWAN SUBSTATION	AVA	8,238	20
850	FAIRCHILD AIR FORCE BASE NORTH SUBSTATION	USAF	25,055	646
851	FAIRCHILD AIR FORCE BASE SOUTH SUBSTATION	USAF	34,734	1,090
852	FAIRFIELD SUBSTATION	IPC	22,634	0
853	FAIRMOUNT SUBSTATION		15,151,510	128,865
854	FAIRVIEW SUBSTATION(BPA)		11,888,796	209,904
855	FEEDVILLE SUBSTATION (UEC)	UEC	6,548	484
856	FERN HILL SUBSTATION	PAC	13,666	450
857	FERN RIDGE SUBSTATION (LANE ELECTRIC)	LEC	16,530	736
858	FERNDALE SUBSTATION	WHPUD	17,315	404
859	FIDALGO SUBSTATION		4,642,101	52,838
860	FILBERT SUBSTATION(CITY OF FOREST GROVE)	FORG	15,622	171
861	FINLEY SUBSTATION (BENTON COUNTY PUD)	BPUD	11,011	1,384
862	FIRST LIFT SUBSTATION		28,131	0
863	FIRST STREET SUBSTATION	RICH	69,550	1,146
864	FISHERS ROAD SUBSTATION	CPU	6,861	0
865	FLATHEAD SUBSTATION(BPA & FLATHEAD ELEC)	BPA/FEC	5,621,981	41,709
866	FLORENCE SUBSTATION (CENTRAL LINCLON PUD)	CLPUD	17,351	426
867	FORDS PRAIRIE SUBSTATION(CITY OF CENTRALIA)	CCL	38,555	243
868	FORDS PRAIRIE SUBSTATION(LEWIS CO PUD)	LPUD	25,993	887
869	FOREST GROVE SUBSTATION	BPA/FORG	5,137,437	45,693
870	FORT ROAD METERING POINT	YPWR	23,768	237
871	FORT ROCK SUBSTATION (MIDSTATE ELECTRIC COOP)	MEC	2,580	0
872	FOSSIL SUBSTATION		1,215,681	45,903
873	FOSTER CREEK SUBSTATION(NESPELEM VALLEY ELEC)	NVEC	56,093	3,310
874	FOSTER CREEK SUBSTATIONDOUGLAS CO PUD)	DOPD	33,214	0
875	FOSTER WELLS SUBSTATION	FPUD	87,713	609
876	FOUR LAKES SUBSTATION	IPL/CHNY	67,720	3,382
877	FOURTH AND HERALD SUBSTATION	AVA	18,003	0
878	FRANKLIN SUBSTATION	BPA/FPUD	7,519,624	251,347
879	FRANZ HOLMES SUBSTATION	ELM	152,954	670
880	FREEWATER SUBSTATION(BPA)	BPA/CMF	1,737,784	12,022
881	FRENCHMAN HILLS SUBSTATION	USBR	14,788	422
882	FRENCHMAN SPRINGS SUBSTATION	USBR	19,285	672
883	FRENCHTOWN SUBSTATION (MISSOULA)	MEC	24,770	574
884	FROMAN SUBSTATION	CPI	10,025	428
885	GARIBALDI SUBSTATION(TILLAMOOK PUD)	TPUD	350,237	2,188
886	GARRISON SUBSTATION		47,828,951	335,935
887	GATES OF THE MOUNTAINS METERING POINT	NWE	7,949	703
888	GEISEL MONUMENT SUBSTATION	CCEC	37,685	187
889	GEM STATE HYDRO PLANT	IFP	10,421	53
890	GEORGIA PACIFIC SUBSTATION(PSE)	PSE	69,838	64
891	GIG HARBOR SUBSTATION	TPWR	59,167	985
892	GILMER SUBSTATION(KLICKITAT CO PUD)	KPUD	22,504	302
893	GLASGOW SUBSTATION	CLPUD	30,939	453
894	GLENOMA SUBSTATION	LPUD	52,158	379
895	GLENWOOD SUBSTATION	KPUD	40,100	480
896	GOBLE SUBSTATION	CRPUD	29,349	501
897	GOLD BAR SUBSTATION	SNOPUD	20,053	485
898	GOLD BEACH SUBSTATION		129,528	5,463
899	GOLDENDALE SUBSTATION(BPA)		1,220,930	23,962
900	GOOSE LAKE SUBSTATION(NESPELEM VALLEY ELEC)	NVEC	6,433	1,252



Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Stations	<u>Network Facilities</u>	Investment(\$)	O&M (\$)	Multi %
901	GORMLEY SUBSTATION (MCMINNVILLE W & L)	MWL	47,378	0
900	GOSHEN SUBSTATION(PACIFICORP)	PAC	2,375,647	0
901	GOSHEN SUBSTATION(UTAH POWER & LIGHT)	PAC	5,350,514	112,028
902	GRAND COULEE #2 METERING POINT	GPUD	10,705	1,295
903	GRAND COULEE SUBSTATION	GPUD	385,862	1,854
904	GRAND RONDE SUBSTATION	PGE	31,005	419
905	GRANDVIEW SUBSTATION	BPA/BREA	3,490,379	57,734
906	GRANGEVILLE SUBSTATION	AVA	1,434	0
907	GRANTSDALE SUBSTATION	RCEC	5,648	551
908	GRAYS HARBOR FACILITY NO 1 (GRAYS HARBOR ENE	GHE	11,252	3,663
909	GRAYS RIVER SUBSTATION	WPUD	61,344	2,644
910	GREEN VALLEY SUBSTATION		2,774,705	15,810
911	GREENTIMBER SUBSTATION	FREC	37,716	222
912	GROUSE CREEK METERING POINT	RREC	13,002	376
913	GUM STREET SUBSTATION	BPUD	20,554	319
914	H2F SUBSTATION	BPUD	23,867	483
915	HAAKENSON SUBSTATION	ELM	106,056	884
916	HAGEN SUBSTATION	PPUD	48,927	329
917	HALF MOON SUBSTATION(INLAND POWER & LIGHT)	IPL	20,346	118
918	HAMPTON SUBSTATION	CEC	73,268	3,970
919	HANFORD SUBSTATION		24,766,759	181,547
920	HANNA SUBSTATION(DOUGLAS CO PUD)	GNC	5,942	0
921	HAPPY VALLEY SUBSTATION		3,835,998	29,999
922	HARNEY SUBSTATION(BPA)		7,682,298	72,212
923	HARVALUM SUBSTATION		3,172,717	53,137
924	HARVEST WIND SUBSTATION (KPUD)	KPUD	121,495	3,819
925	HARVEY SUBSTATION	NVA	292,372	673
926	HASKILL SUBSTATION	FEC	35,947	6,694
927	HASKINS METERING POINT	WOEC	7,710	608
928	HAT ROCK SUBSTATION		5,040,308	25,146
929	HATTON SUBSTATION (BIG BEND)	BBEC	21,007	524
930	HATWAI SUBSTATION		10,839,430	184,475
931	HAUSER SUBSTATION(BPA)		185,541	9,092
932	HAUSER SUBSTATION(CENTRAL LINCOLN PUD)	CLPUD	27,964	23
933	HAWK ROAD METERING POINT	YPWR	17,340	423
934	HAWKINS SUBSTATION	EWEB	10,130	159
935	HAY CANYON SUBSTATION (IBERDOLA)	IBER	37,988	2,470
936	HAY MILL SUBSTATION (UNITED ELEC & CITY OF RUPERT)	UEC/RUPT	228,286	15,165
937	HAYDEN SUBSTATION	KEC	35,420	81
938	HAYFORD SUBSTATION(INLAND POWER & LIGHT)	IPL	14,000	216
939	HEBO SUBSTATION	BPA/TPUD	389,712	16,039
940	HEDGES SUBSTATION(BENTON CO PUD)	BPUD	14,917	286
941	HEGLAR SUBSTATION	RREC	34,766	1,724
942	HEIMARK METERING POINT	APUD	37,535	278
943	HEPPNER GENERATING STATION	MORR	27,447	0
944	HERMISTON BUTTE (UEC)	UEC	20,111	809
945	HEYBURN SUBSTATION		9,390,009	61,600
946	HIDEAWAY SUBSTATION (LANE ELECTRIC)	LEC	10,025	350
947	HIGHLANDS SUBSTATION(BENTON CO PUD)	BPUD	13,750	721
948	HILLTOP SUBSTATION	BPA/NEV	1,907,532	26,902
949	HILTON LAKE SUBSTATION	SNOPUD	28,003	400
950	HINES SUBSTATION	OTEC	32,533	1,035
951	HOLCOMB SUBSTATION		653,608	28,272
952	HOOD RIVER SUBSTATION		607,958	17,390
953	HOODOO SUBSTATION	IPL	9,803	172
954	HOPE VALLEY METERING POINT	QCBID	13,403	654
955	HOPKINS RIDGE SUBSTATION	PSE	30,813	3,481
956	HORN BUTTE SUBSTATION (INV/ENERGY WIND)	INVER	30,813	4,048
957	HORN RAPIDS SUBSTATION	BREA	30,595	1,683
958	HORSE HEAVEN SUBSTATION		2,982,891	36,788
959	HOT SPRINGS SUBSTATION		18,375,338	433,070
960	HUGHS SUBSTATION(SALEM ELEC COOP)	SEC	40,198	1,649
961	IDAHO FALLS SUBSTATION	PAC	2,983	1,597
962	IDAHOME SUBSTATION		471,469	15,239
963	IMRIE SUBSTATION (PACW)	PAC	29,094	6,781
964	INTALCO SUBSTATION		659,933	10,253
965	IONE SUBSTATION		582,192	19,826
966	IRBY SUBSTATION	BPA/IPL	337,734	7,881

Appendix A  
BP-16 Initial Proposal Segmentation Details

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Stations	<u>Network Facilities</u>	Investment (\$)	O&M (\$)	Multi %
967	IRRIGRO SUBSTATION	BPUD	4,436	0
968	JENKINS SUBSTATION	KTPUD	183,601	512
969	JERICO PUMPING PLANT	GPUD	36,866	1,198
970	JIGGS-LEE METERING POINT	IPC	22,773	0
971	JIM CREEK SUBSTATION	USN	20,733	636
972	JOHN CURTIS SUBSTATION	PLW	76,330	552
973	JOHN DAY CONSTRUCTION SUBSTATION	KPUD	38,025	534
974	JOHN DAY SUBSTATION		21,916,385	150,944
975	JOHN DAY SUBSTATION - 230 YARD		28,114,749	39,223
976	JOHNS PRAIRIE SUBSTATION	M3PUD	36,662	261
977	JONES CANYON SUBSTATION		16,712,468	38,273
978	JONES SUBSTATION	VEC	5,407	350
979	JULIAETTA SUBSTATION	AVA	11,005	283
980	JUNCTION CITY SUBSTATION(BLACHLY-LANE CO ELEC COOP)	BLEC	5,106	315
981	JUNIPER CANYON I SUBSTATION (IR INC.)	IBER	9,144	3,970
982	KAH-NEE-TA SUBSTATION	WEC	53,561	732
983	KALISPELL SUBSTATION(BPA)		5,339,069	84,135
984	KAMIAH SUBSTATION	AVA	19,894	1,570
985	KEELER SUBSTATION		67,750,849	1,031,596
986	KELLER SUBSTATION		464,356	9,168
987	KELTON SUBSTATION	RREC	21,825	1,310
988	KENNEDY SUBSTATION	BREA	34,007	2,352
989	KENNEWICK SUBSTATION(BENTON CO PUD)	BPUD	23,070	278
990	KERR SUBSTATION(BPA)		1,155,566	24,413
991	KETTLE FALLS SUBSTATION	AVA	5,249	580
992	KITSAP SUBSTATION		13,062,614	170,369
993	KLONDIKE SCHOOLHOUSE SUBSTATION (IBERDOLA)	IBER	29,337	5,888
994	KLONDIKE SUBSTATION	WEC	99,532	4,186
995	KNAPPA SVENSEN SUBSTATION	PAC	2,188	302
996	KOOSKIA SUBSTATION	AVA	21,459	332
997	LA GRANDE SUBSTATION		7,319,965	52,391
998	LA PINE SUBSTATION		11,685,487	88,621
999	LAGOON SUBSTATION	CMF	22,101	602
1000	LA GRANDE POWERHOUSE	TPWR	18,997	0
1001	LAKE BAY SUBSTATION	PLC	7,193	1,085
1002	LAKE GROVE SUBSTATION	LLP	62,954	566
1003	LAKE LENORE #1 IRRIGATION PUMP	QCBID	12,122	326
1004	LAKE LENORE #2 IRRIGATION PUMP	QCBID	12,736	777
1005	LAKESIDE SUBSTATION (CLP)	CLPUD	21,534	961
1006	LAKESIDE SUBSTATION (FEC)	FEC	22,744	529
1007	LAKEVIEW SUBSTATION	SVEC	59,059	685
1008	LANCASTER SUBSTATION(BPA)		365,490	62,771
1009	LANE SUBSTATION		14,241,070	172,946
1010	LARENE SUBSTATION (INLAND)	IPL	440	195
1011	LATERAL 4 METERING POINT	YPWR	42,935	2,184
1012	LATHAM SUBSTATION	EPUD	89,194	703
1013	LEBANON SUBSTATION		3,701,597	27,647
1014	LEVEY SUBSTATION		810,177	19,051
1015	LEWIS & CLARK SUBSTATION	PAC	7,015	0
1016	LEXINGTON SUBSTATION		4,189,513	93,632
1017	LIBBY SUBSTATION(BPA)		5,974,273	135,458
1018	LIBBY SUBSTATION(BPA/FLATHEAD ELEC)	BPA/FEC	674,984	9,811
1019	LINDEN SUBSTATION (KPUD)	KPUD	10,273	0
1020	LION MOUNTAIN SUBSTATION	FEC	47,515	1,240
1021	LITTLE FALLS GENERATING PLANT	AVA	3,547	0
1022	LITTLE GOOSE SUBSTATION		9,986,440	76,055
1023	LOCUST SUBSTATION	MEWC	32,812	1,229
1024	LODHOLM SUBSTATION	PLC	59,434	268
1025	LOLO SUBSTATION(MPC)	NWE	16,060	169
1026	LONE PINE SUBSTATION(PACIFICORP)	NVEC	26,796	0
1027	LONGVIEW SUBSTATION		35,278,815	247,097
1028	LOOKINGGLASS SUBSTATION(BPA)		329,093	3,033
1029	LOOKOUT POINT SUBSTATION		1,660,895	22,553
1030	LOPEZ ISLAND SUBSTATION(BPA)		6,976,971	78,020
1031	LOST RIVER SUBSTATION	BPA/LREC	1,860,060	30,052
1032	LOW GAP METERING POINT	QCBID	11,133	501
1033	LOWER BULB GENERATING PLANT	IFP	16,027	0
1034	LOWER GRANITE SUBSTATION		6,286,185	79,297

Appendix A  
BP-16 Initial Proposal Segmentation Details

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Stations	<u>Network Facilities</u> Owner	Investment(\$)	O&M (\$)	Multi %
1035	LOWER MONUMENTAL SUBSTATION	16,646,615	102,719	88%
1036	LOWER WOODCHUCK SUBSTATION	34,740	241	
1037	LUHR BEACH SUBSTATION	58,733	1,051	
1038	LUMP GULCH SUBSTATION	20,312	1,141	
1039	LYLE SUBSTATION	48,978	363	
1040	LYN PUMPS PUMPING PLANT	28,149	0	
1041	MABTON SUBSTATION	1,352,795	11,115	
1042	MACKAY SUBSTATION	198,886	91	
1043	MACKS INN SUBSTATION	429,291	39,127	
1044	MADISON SUBSTATION	1,559,262	20,427	
1045	MAPLE VALLEY SUBSTATION	67,684,696	444,905	
1046	MAPLETON SUBSTATION	387,996	19,533	68%
1047	MARENGO SUBSTATION	28,220	633	
1048	MARION SUBSTATION	32,148,738	358,076	91%
1049	MARTIN CREEK SUBSTATION	4,342,343	30,817	
1050	MASHEL PRAIRIE SUBSTATION (OHOP)	131,931	1,324	
1051	MASON SUBSTATION(MASON CO PUDNO 3)	56,492	347	
1052	MAUPIN SUBSTATION	1,872,509	47,363	
1053	MAYFIELD POWERHOUSE	3,167	0	
1054	MAYFIELD SWITCHYARD	202,128	1,550	
1055	MAYVIEW SUBSTATION (INLAND POWER)	100,985	859	
1056	MCCULLOUGH SUBSTATION	29,139	484	
1057	MCKENZIE SUBSTATION(EWEB)	47,720	427	
1058	MCCLOUGHLIN SUBSTATION	329,194	30,373	
1059	MCMINNVILLE SUBSTATION	1,913,615	55,029	
1060	MCNARY SUBSTATION	45,352,829	362,972	88%
1061	MESA SUBSTATION	91,656	1,009	
1062	METALINE FALLS SUBSTATION(PEND OREILLE CO PUD)	14,425	301	
1063	MIDWAY SUBSTATION(BPA)	16,732,077	251,084	
1064	MILAN SUBSTATION	27,672	461	
1065	MILL PLAIN SUBSTATION	3,331	0	
1066	MILL PRIMARY SUBSTATION	44,409	0	
1067	MILLER SUBSTATION(LAKEVIEW LIGHT & PWR)	123,121	1,097	
1068	MILTON SUBSTATION(CITY OF MILTON FREEWATER)	141,908	8,089	
1069	MINICO SUBSTATION (UNITED ELECTRIC)	12,493	1,215	
1070	MINT FARM SWITCHING STATION	12,566	4,616	
1071	MISSION SUBSTATION	4,255	429	
1072	MIST SUBSTATION	50,488	3,047	
1073	MOAB SUBSTATION	27,824	1,049	
1074	MOHLER SUBSTATION(TILLAMOOK PUD)	29,278	2,557	
1075	MONROE SUBSTATION	39,368,091	676,141	
1076	MORRISON SUBSTATION	17,456	0	
1077	MOSCOW SUBSTATION	13,897	463	
1078	MOSSY ROCK SUBSTATION	17,122	0	
1079	MOSSY ROCK SWITCHYARD	47,727	949	
1080	MOUNTAIN HOME SUBSTATION(IDAHO POWER)	67,338	2,548	
1081	MOUNTAIN VIEW SUBSTATION(MASON CO PUD NO 3)	29,452	177	
1082	MOXEE SUBSTATION	2,368,692	41,495	
1083	MOYIE DAM	32,179	1,430	
1084	MT. HALL SUBSTATION	15,208	697	
1085	MT. VERNON SUBSTATION(SPRINGFIELD UTILITY BOARD)	7,307	208	
1086	MURRAY SUBSTATION	9,537,277	219,691	
1087	NAPAVINE SUBSTATION	848,895	20,052	
1088	NARROWS SUBSTATION	96,416	3,020	
1089	NASELLE SUBSTATION	4,091,803	69,581	
1090	NEFF ROAD METERING POINT	46,637	547	
1091	NEWCOMB SUBSTATION(SOLD)	28,362	855	
1092	NEWPORT SUBSTATION(INLAND POWER)	262,565	1,042	
1093	NINE CANYON SUBSTATION (BENTON PUD)	87,961	8,099	
1094	NINE MILE SUBSTATION (FPLE)	42,950	4,488	
1095	NORTH BEND SUBSTATION	39,582	271	
1096	NORTH BONNEVILLE SUBSTATION	7,070,403	107,370	63%
1097	NORTH BROOKINGS SUBSTATION	439,706	7,150	
1098	NORTH LEWISTON SUBSTATION	20,900	98	
1099	NORTH PASCO SUBSTATION	59,484	594	
1100	NORTH PORT SUBSTATION (CCL)	25,067	80	
1101	NORTH POWDER SUBSTATION	4,392	0	
1102	NOTI CREEK SUBSTATION	114,195	1,902	

Appendix A  
BP-16 Initial Proposal Segmentation Details

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Stations	<u>Network Facilities</u>	Investment(\$)	O&M (\$)	Multi %	
1103	NOXON CONSTRUCTION SUBSTATION	AVA	207,354	1,029	
1104	NOXON DAM POWERHOUSE	AVA	50,959	0	
1105	NOXON SWITCHYARD	AVA	3,248	954	
1106	OAK KNOLL SUBSTATION	PAC	17,403	416	
1107	OAKRIDGE SUBSTATION (LANE ELECTRIC)	LEC	156,911	2,093	
1108	ODESSA SUBSTATION		816,570	13,857	
1109	O'GARA SUBSTATION	AVA	1,305	342	
1110	OHOP SUBSTATION	TPWR	61,175	2,752	
1111	OKANOGAN SUBSTATION	OPUD	10,025	1,542	
1112	OLD LOWER GENERATING PLANT	IFP	7,514	0	
1113	OLINDA SUBSTATION	WAPA	362,189	45	
1114	OLNEY METERING POINT	WOEC	35,014	620	
1115	OLYMPIA SUBSTATION		35,731,240	483,300	
1116	OLYMPIC PIPELINE	SNOPUD	12,580	447	
1117	OMAK SUBSTATION	OPUD	13,613	337	
1118	OPHIR SUBSTATION	OPUD	11,385	0	
1119	OPPORTUNITY SUBSTATION	AVA	15,961	268	
1120	OREGON CITY SUBSTATION		5,257,822	78,989	
1121	OREMET SUBSTATION	PAC	31,352	0	
1122	OSTRANDER SUBSTATION		52,149,717	345,931	
1123	OTHELLO SUBSTATION	AVA	69,527	14	
1124	OUTBACK SOLAR GENERATING PLANT (OUTBACK SOLAR, LLC)	OSLLC	14,510	115	
1125	OVANDO SUBSTATION		1,485,661	27,639	
1126	OXBOW SUBSTATION(PACIFIC CO PUD)	PPUD	14,180	830	
1127	PACIFIC SUBSTATION	UEC	39,385	524	
1128	PACKWOOD POWERHOUSE	ENW	21,911	1,069	
1129	PACKWOOD SUBSTATION	LPUD	59,119	0	
1130	PARKDALE SUBSTATION		628,684	10,296	51%
1131	PARKLAND SUBSTATION	PLW	20,439	0	
1132	PASCO SUBSTATION	PAC	97,900	979	
1133	PATEROS SUBSTATION	OPUD	11,455	0	
1134	PATERSON SUBSTATION	BPUD	19,705	569	
1135	PATTON VALLEY METERING POINT	WOEC	17,235	499	
1136	PATU SUBSTATION	PATU	6,177	0	
1137	PAUL SUBSTATION		14,678,147	218,537	
1138	PE ELL SUBSTATIONLEWIS CO PUD)	LPUD	16,913	822	
1139	PEARL SUBSTATION		39,893,496	292,007	
1140	PEBBLE SPRINGS SUBSTATION (IBERDOLA)	IBER	193,916	0	
1141	PENDERGAST SUBSTATION	VEC	5,409	392	
1142	PENDLETON SUBSTATION	BPA/UEC	43,283	17,418	
1143	PHILLIPS SUBSTATION	BPUD	51,248	625	
1144	PHL ROAD METERING POINT	WOEC	12,687	235	
1145	PIKE METERING POINT	WOEC	46,084	803	
1146	PILOT ROCK SUBSTATION	PAC	166,943	413	
1147	PINE HOLLOW SUBSTATION	WEC	9,950	1,305	
1148	PIONEER SUBSTATION	M3PUD	26,068	63	
1149	PLEASANT HILL SUBSTATION	EPUD	25,938	145	
1150	PLEASANT VIEW SUBSTATION	AVA	6,044	203	
1151	PLUMMER SUBSTATION	AVA	55,840	980	
1152	PLYMOUTH SUBSTATION	BREA	41,633	385	
1153	POINT OF ROCKS SUBSTATION	VEC	47,044	1,319	
1154	POMEROY SUBSTATION(BPA)	BPA/IPL	85,125	17,328	
1155	PONDEROSA SUBSTATION(BPA)		53,921,195	89,865	
1156	POPCORN HILL METERING POINT	PGE	22,116	0	
1157	PORT ANGELES SUBSTATION(BPA)		18,129,316	284,258	
1158	PORT ANGELES SUBSTATION(ITT RAYONIER)	NPI	465,014	0	
1159	PORT ORFORD SUBSTATION		38,845	1,504	9%
1160	PORT TOWNSEND SUBSTATION	PTPC	54,323	1,490	
1161	POTHOLES EAST CANAL GENERATING PLANT	SCBID	14,299	116	
1162	POTHOLES SUBSTATION		4,230,633	97,834	
1163	POTLATCH SUBSTATION(AVISTA)	AVA	34,912	629	
1164	POTLATCH SUBSTATION(BPA)		932,667	20,182	83%
1165	POWERLINE SUBSTATION	EPUD	22,086	465	
1166	PRAIRIE SUBSTATION(WWP & KOOTENAI ELEC COOP)	KEC/VWP	15,691	213	
1167	PRIEST RIVER SUBSTATION(AVISTA)	AVA	30,389	311	
1168	PRIEST RIVER SUBSTATION(BPA)		784,499	12,433	
1169	PROSSER SUBSTATION(BENTON CO PUD)	BPUD	12,087	480	
1170	PURDY SUBSTATION	PLC	59,163	833	

Appendix A  
BP-16 Initial Proposal Segmentation Details

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Stations	<u>Network Facilities</u>	Investment(\$)	O&M (\$)	Multi %
1171	PYRAMID SUBSTATION	CSCL	26,868	642
1172	QUARTZ SUBSTATION (IDAHO POWER)	IPC	9,766	954
1173	QUILCENE SUBSTATION	JPUD	25,406	0
1174	QUINCY SUBSTATION	GPUD	16,867	105
1175	RADAR PUMPING PLANT	USBR	13,763	540
1176	RAFT SUBSTATION	RREC	2,177	2,862
1177	RAINIER SUBSTATION	CTPUD	146,713	716
1178	RALSTON SUBSTATION (BIG BEND)	BBEC	5,604	219
1179	RANDLE SUBSTATION	LPUD	32,099	0
1180	RATHDRUM SUBSTATION	AVA	28,219	1,371
1181	RATTLESNAKE ROAD SUBSTATION (HORIZON WIND)	AWPP	16,318	0
1182	RATTLESNAKE SUBSTATION(BENTONREA)	BREA	43,829	626
1183	RAVER SUBSTATION		43,748,874	313,427
1184	RAYMOND SUBSTATION		2,961,404	79,888
1185	REATA SUBSTATION(BENTON CO PUD)	BPUD	12,863	356
1186	RED MOUNTAIN SUBSTATION		4,273,462	30,691
1187	REDMOND SUBSTATION(BPA)		35,201,178	258,620
1188	REEDSPORT SUBSTATION (BPA)		2,819,692	35,352
1189	REPUBLIC SUBSTATION		537,888	15,410
1190	RESTON SUBSTATION		347,850	11,321
1191	RICHLAND SUBSTATION		2,451,184	52,640
1192	RILEY SUBSTATION	HEC	50,777	413
1193	RIMROCK LAKE SUBSTATION (BENTON REA)	BREA	30,789	215
1194	RIVER ROAD GENERATION PLANT SUBSTATION	CPU	10,244	4,332
1195	RIVERBEND LANDFILL GENERATING PLANT (WM LLC)	WM LLC	10,273	769
1196	RIVERFRONT SUBSTATION	BPUD	21,522	241
1197	RIVERGATE SUBSTATION	PGE	4,468	557
1198	RIVERTON SUBSTATION(CITY OF HEYBURN)	HEYB	22,577	602
1199	ROBBINS ROAD METERING POINT	YPWR	20,394	365
1200	ROCK CREEK SUBSTATION		42,927,116	90,146
1201	ROCKY BROOK POWERHOUSE	M1PUD	2,016	480
1202	ROCKY REACH SUBSTATION		4,230,844	15,418
1203	ROE'S CORNER SUBSTATION	RUPT/EEM/REC	38,236	2,088
1204	ROGUE SUBSTATION		15,892,726	116,938
1205	ROSALIA SUBSTATION	AVA	28,425	1,013
1206	ROSS SUBSTATION		14,460,085	390,677
1207	ROUND VALLEY SUBSTATION		1,571,272	21,933
1208	ROUNDUP SUBSTATION		5,356,636	74,676
1209	ROXBORO SUBSTATION	AVA	21,585	701
1210	ROY L ZIMMERMAN SUBSTATION	CCL	45,535	381
1211	ROZA SUBSTATION		3,368	0
1212	RUBY STREET SUBSTATION (FRANKLIN CO PUD)	FPUD	61,727	1,154
1213	RUSSELL SMITH POWERHOUSE	SCBID	11,906	82
1214	SACA JAWEA SUBSTATION		23,153,747	56,286
1215	SACHEEN SUBSTATION		2,175,355	51,000
1216	SAGEHILL SUBSTATION	FPUD	1,506	508
1217	SALEM ALUMINA SUBSTATION(SALEM ELEC COOP)	SEC	18,224	377
1218	SALEM SUBSTATION (SALEM ELEC)	BPA/SEC	5,502,971	100,061
1219	SAMMAMISH SUBSTATION	PSE	1,911	54
1220	SAMUELS SUBSTATION	NLI	42,869	6,720
1221	SAND CREEK SUBSTATION		5,920,812	39,172
1222	SAND DUNES SUBSTATION	GPUD	3,510,776	0
1223	SAND HILL CRANE SUBSTATION	RICH	70,897	1,126
1224	SANDPOINT SUBSTATION(BPA)		991,943	23,438
1225	SANTIAM SUBSTATION		15,084,336	257,346
1226	SAPPHO SUBSTATION		1,673,235	63,123
1227	SATSOP PARK SUBSTATION (GHPUD)	GHPUD	171,077	3,519
1228	SATSOP SUBSTATION(BPA)		19,689,183	113,327
1229	SATUS 2 SUBSTATION	YPWR	9,693	0
1230	SATUS 3 SUBSTATION	YPWR	28,953	0
1231	SCAPPOOSE SUBSTATION	PGE	39,482	528
1232	SCARCELLO SUBSTATION (KOOTENAI ELECTRIC)	KEC	10,025	447
1233	SCHULTZ SUBSTATION		64,962,498	200,618
1234	SCOGGINS VALLEY METERING POINT	WOEC	27,685	326
1235	SCOOTENEY SUBSTATION		913,406	16,682
1236	SEDRO WOOLLEY SUBSTATION	PSE	41,393	579
1237	SETTERS SUBSTATION	KEC	18,961	88
1238	SEVEN FEATHERS SUBSTATION (UIUC)	UIUC	10,387	1,064

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Stations	<u>Network Facilities</u>	Investment(\$)	O&M (\$)	Multi %
1239	SHANO SUBSTATION	BBEC	32,045	361
1240	SHELTON SUBSTATION		28,068,188	139,598
1241	SHEPHERDS FLAT SUBSTATION (CAITHNESS SF)	CASH	63,847	0
1242	SHORT MOUNTAIN GENERATING PLANT	EPUD	17,681	299
1243	SICKLER SUBSTATION		11,492,823	440,137
1244	SIFTON SUBSTATION		6,042,486	109,482
1245	SILVER BOW SUBSTATION		1,751,947	24,837
1246	SILVER CREEK SUBSTATION		2,426,867	60,824
1247	SILVER STAR SUBSTATION	VEC	44,433	909
1248	SILVERADO SUBSTATION (CLALLAMCO. PUD)	CMPUD	119,823	111
1249	SKOOKUM SUBSTATION	M3PUD	68,054	340
1250	SLATT SUBSTATION		73,092,471	178,792
1251	SMITH CREEK POWERHOUSE	SFH	4,962	285
1252	SMITHSON SUBSTATION (KITITITAS CO PUD)	KTPUD	29,513	0
1253	SNIPES SUBSTATION	BREA	90,899	1,820
1254	SNIPTION SUBSTATION	CBEC	47,195	232
1255	SNOHOMISH SUBSTATION		41,318,035	576,758
1256	SNO-KING SUBSTATION		31,733,347	277,320
1257	SNYDER SUBSTATION	RICH	24,522	383
1258	SODA SPRINGS SUBSTATION	SODA	6,336	0
1259	SOUTH BUTTE SUBSTATION	SREC	12,037	0
1260	SOUTH CUT BANK SUBSTATION	GEC	11,955	0
1261	SOUTH ELMA SUBSTATION	GHPUD	342,096	3,108
1262	SOUTH FORK SUBSTATION	TPUD	49,334	484
1263	SOUTH SLOPE SUBSTATION	BREA	31,283	249
1264	SOUTH SUBSTATION (SEATTLE CITY LIGHT)	SCL	62,772	0
1265	SOUTH TACOMA SUBSTATION		4,284,160	57,863
1266	SPALDING SUBSTATION	CPC	51,421	238
1267	SPANGLE SUBSTATION	AVA	18,957	301
1268	SPAR CANYON SUBSTATION	SREC	544,905	41,268
1269	SPAW SUBSTATION	BPUD	11,078	0
1270	SPEARFISH SUBSTATION(KLICKITAT CO PUD)	KPUD	35,741	999
1271	SPRING CREEK SUBSTATION		9,530,317	38,317
1272	SPRINGFIELD SUBSTATION(SPRINGFIELD UTILITY BOARD)	SUB	23,401	0
1273	SPRINGHILL SUBSTATION(INLAND POWER & LIGHT)	IPL	23,544	282
1274	ST. HELENS SUBSTATION	PGE	18,502	2,003
1275	ST. JOHNS SUBSTATION		7,539,819	167,114
1276	STEVENS DRIVE SUBSTATION(CITY OF RICHLAND)	RICH	51,835	211
1277	STEVENSON SUBSTATION	SKPUD	25,896	1,330
1278	STEVENSVILLE SUBSTATION	RCEC	2,086	749
1279	STILLWATER SUBSTATION(LINCOLN ELECTRIC COOP)	LINC	37,172	847
1280	SUBSTATION FG	USN	15,482	4,517
1281	SUGAR MILL SUBSTATION	IFP	185,017	863
1282	SULLIVAN SUBSTATION(VERA WATER & POWER)	VWP	5,684	202
1283	SUMAS SUBSTATION	SUM	13,840	895
1284	SUMMER LAKE SUBSTATION	PAC	2,269,369	37,293
1285	SUMNER SUBSTATION	CCEC	22,970	606
1286	SUN HEAVEN NO. 2 SUBSTATION	BPUD	31,152	961
1287	SUNNYSIDE PORT SUBSTATION	BREA	35,471	0
1288	SUNSET ROAD SUBSTATION (BENTON CO PUD)	BPUD	26,467	523
1289	SWAN VALLEY SUBSTATION		5,493,001	55,051
1290	SWEETWATER SUBSTATION	AVA	22,846	586
1291	TACOMA SUBSTATION		17,545,371	447,441
1292	TAFT SUBSTATION		34,179,384	220,480
1293	TAHKENITCH SUBSTATION		7,127,297	56,936
1294	TAPTEAL SUBSTATION	RICH	92,685	700
1295	TARBELL SUBSTATION	CRPUD	18,665	313
1296	TARGHEE SUBSTATION	BPA/FREC	1,595,611	48,256
1297	TARGHEE TAP SWITCHING STATION		317,710	2,393
1298	TARKIO SUBSTATION (MISSOULA)	MEC	3,886	391
1299	TAYLOR FLATS SUBSTATION	FPUD	53,710	380
1300	TEANAWAY SUBSTATION	KTPUD	398	339
1301	TECOMA METERING POINT	RREC	15,357	1,437
1302	TETON SUBSTATION		3,212,501	62,250
1303	THAYER DRIVE SUBSTATION(CITY OF RICHLAND)	RICH	85,951	754
1304	THE DALLES SUBSTATION	BPA/NWPUD/WEC	2,378,051	47,957
1305	THOMPSON FALLS SUBSTATION	NWE	41,428	1,313
1306	THURSTON SUBSTATION	EWEC	27,476	435

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
Stations	<u>Network Facilities</u>	Investment(\$)	O&M (\$)	Multi %
1307	TIDE FLATS SUBSTATION	(1,389)	0	
1308	TILLAMOOK SUBSTATION	7,803,817	141,338	
1309	TIMBER SUBSTATION	748,498	25,770	
1310	TINCUP SUBSTATION	559,127	11,575	
1311	TOLEDO SUBSTATION	12,832,803	130,368	
1312	TOSTON SUBSTATION	24,600	2,919	
1313	TOWNSEND METERING POINT	35,194	1,340	
1314	TRASK RIVER SUBSTATION	19,987	2,130	
1315	TREGO SUBSTATION(LINCOLN ELECTRIC COOP)	588,787	12,186	
1316	TRENTWOOD SUBSTATION	3,391,935	31,139	49%
1317	TROUT CREEK SUBSTATION	45,108	507	
1318	TROUTDALE SUBSTATION(BPA)	30,368,480	189,376	
1319	TROY SUBSTATION	114,273	3,278	12%
1320	TRUMBULL CREEK SUBSTATION	51,540	581	
1321	TUCANNON RIVER SUBSTATION	3,851,588	42,462	
1322	TUM TUM SUBSTATION	21,889	486	
1323	TWILIGHT SUBSTATION	20,840	167	
1324	TWISP SUBSTATION	66,883	0	
1325	TYEE SUBSTATION	86,912	900	
1326	TYGH VALLEY SUBSTATION (WASCO ELEC. COOP)	27,349	481	
1327	U. S. PLYWOOD SUBSTATION	15,723	0	
1328	UKIAH SUBSTATION	81,846	1,339	
1329	UNDERWOOD SUBSTATION	29,277	1,427	
1330	UNDERWOOD TAP AUTO-SECTIONALIZING STATION	698,308	2,489	
1331	UNITY SUBSTATION (IDAHO POWERCOMPANY)	6,894	0	
1332	UNITY SUBSTATION(BPA)	1,553,224	50,272	
1333	UPPER GENERATING PLANT	17,829	0	
1334	USK SUBSTATION(BPA)	136,257	26,154	
1335	VALHALLA SUBSTATION	3,639,321	125,270	92%
1336	VALLEY SUBSTATION(RAFT RIVER ELEC COOP)	23,392	2,204	
1337	VANCOUVER SHIPYARD SUBSTATION	26,421	0	
1338	VANTAGE STATE PARK METERING POINT	20,238	0	
1339	VANTAGE SUBSTATION	31,931,207	211,509	
1340	VAUGHN SUBSTATION	29,287	978	
1341	VERA SUBSTATION (VERA W&P, INLAND P&L)	10,025	717	
1342	VICTOR SUBSTATION (RAVALLICOUNTY ELEC COOP)	6,943	494	
1343	VICTOR SUBSTATION(FALL RIVER RURAL ELEC COOP)	81,618	588	
1344	VIEW SUBSTATION	13,906	264	
1345	VINSON METERING POINT	27,323	453	
1346	VISTA SUBSTATION	25,231	306	
1347	WAGNER LAKE SUBSTATION	543,101	13,443	
1348	WAHLUKE SUBSTATION	10,343	0	
1349	WALLA WALLA SUBSTATION(BPA)	10,333,966	82,010	
1350	WALLA WALLA SUBSTATION(PACIFICORP)	224,061	0	
1351	WALNUT CITY SUBSTATION(CITY OF MCMINNVILLE)	9,653	256	
1352	WALTON SUBSTATION	21,204	1,129	6%
1353	WARDEN POLE METERING POINT	14,752	1,589	
1354	WARDEN POLE NO 2 METERING POINT	13,121	0	
1355	WARNER SUBSTATION	3,553,133	58,162	
1356	WARREN SUBSTATION	594,774	28,974	
1357	WAUTOMA SUBSTATION	23,661,602	85,037	
1358	WEIPPE SUBSTATION	18,934	329	
1359	WELLS SUBSTATION(IDAHO POWER)	53,246	830	
1360	WENDSON SUBSTATION	6,549,565	95,333	
1361	WEST BURLEY SUBSTATION(UNITEDELEC COOP)	156,561	2,769	
1362	WEST JOHN DAY SUBSTATION	32,991	2,082	
1363	WEST PLAINS SUBSTATION (IP&L)	13,630	177	
1364	WEST REXBURG METERING POINT	21,513	0	
1365	WEST WELLS SUBSTATION	18,036	170	
1366	WEST WENDOVER METERING POINT	59,200	761	
1367	WESTCOTT SUBSTATION (CANBY ELECTRIC)	22,976	238	
1368	WESTMORELAND SUBSTATION	5,482	0	
1369	WESTSIDE SUBSTATION(BPA)	6,708,590	38,716	
1370	WEYERHAEUSER INDUSTRIAL WAY WEYCO NO 1 SUBSTATION (COWLITZ)	20,731	387	
1371	WHEAT FIELD SUBSTATION (WFWPP)	10,273	0	
1372	WHEELER SUBSTATION	10,359	0	
1373	WHITCOMB SUBSTATION	95,864	536	
1374	WHITE BLUFFS SUBSTATION	8,486,563	66,756	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E	
Stations	<u>Network Facilities</u>	Investment(\$)	O&M (\$)	Multi %	
1375	WHITE CREEK SUBSTATION (KPUD)	KPUD	200,409	7,210	
1376	WHITE RIVER SUBSTATION	PSE	10,703	28	
1377	WHITE SWAN SUBSTATION(BENTON REA)	BREA	10,025	917	
1378	WHITEHALL SUBSTATION	VEC	48,014	1,133	
1379	WILLAKENZIE SUBSTATION	EWEB	32,420	0	
1380	WILLARD JOHNSON SUBSTATION(HOOD RIVER ELEC)	HREC	22,483	220	
1381	WILLIS SUBSTATION (KPUD)	KPUD	38,602	3,657	
1382	WILSON RIVER SUBSTATION	TPUD	46,669	750	
1383	WINCHESTER SUBSTATION	USBR	3,851	654	
1384	WINDISHAR SUBSTATION	MWL	32,018	6,614	
1385	WINE COUNTRY SUBSTATION	BPA/PAC	6,342,281	17,381	
1386	WINNEMUCCA SUBSTATION	NVE	134,454	1,563	
1387	WINTHROP SUBSTATION		1,167,692	27,434	76%
1388	WOODLAND SWITCHING STATION	PAC	250,630	937	
1389	WOODSIDE SUBSTATION (RAVALLICO ELEC COOP)	RCEC	17,660	0	
1390	WREN SUBSTATION		1,431,565	18,896	
1391	WYNOOCHEE HYDRO PLANT	TPWR	73,355	1,482	
1392	ZEPHYR HEIGHTS SUBSTATION		46,512	196	
1393	<b>Subtotal Stations</b>		<b>2,356,545,168</b>	<b>26,131,989</b>	
1394	<b>Total Network</b>		<b>4,848,426,351</b>	<b>32,167,113</b>	



Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<u>Southern Intertie Facilities</u>				
	Owner	Investment (\$)	O&M (\$)	Multi %
<b>Transmission Lines</b>				
1395	ALVEY-DIXONVILLE NO 1	25,192,398	0	
1396	BIG EDDY 500/230KV TIE NO 1	51,352	2,432	
1397	BIG EDDY-CELILO NO 1	1,284,742	333	
1398	BIG EDDY-CELILO NO 2	1,463,788	872	
1399	BIG EDDY-CELILO NO 3	373,697	197	
1400	BIG EDDY-CELILO NO 4	249,132	252	
1401	BUCKLEY-GRIZZLY NO 1	9,961,133	5,680	57%
1402	BUCKLEY-MARION NO 1	20,369,871	17,796	50%
1403	CAPTAIN JACK-MALIN NO 1	844,154	2,979	
1404	CAPTAIN JACK-OLINDA NO 1	7,393,503	1,414	
1405	CELILO-SYLMAR NO 1	27,022,357	129,971	
1406	COYOTE SPRINGS-SLATT NO 1	328,931	552	12%
1407	DIXONVILLE-MERIDIAN	32,272,663	939	
1408	GRIZZLY-CAPTAIN JACK NO 1	22,288,387	101,537	
1409	GRIZZLY-SUMMER LAKE NO 1	19,480,851	22,051	57%
1410	JOHN DAY-BIG EDDY NO 1	2,008,149	2,404	
1411	JOHN DAY-GRIZZLY NO 1	12,099,924	36,515	
1412	JOHN DAY-GRIZZLY NO 2	10,521,016	25,731	
1413	MARION-ALVEY NO 1	4,456,110	17,990	50%
1414	SLATT-JOHN DAY NO 1	328,108	1,250	7%
1415	<b>Subtotal Lines</b>	<b>197,990,267</b>	<b>370,892</b>	
<b>Stations</b>				
	Owner	Investment (\$)	O&M (\$)	Multi %
1416	ALVEY SUBSTATION	8,053,719	79,981	26%
1417	BAKEOVEN COMPENSATION STATION	22,868,102	25,953	
1418	BIG EDDY 500 KV SWITCHYARD	12,191,059	53,050	
1419	BIG EDDY SUBSTATION	60,615,224	498,250	81%
1420	BUCKLEY SUBSTATION	6,248,137	62,236	64%
1421	CAPTAIN JACK SUBSTATION	41,181,037	149,607	
1422	CELILO CONVERTER NO 3	880,128	6,855	
1423	CELILO CONVERTER NO 4	864,806	2,919	
1424	CELILO DC CONVERTER STATION	300,727,223	3,242,784	
1425	CHIEF JOSEPH SUBSTATION	1,081,225	22,907	3%
1426	DIXONVILLE SUBSTATION	7,837,854	0	
1427	FORT ROCK COMPENSATION STATION	15,955,175	75,044	
1428	GRIZZLY SUBSTATION	32,130,656	309,929	
1429	JOHN DAY SUBSTATION	12,128,698	83,533	27%
1430	MALIN SUBSTATION	25,289,419	287,207	
1431	MARION SUBSTATION	3,342,294	37,227	9%
1432	MERIDIAN SUBSTATION(PACIFICORP)	7,458,872	0	
1433	ROUND MOUNTAIN SUBSTATION	65,046	0	
1434	SAND SPRING COMPENSATION STATION	17,142,517	95,458	
1435	SLATT SUBSTATION	2,295,096	5,614	3%
1436	SUMMER LAKE SUBSTATION	3,008,234	49,435	57%
1437	SYCAN COMPENSATION STATION	14,453,018	82,003	
1438	SYLMAR DC CONVERTER STATION	2,784	0	
1439	<b>Subtotal Stations</b>	<b>595,820,323</b>	<b>5,169,992</b>	
1440	<b>Total Southern Intertie</b>	<b>793,810,590</b>	<b>5,540,884</b>	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
	<b><u>Eastern Intertie Facilities</u></b>			
	<b>Owner</b>	<b>Investment (\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
1441	BROADVIEW-GARRISON NO 1	47,280,913	37,795	
1442	BROADVIEW-GARRISON NO 2	46,990,310	16,190	
1443	<b>Subtotal Lines</b>	<b>94,271,222</b>	<b>53,985</b>	
	<b>Stations</b>	<b>Investment (\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
1444	COLSTRIP SUBSTATION	43,099	798	
1445	GARRISON SUBSTATION	24,359,252	171,092	34%
1446	<b>Subtotal Stations</b>	<b>24,402,351</b>	<b>171,889</b>	
1447	<b>Total Eastern Intertie</b>	<b>118,673,573</b>	<b>225,874</b>	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<u>Utility Delivery Facilities</u>				
	Owner	Investment (\$)	O&M (\$)	Multi %
<b>Transmission Lines</b>				
1448	ALBANY-BUREAU OF MINES NO 1	23,660	452	
1449	GROUSE CREEK-TECOMA (LEASED FACILITIES)	121,332	0	6%
1450	HOOD RIVER-COOP SERVICE NO 1	23,808	735	
1451	<b>Subtotal Lines</b>	<b>168,799</b>	<b>1,186</b>	
<b>Stations</b>				
	Owner	Investment (\$)	O&M (\$)	Multi %
1452	ACTON SUBSTATION	163,592	10,339	
1453	ALBANY SUBSTATION	1,591,607	14,444	12%
1454	ALDERWOOD SUBSTATION	677,667	8,302	
1455	BANDON SUBSTATION	797,332	11,198	16%
1456	BONNERS FERRY SUBSTATION	615,682	11,840	27%
1457	BURBANK SUBSTATION	516,445	8,848	83%
1458	BURNT WOODS SUBSTATION	319,577	16,875	
1459	CASCADE LOCKS SUBSTATION	518,714	14,221	
1460	DAVIS CREEK SUBSTATION	545,221	14,090	
1461	DIXIE SUBSTATION	519,936	15,162	
1462	DRAIN SUBSTATION	277,801	3,663	9%
1463	EAGLE LAKE SUBSTATION	372,510	12,306	98%
1464	GARDINER SUBSTATION	635,523	26,269	
1465	GLADE SUBSTATION	444,475	9,642	89%
1466	HARRISBURG SUBSTATION	218,361	16,394	
1467	HOOD RIVER SUBSTATION	627,556	17,950	51%
1468	IONE SUBSTATION	210,675	7,174	27%
1469	LACLEDE SUBSTATION	31,715	8,555	
1470	LANGLOIS SUBSTATION	1,101,133	18,824	
1471	LYNCH CREEK SUBSTATION	1,271,810	23,805	
1472	MAPLETON SUBSTATION	183,012	9,213	32%
1473	MINIDOKA SUBSTATION	385,789	11,840	
1474	MONMOUTH SUBSTATION	1,244,686	24,829	
1475	MOUNTAIN AVENUE SUBSTATION	2,098,603	16,825	
1476	MOYIE SUBSTATION	168,870	7,391	
1477	NECANICUM SUBSTATION	127,264	8,156	
1478	NORTH BENCH SUBSTATION	527,396	5,816	
1479	NORTH BUTTE SUBSTATION	168,857	4,062	
1480	PARKDALE SUBSTATION	604,963	9,908	49%
1481	PORT ORFORD SUBSTATION	407,963	15,794	91%
1482	POTLATCH SUBSTATION(BPA)	188,784	4,085	17%
1483	REEDSPORT SUBSTATION (BPA)	734,116	9,204	21%
1484	RINGOLD SUBSTATION	411,773	11,773	79%
1485	SANDPOINT SUBSTATION(BPA)	312,508	7,384	24%
1486	SCOOTENEY SUBSTATION	386,934	7,067	30%
1487	SELLE SUBSTATION	565,619	9,092	
1488	STATELINE SUBSTATION	141,727	20,977	
1489	STEILACOOM SUBSTATION	1,101,095	13,204	
1490	SURPRISE LAKE SUBSTATION	760,077	15,504	
1491	SWAN VALLEY SUBSTATION	495,513	4,966	8%
1492	TROY SUBSTATION	815,848	23,405	88%
1493	TUMBLE CREEK SUBSTATION	979,279	14,346	
1494	TWO MILE ROAD SUBSTATION	1,517,678	14,290	
1495	WALTON SUBSTATION	321,529	17,114	94%
1496	WINTHROP SUBSTATION	361,348	8,490	24%
1497	YAAK SUBSTATION	375,561	16,850	
1498	<b>Subtotal Stations</b>	<b>26,844,123</b>	<b>581,488</b>	
1499	<b>Total Utility Delivery</b>	<b>27,012,923</b>	<b>582,674</b>	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
	<u>DSI Delivery Facilities</u>			
	Owner	Investment (\$)	O&M (\$)	Multi %
1500	Transmission Lines None			
1501	Subtotal Lines	<u>0</u>	<u>0</u>	
	Stations	Investment (\$)	O&M (\$)	Multi %
1502	CONKELLEY SUBSTATION	6,258,745	113,694	55%
1503	INTALCO SUBSTATION	16,403,546	254,840	96%
1504	TRENTWOOD SUBSTATION	3,533,679	32,440	51%
1505	Subtotal Stations	<u>26,195,970</u>	<u>400,975</u>	
1506	Total DSI Delivery	<u>26,195,970</u>	<u>400,975</u>	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<u>Unsegmented Facilities (segmented pro-rata)</u>				
Transmission Lines (allocated according to direct line segmentation)	Owner	Investment (\$)	O&M (\$)	Multi %
1507	BALD MOUNTAIN-CONDIT FIBER SYSTEM	6,914	0	
1508	BELLINGHAM-CUSTER FIBER SYSTEM	128,524	0	
1509	BELL-NOXON FIBER SYSTEM	44,711	0	
1510	BPA SYSTEM-LINES	6,044,940	131,776	
1511	CHENOWETH-HARVEY NO 1	81,982	455	
1512	CHENOWETH-HARVEY NO 2	81,980	351	
1513	CHRISTOPHER TAP TO TACOMA-COVINGTON-4 (RETIRED)	61,063	0	
1514	CONKELLY TAP TO HUNGRY HORSE-COLUMBIA FALLS NO 1 (OBSOLETE)	2,743	0	
1515	COTTAGE GROVE-DRAIN NO 1 (RETIRED)	312,761	0	
1516	COVINGTON-BELL FIBER SYSTEM	80,126	0	
1517	COVINGTON-MAPLE VALLEY FIBER SYSTEM	17,342	0	
1518	FIDALGO-BELLINGHAM FIBER SYSTEM (BLACK ROCK CABLE INC)	360,930	0	
1519	FRANKLIN-MUNRO FIBER SYSTEM	185,538	0	
1520	FRANZ HOLMES TAP TO COWLITZ-LAGRANDE NO 1,2 (OBSOLETE)	276,241	0	
1521	GRAND COULEE 115KV-GRAND COULEE RS FIBER SEG	18,644	0	
1522	JACKSON TAP TO CANAL-SECOND LIFT NO. 1(SOLD)	47,234	397	
1523	KEELER-ALVEY FIBER SYSTEM	1,018,867	0	
1524	KEELER-COVINGTON FIBER SYSTEM	14,035	0	
1525	KEELER-PENNWALT NO 1(DEENERGIZED)	256,113	0	
1526	LANE-FAIRVIEW FIBER SYSTEM	3,435	90	
1527	MARION-SANTIAM 2 (DE-ENERGIZED)	615,992	103	
1528	MCNARY-SANTIAM NO 1(OBS/RET, SEE NOTES)	6,139,225	4,595	
1529	NOXON-TAFT FIBER SYSTEM	357,479	0	
1530	OREGON CITY STUB 20/7-23/12 SECTION(DEENERGIZED)	155	0	
1531	PEARL-TROUTDALE FIBER SYSTEM	113,714	0	
1532	REEDSPORT-TAHKENITCH FIBER SYSTEM	24,936	13,064	
1533	ROSS-FRANKLIN FIBER SYSTEM	3,313,061	0	
1534	ROSS-MALIN FIBER SYSTEM	4,670,521	0	
1535	SANTIAM-LYONS UHV XFMR 1	126,000	0	
1536	TUMBLE CREEK-HALL RIDGE NO.1	610,574	6,275	
1537	VANTAGE-HANFORD NO 1	30,549	16,683	
1538	<b>Subtotal Lines</b>	<b>25,046,329</b>	<b>173,788</b>	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<u>Stations (allocated according to direct station segmentation)</u>	<u>Owner</u>	<u>Investment (\$)</u>	<u>O&amp;M (\$)</u>	<u>Multi %</u>
1539 ADDY SUBSTATION		3,092,383	23,962	30%
1540 ALCOA SUBSTATION		1,091,469	18,696	12%
1541 APPLEWAY (INACTIVE. SEE NOTES)	KEC	24,252	0	
1542 ARGENT(INACTIVE. SEE NOTES)	FPUD	55,722	0	
1543 BAYSHORE SUBSTATION(OBS-RETIRED)	M3PUD	19,501	0	
1544 BURBANK SUBSTATION		103,059	1,766	17%
1545 CAPE HORN(INACTIVE. SEE NOTES)	SKPUD	14,135	0	
1546 CENTRALIA START UP(INACTIVE. SEE NOTES)		13,477	0	
1547 COLUMBIA RIVER RANCH METERING POINT(INACTIVE. SEE NOTES)		22,761	0	
1548 EAGLE LAKE SUBSTATION		8,024	265	2%
1549 EAST GRANGEVILLE SUBSTATION		683,793	16,774	
1550 FOSTER (INACTIVE, SEE NODTES)	PAC	4,456	0	
1551 GLADE SUBSTATION		53,296	1,156	11%
1552 GREAT WESTERN MALTING COMPANY SUBSTATION (RETIRED)	CPU	9,499	0	
1553 KAMILCHE SUBSTATION (OBS-RETIRED)	M3PUD	49,049	0	
1554 KIONA HYDROMET STATION		6,709	0	
1555 NORWAY SUBSTATION	CCEC	289,018	14,958	
1556 PAUL D. JOHNSON SUBSTATION		2,847,803	2,410	
1557 RINGOLD SUBSTATION		110,507	3,159	21%
1558 SUN HARBOR SUBSTATION		1,420,980	11,769	
1559 SYSTEM WIDE		3,867,732	5,931,638	
1560 TACOMA SUBSTATION		1,419,016	36,188	7%
1561 VALHALLA SUBSTATION	BPA/CHPD	317,754	10,937	8%
1562 <b>Subtotal Stations</b>		<b>15,524,395</b>	<b>6,073,679</b>	

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<u>Unsegmented Facilities (segmented pro-rata)</u>		Investment (\$)	O&M (\$)	Multi %
Other Locations (allocated according to direct station segmentation)	Owner			
1563	ALVEY MAINTENANCE HEADQUARTERS	5,494,284		
1564	AUGSPURGER MOUNTAIN RADIO STATION	11,893		
1565	BALD MOUNTAIN RADIO STATION	130,284		
1566	BELL MAINTENANCE HEADQUARTERS	536,791		
1567	BIDDLE BUTTE RADIO STATION	163,480		
1568	BLUE RIDGE RADIO STATION	91,805		
1569	BLYN RADIO STATION	49,179		
1570	BPA SYSTEM	14,820,814		
1571	BPA SYSTEM-MICROWAVE &RADIO STATIONS	182,611		
1572	BPA SYSTEM-NON ELECTRIC PLANT& MISC	4,919,823		
1573	BURLEY MAINTENANCE HEADQUARTERS	6,969		
1574	CAPE BLANCO RADIO STATION (BPA)	58,688		
1575	CHEHALIS MAINTENANCE HEADQUARTERS	88,062		
1576	CHEMAWA MAINTENANCE HEADQUARTERS	74,117		
1577	COVINGTON MAINTENANCE HEADQUARTERS	15,113		
1578	COYOTE HILLS RADIO STATION	25,472		
1579	CULDESAC RADIO STATION	6,995		
1580	DECATUR EAST RADIO STATION	50,787		
1581	DECATUR WEST RADIO STATION	47,229		
1582	DEL RIO RADIO STATION	13,084		
1583	DITTMER BPA SYSTEM CONTROL CENTER	15,918,963		
1584	EASTERN CONTROL CENTER	32,523		
1585	EUGENE C. STARR COMPLEX	9,922,339		
1586	GRAND COULEE RADIO STATION	47,372		
1587	GRANITE MOUNTAIN RADIO STATION	144,812		
1588	GREEN MOUNTAIN PASSIVE REPEATER SITE	3,007		
1589	HORSE ROCK RADIO STATION	(2,444)		
1590	KALISPELL MAINTENANCE HEADQUARTERS	29,664		
1591	KEELER MAINTENANCE HEADQUARTERS	40,199		
1592	KENNEWICK RADIO STATION	49,374		
1593	LAKESIDE RADIO STATION	91,184		
1594	LEWISTON MAINTENANCE HEADQUARTERS	59,008		
1595	LONGVIEW ANNEX I	2,363,993		
1596	LONGVIEW MAINTENANCE HEADQUARTERS	6,038,256		
1597	LOWELL BUTTE RADIO STATION	7,559		
1598	MALAGA RADIO STATION	17,384		
1599	MALIN MAINTENANCE HEADQUARTERS	398,113		
1600	MARYS PEAK RADIO STATION	5,002		
1601	MEGLER RADIO STATION	11,556		
1602	MILLER PEAK RADIO STATION	117,099		
1603	MINT FARM GENERATING PLANT (INACTIVE)	36,768		
1604	MT. HEBBO RADIO STATION	12,244		
1605	MUNRO BPA SYSTEM CONTROL CENTER	3,666,958		
1606	NASELLE RIDGE RADIO STATION	295,505		
1607	NORTH BEND MAINTENANCE HEADQUARTERS	723,564		
1608	NORTH BONNEVILLE ANNEX	29,495		
1609	ODELL BUTTE RADIO STATION	92,507		
1610	OLYMPIA MAINTENANCE HEADQUARTERS	166,376		
1611	OSTRANDER PASSIVE REPEATER SITE	25,022		
1612	PASCO MAINTENANCE HEADQUARTERS	89,312		
1613	REDMOND MAINTENANCE HEADQUARTERS	247,649		
1614	ROCKDALE PASSIVE REPEATER N1 SITE	85,587		
1615	ROCKDALE RADIO STATION	358,292		
1616	ROCKY RIDGE RADIO STATION	114,415		
1617	ROOSEVELT RADIO STATION	13,534		
1618	ROSS AMPERE BUILDING	60,525		
1619	ROSS COMPLEX	25,258,882		
1620	ROSS CONSTRUCTION AND SERVICES BUILDING	153,407		
1621	ROSS FOG TEST BUILDING	81,579		
1622	ROSS HEATLINE	5,254,267		
1623	ROSS MAINTENANCE HEADQUARTERS	12,095		
1624	ROSS MAINTENANCE STORAGE WAREHOUSE	24,336		
1625	ROSS RADIO STATION	7,516		
1626	ROSS TOOLS AND EQUIPMENT BUILDING	676,726		
1627	SCHULTZ MAINTENANCE HEADQUARTERS	1,377,094		
1628	SEATTLE RADIO STATION	3,939		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<u>Unsegmented Facilities (segmented pro-rata)</u>				
Other Locations (allocated according to direct station segmentation)	Owner	Investment (\$)	O&M (\$)	Multi%
1629	SHANIKO RADIO STATION	16,738		
1630	SICKLER MAINTENANCE HEADQUARTERS	50,012		
1631	SKYROCKET RADIO STATION	6,481		
1632	SNOHOMISH MAINTENANCE HEADQUARTERS	58,551		
1633	SOUTH MOUNTAIN RADIO STATION	2,770		
1634	SPOKANE HANGAR	75,378		
1635	SQUAK MOUNTAIN RADIO STATION	4,272		
1636	TACOMA PUBLIC UTILITIES DISPATCH CENTER	36,618		
1637	TACOMA RADIO STATION	59,709		
1638	WALKER MOUNTAIN RADIO STATION	625,240		
1639	<b>Subtotal Other</b>	<b>101,885,803</b>		
	<b>Emergency Stock (allocated according to direct sub segmentation)</b>	<b>Investment (\$)</b>		
1640	ROSS WAREHOUSE	11,013,835		
1641	<b>Subtotal Emergency Stock</b>	<b>11,013,835</b>		



Appendix A  
BP-16 Initial Proposal Segmentation Details

	A	B	C	D	E
	<u>Station Land (segmented to Network)</u>	<u>Depreciable Land</u> Owner	Investment (\$)	O&M (\$)	Multi %
1642	LA PINE SUBSTATION		18,619		
1643	NOXON CONSTRUCTION SUBSTATION		1		
1644	OKANOGAN SUBSTATION		14,156		
1645	SIFTON SUBSTATION		12,810		
1646	<b>Subtotal Stations</b>		<b>45,586</b>		

	A	B	C	D	E
	<u>Transmission Line Land (segmented to Network)</u>	Owner	Investment (\$)	O&M (\$)	Multi %
1647	ALBANY-BURNT WOODS NO 1		307,619		
1648	ASHE-SLATT NO 1		19,806		
1649	BELL-ADDY NO 1		5,046		
1650	BELL-BOUNDARY NO 3		5,046		
1651	BELL-LANCASTER NO 1		8,276		
1652	BIG EDDY-CHENOWETH NO 1		387,831		
1653	BIG EDDY-CHENOWETH NO 2		387,596		
1654	BIG EDDY-SPRING CREEK NO 1		391,887		
1655	CHEHALIS-OLYMPIA NO 1		793		
1656	CHEHALIS-RAYMOND NO 1		47,011		
1657	CHIEF JOSEPH-EAST OMAK NO 1		10,724		
1658	CHIEF JOSEPH-MONROE NO 1		141,953		
1659	CHIEF JOSEPH-SNOHOMISH NO 3		31,581		
1660	COLUMBIA-ELLENSBURG NO 1		181,965		
1661	DE MOSS-FOSSIL NO 1		320		
1662	DWORSHAK PH-OROFINO NO 1		400		
1663	EAST OMAK TAP TO GRAND COULEE-FOSTER CREEK NO 1		174,817		
1664	FAIRVIEW-BANDON NO 2		1,602		
1665	FIDALGO-LOPEZ ISLAND NO 5		63,802		
1666	FLATHEAD-HOT SPRINGS NO 1		10,728,941		
1667	FOREST GROVE-TILLAMOOK NO 1		1,731		
1668	FRANKLIN-BADGER CANYON NO 1		1,432		
1669	GARRISON-ANACONDA NO 1		1,524		
1670	GOSHEN-DRUMMOND NO 1		3,924		
1671	GRAND COULEE-BELL NO 5		2,114,751		
1672	GRAND COULEE-HANFORD NO 1		14,375		
1673	GRAND COULEE-OKANOGAN NO 2		470		
1674	GRAND COULEE-SCHULTZ NO 1		24,380		
1675	HARVALUM-BIG EDDY NO 1		19,142,567		
1676	HORSE HEAVEN-HARVALUM NO 1		387,596		
1677	HOT SPRINGS-RATTLESNAKE NO 1		6,007,072		
1678	HUNGRY HORSE-CONKELLEY NO 1		6,043		
1679	KEELER-OREGON CITY NO 2		8,729		
1680	KELLER TAP TO GRAND COULEE-OKANOGAN NO 2		3,200		
1681	KLONDIKE SCHOOLHOUSE-JOHN DAY NO 1		657,883		
1682	LANCASTER-NOXON NO 1		82,527		
1683	LIBBY-BONNERS FERRY NO 1		5,851		
1684	LOWER MONUMENTAL-MCNARY NO 1		1,071		
1685	MCNARY-ROSS NO 1		387,596		
1686	OLYMPIA-GRAND COULEE NO 1		16,745		
1687	OLYMPIA-SATSOP NO 3		27,986		
1688	OSTRANDER-PEARL NO 1		45,358		
1689	PALISADES-CATTLE CREEK NO 1		92,439		
1690	PAUL-ALLSTON NO 2		236		
1691	RAVER-COVINGTON NO 2		387,596		
1692	RAYMOND-COSMOPOLIS NO 1		36,335		
1693	ROCKY REACH-MAPLE VALLEY NO 1		210,071		
1694	ROSS-LEXINGTON NO 1		82,898		
1695	ROUNDUP-LAGRANDE NO 1		645,809		
1696	SANTIAM-TOLEDO NO 1		78,122		
1697	SCHULTZ-WAUTOMA NO 1		2,277,742		
1698	SPIRIT TAP TO COLVILLE-BOUNDARY NO 1		24,206		
1699	SWAN VALLEY-TETON NO 1		54,679		
1700	TAFT-BELL NO 1		133,069		

Appendix A  
BP-16 Initial Proposal Segmentation Details

	A	B	C	D	E
	<b>Transmission Line Land (segmented to Network)</b>	<b>Owner</b>	<b>Investment (\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
1701	TUCANNON RIVER-NORTH LEWISTON NO 1		862,880		
1702	WALLA WALLA-PENDLETON NO 1		126,393		
1703	WALLA WALLA-TUCANNON RIVER NO 1		1,340		
1704	WAUTOMA-OSTRANDER NO 1		1,747		
1705	WAUTOMA-ROCK CREEK NO 1		391,431		
1706	<b>Subtotal Network Line Land</b>		<b>47,246,821</b>		
	<b>Transmission Line Land (segmented to Generation Integration)</b>	<b>Owner</b>	<b>Investment (\$)</b>		
1707	ANDERSON RANCH-MOUNTAIN HOME NO 1		60,166		
1708	DETROIT-SANTIAM NO 1		677		
1709	<b>Subtotal GI Line Land</b>		<b>60,843</b>		
	<b>Transmission Line Land (segmented pro-rata)</b>	<b>Owner</b>	<b>Investment (\$)</b>		
1710	COVINGTON-MAPLE VALLEY FIBER SYSTEM		23,437		
1711	FRANKLIN-HATWAI FIBER SYSTEM		35,889		
1712	HOT SPRINGS-GARRISON FIBER SYSTEM		58,561		
1713	PENDLETON-LAGRANDE		195		
1714	ROSS-FRANKLIN FIBER SYSTEM		97,757		
1715	<b>Subtotal Line Land pro-rata</b>		<b>215,839</b>		
	<b>Other Facility Land (segmented pro-rata)</b>	<b>Owner</b>	<b>Investment (\$)</b>		
1716	ALBION BUTTE RADIO STATION		6,356		
1717	APLEGATE BUTTE RADIO STATION		49,780		
1718	BOISTFORT PEAK RADIO STATION(WEYERHOUSER)		9,081		
1719	CAPITOL PEAK RADIO STATION(BPA)		1,916		
1720	INDIAN MOUNTAIN RADIO STATION		72,672		
1721	ELLIS RADIO STATION		6,824		
1722	HAYSTACK BUTTE RADIO STATION		388,346		
1723	SICKLER PASSIVE REPEATER SITE		913		
1724	CAPE BLANCO RADIO STATION (BPA)		118,992		
1725	SEVEN MILE HILL METEOROLOGICAL TOWER		15,105		
1726	<b>Subtotal Other pro-rata</b>		<b>669,985</b>		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<b>Communication and Control Equipment ***</b>	<b><u>Ancillary Service Facilities</u></b> <b>Owner</b>	<b>Investment (\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
1727	ABERDEEN SUBSTATION	124,433		
1728	ADAIR SUBSTATION(BPA)	2,942		
1729	ADDY SUBSTATION	270,287		
1730	ALBANY SUBSTATION	19,130		
1731	ALBENI FALLS SUBSTATION	5,807		
1732	ALCOA SUBSTATION	47,905		
1733	ALFALFA SUBSTATION	5,205		
1734	ALLSTON SUBSTATION	259,373		
1735	ALVEY SUBSTATION	1,063,136		
1736	ANACONDA SUBSTATION	164,488		
1737	ASHE SUBSTATION	231,328		
1738	BANDON SUBSTATION	16,566		
1739	BEAVER SUBSTATION (PGE)	210,386		
1740	BELL SUBSTATION	805,634		
1741	BENTON SUBSTATION	3,840		
1742	BETTAS ROAD SUBSTATION	213,160		
1743	BIDDLE BUTTE RADIO STATION	19,866		
1744	BIG EDDY 500 KV SWITCHYARD	345,912		
1745	BIG EDDY SUBSTATION	1,442,328		
1746	BOARDMAN SUBSTATION	143,981		
1747	BONNERS FERRY SUBSTATION	151,071		
1748	BONNEVILLE BUILDING PORTLAND	92,338		
1749	BONNEVILLE POWERHOUSE #1	310,681		
1750	BOUNDARY SUBSTATION	55,264		
1751	BPA HEADQUARTERS BUILDING	6,225		
1752	BPA SYSTEM	5,815,092		
1753	BPA SYSTEM-NON ELECTRIC PLANT& MISC	30,999,053		
1754	BRASADA SUBSTATION (CENTRAL ELECTRIC COOPERATIVE)	187,017		
1755	BRIDGE SUBSTATION	34,676		
1756	BUCK BUTTE RADIO STATION	8,923		
1757	BUCKLEY SUBSTATION	42,924		
1758	CALPINE SUBSTATION	170,566		
1759	CAPTAIN JACK SUBSTATION	76,789		
1760	CARLTON SUBSTATION	14,581		
1761	CASCADE STEEL SUBSTATION	7,187		
1762	CELILO DC CONVERTER STATION	6,190,761		
1763	CHEHALIS RADIO STATION	2,057		
1764	CHEHALIS SUBSTATION	323,618		
1765	CHEMAWA SUBSTATION	65,891		
1766	CHENOWETH SUBSTATION	22,055		
1767	CHIEF JOSEPH SUBSTATION	44,233		
1768	COLUMBIA FALLS ALUMINUM COMPANY SUBSTATION	19,459		
1769	COLUMBIA FALLS SUBSTATION - 230 KV YARD	167,581		
1770	COLUMBIA SUBSTATION	71,906		
1771	COLVILLE SUBSTATION	11,883		
1772	CONDON SUBSTATION	29,512		
1773	CONDON WIND SUBSTATION(SEAWEST)	283,503		
1774	CONKELLEY SUBSTATION	103,189		
1775	CONNELL SUBSTATION	14,474		
1776	COSMOPOLIS SUBSTATION	69,807		
1777	COVINGTON SUBSTATION	192,502		
1778	COWLITZ SUBSTATION(BPA)	32,603		
1779	COYOTE SPRINGS SUBSTATION	22,177		
1780	CRESTON SUBSTATION(BPA)	69,343		
1781	CULDESAC RADIO STATION	533		
1782	CUSICK SUBSTATION	74,316		
1783	CUSTER SUBSTATION	280,860		
1784	DE MOSS SUBSTATION(BPA)	509,045		
1785	DEER PARK SUBSTATION	3,886		
1786	DITTMER BPA SYSTEM CONTROL CENTER	75,561,062		
1787	DRAIN SUBSTATION	22,237		
1788	DRISCOLL SUBSTATION	46,177		
1789	DRUMMOND SUBSTATION	230,117		
1790	DWORSHAK POWERHOUSE	130,599		
1791	DWORSHAK SUBSTATION	129,362		
1792	EAST OMAK SUBSTATION	164,065		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B <u>Ancillary Service Facilities</u>	C	D	E
<b>Communication and Control Equipment ***</b>	<b>Owner</b>	<b>Investment (\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
1793 EASTERN CONTROL CENTER		3,697		
1794 EASTSIDE SYSTEM CONTROL CENTER(PSE)	PSE	8,768		
1795 ECHO LAKE SUBSTATION		64,433		
1796 EUGENE C. STARR COMPLEX		31,743		
1797 EUGENE SUBSTATION		75,533		
1798 FAIRMOUNT SUBSTATION		61,560		
1799 FAIRVIEW SUBSTATION(BPA)		204,101		
1800 FIDALGO SUBSTATION		6,872		
1801 FLATHEAD SUBSTATION(BPA & FLATHEAD ELEC)	BPA/FEC	270,109		
1802 FOREST GROVE SUBSTATION	BPA/FORG	112,995		
1803 FORT ROCK SUBSTATION (MIDSTATE ELECTRIC COOP)	MSEC	27,484		
1804 FRANKLIN SUBSTATION	BPA/FPUD	219,430		
1805 FREEWATER SUBSTATION(BPA)	BPA/CMF	15,432		
1806 GARRISON SUBSTATION		1,874,531		
1807 GOSHEN SUBSTATION(UTAH POWER & LIGHT)	BPA/PAC-ID	231,030		
1808 GRAND COULEE 115 KV SWITCHYARD		869,968		
1809 GRAND COULEE 230 KV SWITCHYARD		709,551		
1810 GRAND COULEE 500 KV SWITCHYARD		167,375		
1811 GRAND COULEE RADIO STATION		208,028		
1812 GRAND COULEE SUBSTATION	GPUD	93,082		
1813 GRANDVIEW SUBSTATION	BPA/BREA	13,048		
1814 GREEN PETER SUBSTATION		17,205		
1815 GRIZZLY SUBSTATION		23,899		
1816 HANFORD SUBSTATION		915,989		
1817 HAPPY CAMP RADIO STATION(PG&E)	PG&E	44,805		
1818 HARNEY SUBSTATION(BPA)		142,960		
1819 HARVALUM SUBSTATION		87,669		
1820 HARVEY SUBSTATION		13,444		
1821 HATWAI SUBSTATION		59,328		
1822 HAY CANYON SUBSTATION (IBERDOLA)	IBER	52,792		
1823 HEYBURN SUBSTATION		14,446		
1824 HILLTOP SUBSTATION	BPA/NVE	30,653		
1825 HOOD RIVER SUBSTATION		4,519		
1826 HORN BUTTE SUBSTATION (INVENERGY WIND)	INVER	245,607		
1827 HORSE HEAVEN SUBSTATION		135,366		
1828 HOT SPRINGS SUBSTATION		172,041		
1829 HUNGRY HORSE POWERHOUSE		468,842		
1830 IONA BUTTE RADIO STATION		2,590		
1831 JOHN DAY SUBSTATION		781,170		
1832 JONES CANYON SUBSTATION		568,665		
1833 KALISPELL SUBSTATION(BPA)		21,140		
1834 KEELER SUBSTATION		64,713		
1835 KENNEWICK RADIO STATION		3,749		
1836 KITSAP SUBSTATION		112,892		
1837 LA GRANDE SUBSTATION		69,987		
1838 LA PINE SUBSTATION		31,226		
1839 LANCASTER SUBSTATION(BPA)		181,691		
1840 LANE SUBSTATION		69,052		
1841 LEBANON SUBSTATION		81,133		
1842 LEXINGTON SUBSTATION		427,143		
1843 LIBBY SUBSTATION(BPA)		25,470		
1844 LITTLE GOOSE POWERHOUSE		26,862		
1845 LITTLE GOOSE SUBSTATION		860,162		
1846 LONGVIEW SUBSTATION		490,281		
1847 LOOKOUT POINT SUBSTATION		62,551		
1848 LOPEZ ISLAND SUBSTATION(BPA)		6,079		
1849 LOST RIVER SUBSTATION	BPA/LREC	9,581		
1850 LOWER GRANITE SUBSTATION		423,146		
1851 LOWER MONUMENTAL SUBSTATION		799,028		
1852 MACKS INN SUBSTATION	FREC	8,757		
1853 MALIN MAINTENANCE HEADQUARTERS		18,700		
1854 MALIN SUBSTATION	BPA/PAC	106,743		
1855 MAPLE VALLEY SUBSTATION		168,780		
1856 MARION SUBSTATION		50,889		
1857 MARTIN CREEK SUBSTATION		42,765		
1858 MAUPIN SUBSTATION		50,782		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<b>Communication and Control Equipment ***</b>	<b><u>Ancillary Service Facilities</u></b>	<b>Investment (\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
1859 MCLOUGHLIN SUBSTATION	Owner	77,460		
1860 MCMINNVILLE SUBSTATION	PGE	10,910		
1861 MCNARY SUBSTATION	BPA/MWL	579,109		
1862 MIDWAY SUBSTATION(BPA)		105,155		
1863 MONMOUTH SUBSTATION		3,517		
1864 MONROE SUBSTATION		210,532		
1865 MOXEE SUBSTATION		36,140		
1866 MT. HEBBO RADIO STATION		30,899		
1867 MUNRO BPA SYSTEM CONTROL CENTER		10,689,316		
1868 MURRAY SUBSTATION		20,792		
1869 NAPA VINE SUBSTATION		170,420		
1870 NASELLE SUBSTATION		188,956		
1871 NINE CANYON SUBSTATION (BENTON PUD)	BPUD	209,461		
1872 NINE MILE SUBSTATION (FPLE)	FPLE	266,939		
1873 NORTH BONNEVILLE SUBSTATION	BPA/SKPUD	241,495		
1874 NOXON CONSTRUCTION SUBSTATION	AVA	982		
1875 OLYMPIA SUBSTATION		60,331		
1876 OREGON CITY SUBSTATION		15,282		
1877 OSTRANDER PASSIVE REPEATER SITE		1,213		
1878 OSTRANDER SUBSTATION		19,385		
1879 PALISADES POWERHOUSE		31,408		
1880 PAUL SUBSTATION		242,937		
1881 PEARL SUBSTATION		152,709		
1882 PLUM RADIO STATION		60,317		
1883 PONDEROSA SUBSTATION(BPA)		3,557		
1884 PORT ANGELES SUBSTATION(BPA)		307,221		
1885 RATTLESNAKE SUBSTATION(MPC)	NWE	93,655		
1886 RAVER SUBSTATION		160,690		
1887 RAYMOND SUBSTATION		73,048		
1888 RED MOUNTAIN SUBSTATION		353,542		
1889 REDMOND SUBSTATION(BPA)		167,063		
1890 REEDSPORT SUBSTATION (BPA)		347,724		
1891 RICHLAND SUBSTATION		8,368		
1892 ROCK CREEK SUBSTATION		167,443		
1893 ROCKY REACH SWITCHYARD		10,008		
1894 ROGUE SUBSTATION		454,259		
1895 ROSS COMPLEX		7,471		
1896 ROSS SUBSTATION		72,916		
1897 ROUND VALLEY SUBSTATION		9,332		
1898 ROUNDUP SUBSTATION		103,350		
1899 SACA JAWEA SUBSTATION		11,318		
1900 SAND CREEK SUBSTATION		10,972		
1901 SAND DUNES SUBSTATION	GPUD	7,208		
1902 SANDPOINT SUBSTATION(BPA)		14,513		
1903 SANTIAM SUBSTATION		52,080		
1904 SAPPHO SUBSTATION		4,868		
1905 SATSOP PARK SUBSTATION (GHPUD)	GHPUD	10,920		
1906 SATSOP SUBSTATION(BPA)		108,841		
1907 SCHULTZ SUBSTATION		137,683		
1908 SEDRO WOOLLEY SUBSTATION	PSE	25,481		
1909 SHANO SUBSTATION	BBEC	4,255		
1910 SHELTON SUBSTATION		61,607		
1911 SICKLER SUBSTATION		181,871		
1912 SIFTON SUBSTATION		94,714		
1913 SILVER CREEK SUBSTATION		235,115		
1914 SKYROCKET RADIO STATION		8,902		
1915 SLATT SUBSTATION		1,299,283		
1916 SNOHOMISH SUBSTATION		748,606		
1917 SNO-KING SUBSTATION		130,140		
1918 SOUTH TACOMA SUBSTATION		213,815		
1919 SPAR CANYON SUBSTATION	SREC	8,749		
1920 SPRING CREEK SUBSTATION		34,581		
1921 ST. JOHNS SUBSTATION		34,628		
1922 STEILACOOM SUBSTATION		2,911		
1923 SUMMER LAKE SUBSTATION		35,875		
1924 SWAN VALLEY RADIO STATION		8,904		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<b>Communication and Control Equipment ***</b>	<b><u>Ancillary Service Facilities</u></b>	<b>Investment (\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi%</b>
1925	SWAN VALLEY SUBSTATION	129,263		
1926	SYSTEM WIDE	819,368		
1927	TACOMA RADIO STATION	15,376		
1928	TACOMA SUBSTATION	83,008		
1929	TAFT SUBSTATION	982		
1930	TAHKENITCH SUBSTATION	139,952		
1931	TARGHEE SUBSTATION	12,526		
1932	TEAKEAN BUTTE RADIO STATION	66,706		
1933	TETON SUBSTATION	364,191		
1934	THE DALLES SUBSTATION	102,870		
1935	TILLAMOOK SUBSTATION	25,845		
1936	TINCUP SUBSTATION	147,498		
1937	TOLEDO SUBSTATION	299,940		
1938	TRENTWOOD SUBSTATION	3,184		
1939	TROUTDALE SUBSTATION(BPA)	84,837		
1940	TUCANNON RIVER SUBSTATION	209,349		
1941	UNITY SUBSTATION(BPA)	8,457		
1942	USK SUBSTATION(BPA)	308,498		
1943	VALHALLA SUBSTATION	728,708		
1944	VANSYCLE RIDGE WIND GENERATION FACILITY	68,676		
1945	VANTAGE SUBSTATION	648,063		
1946	WALLA WALLA SUBSTATION(BPA)	345,896		
1947	WARNER SUBSTATION	22,126		
1948	WAUTOMA SUBSTATION	610,929		
1949	WENDSON SUBSTATION	303,201		
1950	WEYERHAEUSER INDUSTRIAL WAY WEYCO NO 1 SUBSTATION (COWLITZ)	8,630		
1951	WHITE BLUFFS SUBSTATION	180,060		
1952	WHITE CREEK SUBSTATION (KPUD)	436,404		
1953	WILLIS SUBSTATION (KPUD)	353,448		
1954	WINE COUNTRY SUBSTATION	162,189		
1955	<b>Total Ancillary Service</b>	<b>167,464,306</b>		

\*\*\* FERC Account 353(1) Control, 391(2) Hardware, 391(3) Software, and 397(104,108) SCADA Communications

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
General Plant	<u>General Plant Facilities</u> Owner	Investment(\$)	O&M (\$)	Multi %
1956	ABERDEEN SUBSTATION	51,922		
1957	ADDY SUBSTATION	42,118		
1958	ADEL RADIO STATION	1,153,729		
1959	ALBANY SUBSTATION	212,996		
1960	ALBANY-EUGENE NO 1	417,035		
1961	ALBENI FALLS RADIO STATION (USCE)	167,336		
1962	ALBENI FALLS SUBSTATION	3,992		
1963	ALBION BUTTE RADIO STATION	855,859		
1964	ALCOA SUBSTATION	92,061		
1965	ALDER METERING POINT	9,317		
1966	ALFALFA SUBSTATION	109,518		
1967	ALLSTON SUBSTATION	1,398,499		
1968	ALVEY MAINTENANCE HEADQUARTERS	844,250		
1969	ALVEY SUBSTATION	4,696,948		
1970	ANACONDA SUBSTATION	198,847		
1971	APPLEGATE BUTTE RADIO STATION	1,813,502		
1972	ARTONDALE SUBSTATION	38,647		
1973	ASHE MAINTENANCE HEADQUARTERS	2,409,638		
1974	ASHE SUBSTATION	3,339,075		
1975	ASHTON HILL RADIO STATION	155,791		
1976	AUGSPURGER MOUNTAIN RADIO STATION	320,586		
1977	BADGER CANYON SUBSTATION	1,107,913		
1978	BAKEOVEN COMPENSATION STATION	20,113		
1979	BALD MOUNTAIN RADIO STATION	1,373,383		
1980	BALD PEAK RADIO STATION	85,094		
1981	BANDON SUBSTATION	719,357		
1982	BEAVER SUBSTATION (PGE)	85,273		
1983	BELL MAINTENANCE HEADQUARTERS	6,887,522		
1984	BELL SUBSTATION	3,849,020		
1985	BELLINGHAM SUBSTATION(BPA)	999,731		
1986	BELLINGHAM-CUSTER FIBER SYSTEM	3,760,858		
1987	BELL-NOXON FIBER SYSTEM	3,981,955		
1988	BENNETT MOUNTAIN RADIO STATION	89,534		
1989	BENTON SUBSTATION	48,848		
1990	BENTON-FRANKLIN NO 1	15,180		
1991	BETTA'S ROAD SUBSTATION	482,404		
1992	BEVERLY RADIO STATION	75,088		
1993	BIDDLE BUTTE RADIO STATION	24,562		
1994	BIG EDDY 500 KV SWITCHYARD	302,747		
1995	BIG EDDY SUBSTATION	3,317,227		
1996	BIG EDDY-TROUTDALE NO 1	63,155		
1997	BIRCH CREEK RADIO STATION	29,191		
1998	BLACK MOUNTAIN RADIO STATION	142,573		
1999	BLACKTAIL PEAK RADIO STATION	576,376		
2000	BLUE RIDGE RADIO STATION	441,312		
2001	BOARDMAN SUBSTATION	418,466		
2002	BOARDMAN-TOWER ROAD NO 1	(5,942)		
2003	BOISTFORT PEAK RADIO STATION(WEYERHOUSER)	55,063		
2004	BONNERS FERRY SUBSTATION	53,864		
2005	BONNEVILLE POWERHOUSE #1	3,513		
2006	BOUNDARY SUBSTATION	937,566		
2007	BPA HEADQUARTERS BUILDING	94,536		
2008	BPA SYSTEM	35,176,406		
2009	BPA SYSTEM-LINES	144,773		
2010	BPA SYSTEM-MICROWAVE &RADIO STATIONS	474,287		
2011	BPA SYSTEM-NON ELECTRIC PLANT& MISC	81,865,374		
2012	BRADFORD ISLAND RADIO STATION	58,502		
2013	BRASADA SUBSTATION (CENTRAL ELECTRIC COOPERATIVE)	456,814		
2014	BRIDGE SUBSTATION	271,662		
2015	BROADVIEW SUBSTATION	36,126		
2016	BROOKDALE SUBSTATION(ELMHURSTMUTUAL PWR & LIGHT)	44,058		
2017	BUCK BUTTE RADIO STATION	1,598,343		
2018	BUCKLEY SUBSTATION	1,268,804		
2019	BURLEY MAINTENANCE HEADQUARTERS	57,779		
2020	BURNS RADIO STATION	132,271		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
General Plant	<u>General Plant Facilities</u> Owner	Investment(\$)	O&M (\$)	Multi %
2021	CABBAGE HILL RADIO STATION	84,401		
2022	CALPINE SUBSTATION	420,965		
2023	CAPE BLANCO RADIO STATION (BPA)	902,315		
2024	CAPITOL PEAK RADIO STATION(BPA)	583,519		
2025	CAPTAIN JACK SUBSTATION	1,935,832		
2026	CARDWELL SUBSTATION	213,502		
2027	CARLTON SUBSTATION	396,407		
2028	CARLTON-SHERWOOD NO 1	556		
2029	CASCADE STEEL SUBSTATION	28,301		
2030	CATHLAMET SUBSTATION	17,960		
2031	CELILO DC CONVERTER STATION	5,494,868		
2032	CELILO MAINTENANCE HEADQUARTERS	21,287		
2033	CENTRALIA SUBSTATION	31,477		
2034	CHEHALIS MAINTENANCE HEADQUARTERS	79,987		
2035	CHEHALIS RADIO STATION	128,615		
2036	CHEHALIS SUBSTATION	1,413,991		
2037	CHEMAWA MAINTENANCE HEADQUARTERS	93,505		
2038	CHEMAWA SUBSTATION	6,939,559		
2039	CHENOWETH SUBSTATION	252,909		
2040	CHIEF JOSEPH POWERHOUSE	508,107		
2041	CHIEF JOSEPH SUBSTATION	2,288,689		
2042	CLATSOP SUBSTATION	10,265		
2043	CLINTON SUBSTATION (SOLD)	1,193		
2044	COBURG RADIO STATION	225,732		
2045	COBURG SUBSTATION	140,618		
2046	COLSTRIP SES	41,676		
2047	COLSTRIP SUBSTATION	165,332		
2048	COLUMBIA FALLS SUBSTATION -- 115 YARD	406,902		
2049	COLUMBIA FALLS SUBSTATION - 230 KV YARD	963,013		
2050	COLUMBIA FALLS-KALISPELL NO 1	31,810		
2051	COLUMBIA GENERATING STATION SUBSTATION (ENERGY NORTHWEST)	1,864,102		
2052	COLUMBIA GENERATING STATION-ASHE FIBER SYSTEM	126,744		
2053	COLUMBIA SUBSTATION	1,406,071		
2054	COLVILLE SUBSTATION	185,792		
2055	CONDON WIND SUBSTATION(SEAWEST)	17,366		
2056	CONKELLEY SUBSTATION	1,404,185		
2057	COSMOPOLIS SUBSTATION	4,164		
2058	COVINGTON MAINTENANCE HEADQUARTERS	785,206		
2059	COVINGTON SUBSTATION	3,735,350		
2060	COVINGTON-BELL FIBER SYSTEM	18,377,621		
2061	COVINGTON-BETTAS ROAD NO 1	402,607		
2062	COVINGTON-MAPLE VALLEY FIBER SYSTEM	2,941,491		
2063	COVINGTON-MUNRO FIBER SYSTEM(INACTIVE SEE NOTES)	1,383,291		
2064	COWLITZ SUBSTATION(BPA)	21,809		
2065	COYOTE HILLS RADIO STATION	1,373,033		
2066	COYOTE SPRINGS SUBSTATION	449,012		
2067	CRESTON SUBSTATION(BPA)	337,151		
2068	CULDESAC RADIO STATION	12,970		
2069	CUSICK SUBSTATION	86,245		
2070	CUSTER MAINTENANCE HEADQUARTERS	724,085		
2071	CUSTER SUBSTATION	2,296,007		
2072	CUSTER-INGLEDOW NO 1	190,843		
2073	DAVENPORT RADIO STATION	85,991		
2074	DE MOSS SUBSTATION(BPA)	343,420		
2075	DECATUR SUBSTATION	134,517		
2076	DEL RIO RADIO STATION	220,873		
2077	DEVILS MOUNTAIN RADIO STATION	316,863		
2078	DITTMER BPA SYSTEM CONTROL CENTER	29,660,222		
2079	DIXONVILLE SUBSTATION	164,947		
2080	DOUGLAS SWITCHYARD	68,042		
2081	DRAIN SUBSTATION	21,211		
2082	DRISCOLL SUBSTATION	411,453		
2083	DRISCOLL-NASELLE NO 1	274,886		
2084	DRUMMOND SUBSTATION	130,515		
2085	DWORSHAK POWERHOUSE	31,350		



Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<b>General Plant</b>	<b><u>General Plant Facilities</u></b>	<b>Investment(\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
	<b>Owner</b>			
2086	DWORSHAK SUBSTATION	466,409		
2087	EAST OMAK SUBSTATION	34,781		
2088	EASTERN CONTROL CENTER	1,078,743		
2089	EASTON RADIO STATION	310,876		
2090	EASTSIDE SYSTEM CONTROL CENTER(PSE)	14,423		
2091	ECHO LAKE SUBSTATION	1,420,119		
2092	ECHO LAKE-MONROE-SNOHOMISH FIBER SYSTEM	4,908,397		
2093	ELLENSBURG SUBSTATION	377,775		
2094	ELLENSBURG-MOXEE NO 1	254,038		
2095	ELLIS MOUNTAIN RADIO STATION	32,352		
2096	ELLIS RADIO STATION	556		
2097	EUGENE C. STARR COMPLEX	3,497,144		
2098	EUGENE SUBSTATION	348,327		
2099	EUGENE-ALDERWOOD NO 1	417,035		
2100	FAIRVIEW SUBSTATION(BPA)	786,326		
2101	FIDALGO SUBSTATION	434,263		
2102	FIDALGO-LOPEZ ISLAND NO 5	95,100		
2103	FLATHEAD SUBSTATION(BPA & FLATHEAD ELEC)	1,133,521		
2104	FOLSOM CONTROL CENTER (CAL ISO)	3,416		
2105	FOREST GROVE SUBSTATION	106,629		
2106	FOREST GROVE-MCMINNVILLE NO 1	6,668		
2107	FOREST GROVE-TILLAMOOK NO 1	14,894		
2108	FORT ROCK COMPENSATION STATION	370,389		
2109	FORT ROCK SUBSTATION (MIDSTATE ELECTRIC COOP)	3,351		
2110	FOSTER CREEK RADIO STATION	48,736		
2111	FOSTER SUBSTATION	16,933		
2112	FRANKLIN MAINTENANCE HEADQUARTERS	233,605		
2113	FRANKLIN SUBSTATION	1,335,471		
2114	FRANKLIN-MUNRO FIBER SYSTEM	16,440,087		
2115	FRANZ HOLMES SUBSTATION	2,341		
2116	FREDERICKSON GENERATING PLANT(FREDERICKSON POWER LP)	119,537		
2117	FREDERICKSON GENERATION-SOUTH TACOMA FIBER SYSTEM	618,584		
2118	FRENCHMAN SPRINGS SUBSTATION	766		
2119	GARDINER RIDGE RADIO STATION(BPA)	23,654		
2120	GARDINER RIDGE RADIO STATION(CENTRAL LINCOLN PUD)	10,244		
2121	GARRISON MAINTENANCE HEADQUARTERS	158,654		
2122	GARRISON SUBSTATION	4,395,189		
2123	GIG HARBOR SUBSTATION	46,027		
2124	GOLDENDALE SUBSTATION(BPA)	11,710		
2125	GOODWIN PEAK RADIO STATION	390,889		
2126	GOSHEN SUBSTATION(UTAH POWER & LIGHT)	38,803		
2127	GRAND COULEE 115 KV SWITCHYARD	634,783		
2128	GRAND COULEE 115KV-GRAND COULEE RS FIBER SEG	249,005		
2129	GRAND COULEE 230 KV SWITCHYARD	319,123		
2130	GRAND COULEE 500 KV SWITCHYARD	1,217,762		
2131	GRAND COULEE MAINTENANCE BUILDING	629,567		
2132	GRAND COULEE PASSIVE REPEATERSITE	556		
2133	GRAND COULEE RADIO STATION	386,369		
2134	GRAND COULEE SUBSTATION	113,077		
2135	GRAND COULEE THIRD POWERHOUSE	152,907		
2136	GRAND COULEE-BELL NO 5	22,276		
2137	GRANDVIEW SUBSTATION	38,617		
2138	GRANITE MOUNTAIN RADIO STATION	913,001		
2139	GRASSY MOUNTAIN RADIO STATION	556		
2140	GRAZZINI SUBSTATION	69,978		
2141	GREEN MOUNTAIN PASSIVE REPEATER SITE	18,681		
2142	GREENBERRY SUBSTATION	645		
2143	GRIZZLY MOUNTAIN RADIO STATION	90,226		
2144	GRIZZLY SUBSTATION	879,434		
2145	GROUSE PEAK RADIO STATION	375,503		
2146	HAAKENSEN SUBSTATION	24,891		
2147	HALL RIDGE RADIO STATION	409,676		
2148	HAMPTON BUTTE RADIO STATION	343,430		
2149	HANFORD SUBSTATION	753,297		
2150	HANFORD-WAUTOMA NO 1	1,770		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<u>General Plant Facilities</u>		Investment(\$)	O&M (\$)	Multi %
	<u>Owner</u>			
2151	HAPPY CAMP RADIO STATION(PG&E)	485,754		
2152	HAPPY CAMP RADIO STATION(TANC)	52,708		
2153	HAPPY VALLEY SUBSTATION	1,657		
2154	HARNEY SUBSTATION(BPA)	270,352		
2155	HARVALUM SUBSTATION	487,931		
2156	HARVEY SUBSTATION	142,362		
2157	HAT ROCK SUBSTATION	85,428		
2158	HATWAI SUBSTATION	1,330,644		
2159	HAUSER SUBSTATION(BPA)	9,889		
2160	HAUSER-NORTH BEND MAINTENANCE HQ FIBER SYSTEM	52,648		
2161	HAYDEN SUBSTATION	4,128		
2162	HAYSTACK BUTTE RADIO STATION	86,253		
2163	HEYBURN SUBSTATION	26,048		
2164	HILLTOP SUBSTATION	27,330		
2165	HOLCOMB RADIO STATION	270,971		
2166	HOLCOMB SUBSTATION	16,087		
2167	HOOD RIVER SUBSTATION	143,515		
2168	HOOD RIVER-THE DALLES NO 1	95,770		
2169	HORN BUTTE TAP TO TOWER ROAD-ALKALINO 1	7,512		
2170	HORSE HEAVEN SUBSTATION	11,423		
2171	HOT SPRINGS SUBSTATION	2,127,050		
2172	HOT SPRINGS-GARRISON FIBER SYSTEM	9,027,301		
2173	HUNGRY HORSE POWERHOUSE	543,650		
2174	HUNGRY HORSE RADIO STATION	653,256		
2175	ICE HARBOR POWERHOUSE	252,790		
2176	IDAHO FALLS DISTRICT OFFICE AND MAINTENANCE HEADQUARTERS	4,447,679		
2177	IDAHO FALLS STORAGE YARD	380,162		
2178	INDIAN MOUNTAIN RADIO STATION	51,774		
2179	INTALCO SUBSTATION	868,855		
2180	IONA BUTTE RADIO STATION	747		
2181	JOHN CURTIS SUBSTATION	68,395		
2182	JOHN DAY POWERHOUSE	270,063		
2183	JOHN DAY SUBSTATION	2,125,857		
2184	JOHN DAY SUBSTATION - 230 YARD	971,128		
2185	JONES CANYON SUBSTATION	2,467,180		
2186	KAHLOTUS RADIO STATION	116,277		
2187	KALISPELL MAINTENANCE HEADQUARTERS	7,012,388		
2188	KALISPELL SUBSTATION(BPA)	1,916,867		
2189	KEELER MAINTENANCE HEADQUARTERS	521,342		
2190	KEELER SUBSTATION	1,794,542		
2191	KEELER-ALVEY FIBER SYSTEM	8,601,493		
2192	KEELER-COVINGTON FIBER SYSTEM	17,816,936		
2193	KEELER-FOREST GROVE NO 1	3,269		
2194	KENNEDY SUBSTATION	3,017		
2195	KENNEWICK RADIO STATION	1,515,118		
2196	KENNEWICK SUBSTATION(BENTON CO PUD)	7,152		
2197	KENYON MOUNTAIN RADIO STATION	309,028		
2198	KITSAP SUBSTATION	1,074,446		
2199	KLONDIKE SCHOOLHOUSE SUBSTATION (IBERDOLA)	130,842		
2200	LA GRANDE SUBSTATION	164,303		
2201	LA PINE SUBSTATION	969,060		
2202	LAKE BAY SUBSTATION	119,816		
2203	LAKE GROVE SUBSTATION	56,584		
2204	LAKESIDE RADIO STATION	34,188		
2205	LANCASTER SUBSTATION(BPA)	421,234		
2206	LANE SUBSTATION	842,434		
2207	LEBANON SUBSTATION	6,013		
2208	LENEVE RADIO STATION	94,478		
2209	LEWISTON MAINTENANCE HEADQUARTERS	24,455		
2210	LEXINGTON SUBSTATION	351,036		
2211	LIBBY POWERHOUSE	438,990		
2212	LIBBY SUBSTATION(BPA)	1,649,294		
2213	LIBBY SUBSTATION(BPA/FLATHEAD/LEC)	434,298		
2214	LINES CREEK RADIO STATION	707,598		
2215	LITTLE GOOSE PH-LITTLE GOOSE NO 1	(1,777)		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
General Plant	<u>General Plant Facilities</u> Owner	Investment(\$)	O&M (\$)	Multi %
2216	LITTLE GOOSE POWERHOUSE	600,318		
2217	LITTLE GOOSE SUBSTATION	3,263,875		
2218	LODHOLM SUBSTATION	132,402		
2219	LONGVIEW ANNEX I	2,885		
2220	LONGVIEW MAINTENANCE HEADQUARTERS	267,444		
2221	LONGVIEW SUBSTATION	2,140,951		
2222	LOOKOUT MOUNTAIN RADIO STATION	214,429		
2223	LOOKOUT POINT SUBSTATION	17,902		
2224	LOPEZ ISLAND SUBSTATION(BPA)	496,029		
2225	LOST RIVER SUBSTATION	173,126		
2226	LOWELL BUTTE RADIO STATION	1,855,300		
2227	LOWER GRANITE POWERHOUSE	329,857		
2228	LOWER GRANITE SUBSTATION	4,139,274		
2229	LOWER MONUMENTAL POWERHOUSE	258,795		
2230	LOWER MONUMENTAL SUBSTATION	1,643,694		
2231	LOWER MONUMENTAL-HANFORD NO 1	53,475		
2232	LOWER MONUMENTAL-MCNARY NO 1	7,729		
2233	LYN PUMPS PUMPING PLANT	4,267		
2234	LYNCH CREEK SUBSTATION	121,887		
2235	MACKS INN SUBSTATION	13,198		
2236	MALAGA RADIO STATION	253,068		
2237	MALIN MAINTENANCE HEADQUARTERS	5,215,428		
2238	MALIN PASSIVE REPEATER S SITE	13,184		
2239	MALIN SUBSTATION	2,768,136		
2240	MALONEY RIDGE RADIO STATION	1,571		
2241	MAPLE VALLEY SUBSTATION	2,349,492		
2242	MAPLE VALLEY-SNOHOMISH FIBER SYSTEM	732,999		
2243	MAPLETON SUBSTATION	60,489		
2244	MARION SUBSTATION	2,073,002		
2245	MARION-SANTIAM FIBER SYSTEM	1,060,590		
2246	MARTIN CREEK SUBSTATION	57,943		
2247	MARYS PEAK RADIO STATION	246,203		
2248	MAUPIN SUBSTATION	229,841		
2249	MAYFIELD POWERHOUSE	12,509		
2250	MAYFIELD SWITCHYARD	57,344		
2251	MCCULLOUGH SUBSTATION	59,703		
2252	MCLOUGHLIN SUBSTATION	881,150		
2253	MCMINNVILLE SUBSTATION	235,988		
2254	MCNARY MAINTENANCE HEADQUARTERS	64,656		
2255	MCNARY POWERHOUSE	505,020		
2256	MCNARY SUBSTATION	4,338,801		
2257	MCNARY-COYOTE SPRINGS NO 1	1,519,037		
2258	MCNARY-HORSE HEAVEN NO 1	70,204		
2259	MCNARY-JOHN DAY NO 2	5,493,113		
2260	MEAD SUBSTATION	4,712		
2261	MEGLER RADIO STATION	556		
2262	MERIDIAN SUBSTATION(PACIFICORP)	215,029		
2263	MERRITT RADIO STATION	119,019		
2264	METALINE RADIO STATION	78,233		
2265	MICA PEAK RADIO STATION	765,517		
2266	MIDWAY SUBSTATION(BPA)	2,145,058		
2267	MIDWAY-MOXEE NO 1	33,830		
2268	MILES CITY SUBSTATION	78,146		
2269	MILLER PEAK RADIO STATION	825,116		
2270	MILLER SUBSTATION(LAKEVIEW LIGHT & PWR)	65,777		
2271	MINIDOKA POWERHOUSE	67,168		
2272	MINIDOKA POWERHOUSE-MINIDOKA RADIO STATION FIBER SYSTEM	171,931		
2273	MINIDOKA RADIO STATION	104,319		
2274	MINTER SUBSTATION (PENINSULA)	100,179		
2275	MOBILE COMMUNICATIONS	409,133		
2276	MONROE SUBSTATION	1,355,898		
2277	MOXEE SUBSTATION	91,052		
2278	MT SI-TANNER NO 1	2,223,299		
2279	MT. EMILY RADIO STATION	65,833		
2280	MT. HEBO RADIO STATION	9,063		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<b>General Plant</b>	<b>General Plant Facilities</b>	<b>Investment(\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
	<b>Owner</b>			
2281	MT. SPOKANE RADIO STATION(AVISTA)	43,896		
2282	MT. SPOKANE RADIO STATION(BPA)	201,662		
2283	MUNRO BPA SYSTEM CONTROL CENTER	13,058,705		
2284	MURRAY SUBSTATION	31,793		
2285	NAPAVINE SUBSTATION	361,081		
2286	NARROWS SUBSTATION	75,170		
2287	NASELLE RIDGE RADIO STATION	262,736		
2288	NASELLE SUBSTATION	188,012		
2289	NASELLE-TARLETT NO 1	37,122		
2290	NEWPORT SUBSTATION(INLAND POWER)	431		
2291	NINE CANYON SUBSTATION (BENTON PUD)	63,776		
2292	NORTH BEND MAINTENANCE HEADQUARTERS	2,487,737		
2293	NORTH BEND RADIO STATION	596,263		
2294	NORTH BONNEVILLE SUBSTATION	444,071		
2295	NORTH BONNEVILLE-MIDWAY NO 1	3,745		
2296	NORTH BONNEVILLE-TROUTDALE NO2	281,830		
2297	NOTI RADIO STATION	271,116		
2298	NOXON CONSTRUCTION SUBSTATION	344,199		
2299	NOXON RADIO STATION	1,689,098		
2300	NOXON-KALISPELL FIBER SYSTEM	11,514,282		
2301	NOXON-LIBBY NO 1	354,839		
2302	NOXON-TAFT FIBER SYSTEM	5,718,682		
2303	ODELL BUTTE RADIO STATION	970,199		
2304	OHOP SUBSTATION	126,215		
2305	OLNEY METERING POINT	2,706		
2306	OLYMPIA MAINTENANCE HEADQUARTERS	6,562,207		
2307	OLYMPIA SUBSTATION	1,785,858		
2308	OLYMPIA-ABERDEEN FIBER SYSTEM	989,884		
2309	OLYMPIA-GRAND COULEE NO 1	898,339		
2310	OLYMPIA-KITSAP NO 3 (SEE NOTES)	66,850		
2311	OLYMPIA-PORT ANGELES FIBER SYSTEM	6,850,457		
2312	OLYMPIA-ST CLAIR NO 1	1,318,835		
2313	OREGON CITY SUBSTATION	80,667		
2314	OSTRANDER PASSIVE REPEATER SITE	66,182		
2315	OSTRANDER SUBSTATION	6,415,860		
2316	PACIFIC GAS AND ELECTRIC OPERATIONS CENTER	4,109		
2317	PALISADES POWERHOUSE	14,556		
2318	PASCO MAINTENANCE HEADQUARTERS	196,041		
2319	PATRICKS KNOB RADIO STATION	701,903		
2320	PAUL SUBSTATION	2,258,571		
2321	PBL ROSS EMERGENCY SCHEDULINGCENTER (ESC)	57,571		
2322	PEARL SUBSTATION	1,246,495		
2323	PEARL-TROUTDALE FIBER SYSTEM	4,093,153		
2324	PENDLETON SUBSTATION	17,757		
2325	PILOT BUTTE-LA PINE NO 1	124,765		
2326	PINE MOUNTAIN RADIO STATION	192,493		
2327	POMEROY RADIO STATION	542,569		
2328	POMEROY SUBSTATION(BPA)	5,395		
2329	PONDEROSA SUBSTATION(BPA)	541,196		
2330	PORT ANGELES SUBSTATION(BPA)	139,450		
2331	PORTLAND INTERNATIONAL AIRPORT HANGAR	1,160,192		
2332	POTHOLES SUBSTATION	33,878		
2333	PROSPECT HILL RADIO STATION	410,562		
2334	PURDY SUBSTATION	46,473		
2335	RAINIER RADIO STATION	685,741		
2336	RAINIER SUBSTATION	3,384		
2337	RATTLESNAKE SUBSTATION(MPC)	81,320		
2338	RAVER SUBSTATION	3,219,692		
2339	RAVER-ECHO LAKE FIBER SYSTEM	7,294,724		
2340	RAYMOND HILL RADIO STATION	491,694		
2341	RAYMOND RADIO STATION	238,453		
2342	RAYMOND SUBSTATION	21,198		
2343	RED MOUNTAIN SUB (BENTON REA)- NEVER BUILT-OBS	391,394		
2344	RED MOUNTAIN SUBSTATION	462,774		
2345	REDMOND BPA HANGAR SITE	1,348,223		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<b>General Plant</b>	<u>General Plant Facilities</u> <b>Owner</b>	<b>Investment(\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
2346	REDMOND MAINTENANCE HEADQUARTERS	3,092,670		
2347	REDMOND SUBSTATION(BPA)	1,408,965		
2348	REEDSPORT SUBSTATION (BPA)	191,923		
2349	REEDSPORT-FAIRVIEW NO 1	314,896		
2350	REEDSPORT-TAHKENITCH FIBER SYSTEM	193,800		
2351	RESTON SUBSTATION	153,458		
2352	RICHLAND SUBSTATION	98,308		
2353	ROCK CREEK SUBSTATION	603,743		
2354	ROCK CREEK-JOHN DAY NO 1	1,994		
2355	ROCKDALE RADIO STATION	31,091		
2356	ROCKY RADIO STATION [RET]	12,681		
2357	ROCKY REACH SUBSTATION	556		
2358	ROCKY REACH SWITCHYARD	85,702		
2359	ROCKY RIDGE RADIO STATION	941,683		
2360	ROGUE SUBSTATION	1,042,883		
2361	ROOSEVELT RADIO STATION	240,239		
2362	ROSS AMPERE BUILDING	5,549,046		
2363	ROSS COMPLEX	54,084,571		
2364	ROSS CONSTRUCTION AND SERVICES BUILDING	9,348,266		
2365	ROSS EHV LABORATORY	603,409		
2366	ROSS MAINTENANCE HEADQUARTERS	205,983		
2367	ROSS RADIO STATION	43,336		
2368	ROSS SUBSTATION	521,532		
2369	ROSS TOOLS AND EQUIPMENT BUILDING	3,459,851		
2370	ROSS WAREHOUSE	5,737,739		
2371	ROSS-FRANKLIN FIBER SYSTEM	20,824,601		
2372	ROSS-MALIN FIBER SYSTEM	20,193,947		
2373	ROUND VALLEY SUBSTATION	133,669		
2374	ROUNDUP SUBSTATION	86,577		
2375	SACAJAWEA SUBSTATION	712,737		
2376	SACHEEN SUBSTATION	26,811		
2377	SALEM PASSIVE REPEATER SITE	10,266		
2378	SALEM SUBSTATION (SALEM ELEC)	558,458		
2379	SAND DUNES SUBSTATION	58,891		
2380	SAND SPRING COMPENSATION STATION	93,311		
2381	SANDPOINT SUBSTATION(BPA)	22,550		
2382	SANTIAM SUBSTATION	1,903,112		
2383	SANTIAM-BETHEL NO 1	206,955		
2384	SATSOP SUBSTATION(BPA)	1,193,020		
2385	SAWTELL RADIO STATION	210,883		
2386	SCHULTZ MAINTENANCE HEADQUARTERS	2,704,238		
2387	SCHULTZ SUBSTATION	1,656,445		
2388	SCHULTZ-ECHO LAKE NO 1	1,237,435		
2389	SCHULTZ-WAUTOMA NO 1	18,029,963		
2390	SCOTT MOUNTAIN RADIO STATION	288,852		
2391	SEATTLE RADIO STATION	3,908		
2392	SHANIKO RADIO STATION	585,217		
2393	SHANO SUBSTATION	13,189		
2394	SHELTON SUBSTATION	716,506		
2395	SHELTON-KITSAP NO 2	399,843		
2396	SHELTON-SOUTH BREMERTON NO 1	399,843		
2397	SICKLER MAINTENANCE HEADQUARTERS	1,069,891		
2398	SICKLER SUBSTATION	2,005,652		
2399	SICKLER-SCHULTZ NO 1	311,816		
2400	SIFTON SUBSTATION	1,309,745		
2401	SILVER CREEK SUBSTATION	433,737		
2402	SILVERADO SUBSTATION (CLALLAM CO. PUD)	875		
2403	SKYROCKET RADIO STATION	849,895		
2404	SLATT SUBSTATION	3,459,629		
2405	SNOHOMISH CO. PUD DISPATCH CENTER	8,094		
2406	SNOHOMISH MAINTENANCE HEADQUARTERS	1,648,879		
2407	SNOHOMISH SUBSTATION	3,418,035		
2408	SNO-KING SUBSTATION	1,193,261		
2409	SNO-KING-MAPLE VALLEY NO. 2	45,639		
2410	SNO-KING-SNOHOMISH FIBER SYSTEM (DO NOT USE, SEE NOTES)	2,949,281		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<b>General Plant</b>	<u>General Plant Facilities</u> <b>Owner</b>	<b>Investment(\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
2411	SOUTH MOUNTAIN RADIO STATION	297,568		
2412	SOUTH TACOMA SUBSTATION	348,933		
2413	SPAR CANYON SUBSTATION	136,951		
2414	SPOKANE HANGAR	1,705,354		
2415	SPRING CREEK SUBSTATION	161,800		
2416	SPRING CREEK-WINE COUNTRY NO 1	50,782		
2417	SQUAK MOUNTAIN RADIO STATION	63,709		
2418	ST. JOHNS SUBSTATION	9,571		
2419	STAMPEDE PASS RADIO STATION	145,800		
2420	STEILACOOM SUBSTATION	97,941		
2421	SUMMER LAKE HOUSING	143,243		
2422	SUMMER LAKE SUBSTATION	1,016,692		
2423	SUN HARBOR SUBSTATION	13,914		
2424	SUNNYSIDE RADIO STATION	756,612		
2425	SURPRISE LAKE SUBSTATION	80,458		
2426	SWAN LAKE POINT RADIO STATION	64,785		
2427	SWAN VALLEY PASSIVE REPEATER SITE	152,951		
2428	SWAN VALLEY RADIO STATION	433,850		
2429	SWAN VALLEY SUBSTATION	262,636		
2430	SWAN VALLEY-TETON NO 1	94,591		
2431	SWAN VALLEY-TETON NO 2	94,531		
2432	SYCAN COMPENSATION STATION	284,019		
2433	SYSTEM WIDE	29,679,050		
2434	TACOMA PASSIVE REPEATER SITE	7,992		
2435	TACOMA RADIO STATION	1,896,388		
2436	TACOMA SUBSTATION	1,167,434		
2437	TAFT SUBSTATION	1,987,212		
2438	TAHKENITCH SUBSTATION	207,583		
2439	TARGHEE SUBSTATION	138,873		
2440	TARKIO SUBSTATION (SOLD)	2,772		
2441	TEAKEAN BUTTE RADIO STATION	291,237		
2442	TEANAWAY RADIO STATION	231,214		
2443	TETON SUBSTATION	86,163		
2444	THE DALLES FISHWAY HYDRO PLANT	16,496		
2445	THE DALLES MAINTENANCE HEADQUARTERS	4,601,552		
2446	THE DALLES OPERATING DISTRICT HEADQUARTERS	26,595		
2447	THE DALLES POWERHOUSE	293,724		
2448	THE DALLES SUBSTATION	250,582		
2449	THOMPSON FALLS RADIO STATION	466,622		
2450	TILLAMOOK SUBSTATION	392,068		
2451	TOLEDO SUBSTATION	161,010		
2452	TRENTWOOD SUBSTATION	87,179		
2453	TROUTDALE SUBSTATION(BPA)	2,934,869		
2454	TROUTDALE SUBSTATION(PACIFICORP)	151,373		
2455	TROY SUBSTATION	3,763		
2456	TUCANNON RIVER SUBSTATION	1,042,719		
2457	TUNK MOUNTAIN RADIO STATION	211,786		
2458	TWO PARK PLACE	25,339		
2459	TYEE SUBSTATION	88,101		
2460	UNITY SUBSTATION(BPA)	266,885		
2461	USK SUBSTATION(BPA)	130,612		
2462	VALHALLA SUBSTATION	426,991		
2463	VANTAGE SUBSTATION	955,439		
2464	VAUGHN SUBSTATION	113,732		
2465	WALKER MOUNTAIN RADIO STATION	1,874,997		
2466	WALLA WALLA SUBSTATION(BPA)	764,283		
2467	WALLA WALLA SUBSTATION(PACIFICORP)	16,384		
2468	WALLA WALLA-WALLA WALLA (PACW) NO 1	163,462		
2469	WARDEN POLE METERING POINT	6,664		
2470	WARNER SUBSTATION	346,484		
2471	WASCO RADIO STATION	685,695		
2472	WATERVILLE RADIO STATION	105,061		
2473	WAUNA PAPER MILL	9,063		
2474	WAUTOMA SUBSTATION	2,840,279		
2475	WAUTOMA-COLUMBIA FIBER SYSTEM	5,084,288		

Appendix A  
BP-16 Initial Proposal Segmentation Details

A	B	C	D	E
<b>General Plant</b>	<b><u>General Plant Facilities</u></b>	<b>Investment(\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>
	<b>Owner</b>			
2476 WAUTOMA-OSTRANDER NO 1		19,979		
2477 WEISER SUBSTATION		7,809		
2478 WENDSON SUBSTATION		565,011		
2479 WENDSON-TAHKENITCH NO 2		514,470		
2480 WEST PORTLAND RADIO STATION		55,659		
2481 WESTSIDE SUBSTATION(BPA)		21,113		
2482 WHISKEY RIDGE RADIO STATION		18,065		
2483 WHITE BLUFFS SUBSTATION		813,829		
2484 WHITE CREEK SUBSTATION (KPUD)	KPUD	29,645		
2485 WILSON RIVER SUBSTATION		5,855		
2486 WINCHESTER SUBSTATION		11,849		
2487 WINDY DEVIL RADIO STATION		82,197		
2488 WINE COUNTRY SUBSTATION	BPA/PAC	732,852		
2489 WOLF MOUNTAIN RADIO STATION		1,472,604		
2490 WPPSS NO. 2 POWERHOUSE	ENW	89,096		
2491 <b>Total General Plant</b>		<b><u><u>779,612,109</u></u></b>		

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**Appendix B**  
**BP-16 Multi-Segmented Facilities Summary**

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Appendix B  
BP-16 Multi-Segmented Facilities Summary

A	B	C	D	E
Transmission Lines	Investment (\$)	O&M (\$)	Multi %	Segment
1 BUCKLEY-GRIZZLY NO 1	7,514,539	4,285	43%	Network
2 BUCKLEY-GRIZZLY NO 1	9,961,133	5,680	57%	Southern Intertie
3 BUCKLEY-GRIZZLY NO 1	17,475,672	9,965	100%	Total
4 BUCKLEY-MARION NO 1	20,369,871	17,796	50%	Network
5 BUCKLEY-MARION NO 1	20,369,871	17,796	50%	Southern Intertie
6 BUCKLEY-MARION NO 1	40,739,743	35,591	100%	Total
7 COUGAR-THURSTON NO 1	123,688	1,585	5%	Generation Integration
8 COUGAR-THURSTON NO 1	2,159,286	27,674	95%	Network
9 COUGAR-THURSTON NO 1	2,282,974	29,259	100%	Total
10 COYOTE SPRINGS-SLATT NO 1	2,352,112	3,944	88%	Network
11 COYOTE SPRINGS-SLATT NO 1	328,931	552	12%	Southern Intertie
12 COYOTE SPRINGS-SLATT NO 1	2,681,042	4,496	100%	Total
13 GREEN PETER-LEBANON NO 1	357,224	4,339	35%	Generation Integration
14 GREEN PETER-LEBANON NO 1	666,893	8,101	65%	Network
15 GREEN PETER-LEBANON NO 1	1,024,116	12,440	100%	Total
16 GRIZZLY-SUMMER LAKE NO 1	14,696,081	16,635	43%	Network
17 GRIZZLY-SUMMER LAKE NO 1	19,480,851	22,051	57%	Southern Intertie
18 GRIZZLY-SUMMER LAKE NO 1	34,176,932	38,686	100%	Total
19 Grouse Creek-Tecoma Transmission Lines & Substation	1,919,106	0	94%	Network
20 Grouse Creek-Tecoma Transmission Lines & Substation	121,332	0	6%	Utility Delivery
21 Grouse Creek-Tecoma Transmission Lines & Substation	2,040,437	0	100%	Total
22 HILLS CREEK-LOOKOUT POINT NO 1	297,360	5,732	19%	Generation Integration
23 HILLS CREEK-LOOKOUT POINT NO 1	1,242,208	23,947	81%	Network
24 HILLS CREEK-LOOKOUT POINT NO 1	1,539,568	29,679	100%	Total
25 ICE HARBOR-FRANKLIN NO 2	15,726	34	3%	Generation Integration
26 ICE HARBOR-FRANKLIN NO 2	554,825	1,202	97%	Network
27 ICE HARBOR-FRANKLIN NO 2	570,551	1,236	100%	Total
28 ICE HARBOR-FRANKLIN NO 3	133,963	109	9%	Generation Integration
29 ICE HARBOR-FRANKLIN NO 3	1,331,565	1,085	91%	Network
30 ICE HARBOR-FRANKLIN NO 3	1,465,528	1,194	100%	Total
31 MARION-ALVEY NO 1	4,456,110	17,990	50%	Network
32 MARION-ALVEY NO 1	4,456,110	17,990	50%	Southern Intertie
33 MARION-ALVEY NO 1	8,912,221	35,979	100%	Total
34 SLATT-JOHN DAY NO 1	4,830,181	16,607	93%	Network
35 SLATT-JOHN DAY NO 1	328,108	1,250	7%	Southern Intertie
36 SLATT-JOHN DAY NO 1	5,158,288	17,858	100%	Total

Appendix B  
BP-16 Multi-Segmented Facilities Summary

	A	B	C	D	E
	<b>Transmission Lines</b>	<b>Investment (\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>	<b>Segment</b>
1	BUCKLEY-GRIZZLY NO 1	7,514,539	4,285	43%	Network
2	BUCKLEY-GRIZZLY NO 1	9,961,133	5,680	57%	Southern Intertie
3	BUCKLEY-GRIZZLY NO 1	17,475,672	9,965	100%	Total
4	BUCKLEY-MARION NO 1	20,369,871	17,796	50%	Network
5	BUCKLEY-MARION NO 1	20,369,871	17,796	50%	Southern Intertie
6	BUCKLEY-MARION NO 1	40,739,743	35,591	100%	Total
7	COUGAR-THURSTON NO 1	123,688	1,585	5%	Generation Integration
8	COUGAR-THURSTON NO 1	2,159,286	27,674	95%	Network
9	COUGAR-THURSTON NO 1	2,282,974	29,259	100%	Total
10	COYOTE SPRINGS-SLATT NO 1	2,352,112	3,944	88%	Network
11	COYOTE SPRINGS-SLATT NO 1	328,931	552	12%	Southern Intertie
12	COYOTE SPRINGS-SLATT NO 1	2,681,042	4,496	100%	Total
13	GREEN PETER-LEBANON NO 1	357,224	4,339	35%	Generation Integration
14	GREEN PETER-LEBANON NO 1	666,893	8,101	65%	Network
15	GREEN PETER-LEBANON NO 1	1,024,116	12,440	100%	Total
16	GRIZZLY-SUMMER LAKE NO 1	14,696,081	16,635	43%	Network
17	GRIZZLY-SUMMER LAKE NO 1	19,480,851	22,051	57%	Southern Intertie
18	GRIZZLY-SUMMER LAKE NO 1	34,176,932	38,686	100%	Total
19	Grouse Creek-Tecoma Transmission Lines & Substation	1,919,106	0	94%	Network
20	Grouse Creek-Tecoma Transmission Lines & Substation	121,332	0	6%	Utility Delivery
21	Grouse Creek-Tecoma Transmission Lines & Substation	2,040,437	0	100%	Total
22	HILLS CREEK-LOOKOUT POINT NO 1	297,360	5,732	19%	Generation Integration
23	HILLS CREEK-LOOKOUT POINT NO 1	1,242,208	23,947	81%	Network
24	HILLS CREEK-LOOKOUT POINT NO 1	1,539,568	29,679	100%	Total
25	ICE HARBOR-FRANKLIN NO 2	15,726	34	3%	Generation Integration
26	ICE HARBOR-FRANKLIN NO 2	554,825	1,202	97%	Network
27	ICE HARBOR-FRANKLIN NO 2	570,551	1,236	100%	Total
28	ICE HARBOR-FRANKLIN NO 3	133,963	109	9%	Generation Integration
29	ICE HARBOR-FRANKLIN NO 3	1,331,565	1,085	91%	Network
30	ICE HARBOR-FRANKLIN NO 3	1,465,528	1,194	100%	Total
31	MARION-ALVEY NO 1	4,456,110	17,990	50%	Network
32	MARION-ALVEY NO 1	4,456,110	17,990	50%	Southern Intertie
33	MARION-ALVEY NO 1	8,912,221	35,979	100%	Total
34	SLATT-JOHN DAY NO 1	4,830,181	16,607	93%	Network
35	SLATT-JOHN DAY NO 1	328,108	1,250	7%	Southern Intertie
36	SLATT-JOHN DAY NO 1	5,158,288	17,858	100%	Total

Appendix B  
BP-16 Multi-Segmented Facilities Summary

	A	B	C	D	E
	<b>Substations</b>	<b>Investment (\$)</b>	<b>O&amp;M (\$)</b>	<b>Multi %</b>	<b>Segment</b>
37	ADDY SUBSTATION	7,221,024	55,953	70%	Network
38	ADDY SUBSTATION	3,092,383	23,962	30%	Unsegmented
39	ADDY SUBSTATION	10,313,407	79,914	100%	Total
40	ALBANY SUBSTATION	11,467,254	104,068	88%	Network
41	ALBANY SUBSTATION	1,591,607	14,444	12%	Utility Delivery
42	ALBANY SUBSTATION	13,058,861	118,512	100%	Total
43	ALBENI FALLS SUBSTATION	365,644	6,150	25%	Generation Integration
44	ALBENI FALLS SUBSTATION	1,096,932	18,449	75%	Network
45	ALBENI FALLS SUBSTATION	1,462,575	24,598	100%	Total
46	ALCOA SUBSTATION	7,740,270	132,586	88%	Network
47	ALCOA SUBSTATION	1,091,469	18,696	12%	Unsegmented
48	ALCOA SUBSTATION	8,831,740	151,282	100%	Total
49	ALVEY SUBSTATION	23,034,748	228,758	74%	Network
50	ALVEY SUBSTATION	8,053,719	79,981	26%	Southern Intertie
51	ALVEY SUBSTATION	31,088,468	308,739	100%	Total
52	ASHE SUBSTATION	4,245,588	50,064	12%	Generation Integration
53	ASHE SUBSTATION	31,209,146	368,015	88%	Network
54	ASHE SUBSTATION	35,454,734	418,079	100%	Total
55	BANDON SUBSTATION	4,085,324	57,378	84%	Network
56	BANDON SUBSTATION	797,332	11,198	16%	Utility Delivery
57	BANDON SUBSTATION	4,882,656	68,576	100%	Total
58	BIG EDDY SUBSTATION	3,430,442	28,198	5%	Generation Integration
59	BIG EDDY SUBSTATION	10,857,639	89,248	14%	Network
60	BIG EDDY SUBSTATION	60,615,224	498,250	81%	Southern Intertie
61	BIG EDDY SUBSTATION	74,903,305	615,696	100%	Total
62	BONNERS FERRY SUBSTATION	1,689,233	32,486	73%	Network
63	BONNERS FERRY SUBSTATION	615,682	11,840	27%	Utility Delivery
64	BONNERS FERRY SUBSTATION	2,304,915	44,326	100%	Total
65	BUCKLEY SUBSTATION	3,489,220	34,755	36%	Network
66	BUCKLEY SUBSTATION	6,248,137	62,236	64%	Southern Intertie
67	BUCKLEY SUBSTATION	9,737,357	96,992	100%	Total
68	BURBANK SUBSTATION	516,445	8,848	83%	Utility Delivery
69	BURBANK SUBSTATION	103,059	1,766	17%	Unsegmented
70	BURBANK SUBSTATION	619,504	10,614	100%	Total
71	CHIEF JOSEPH SUBSTATION	8,068,407	170,936	25%	Generation Integration
72	CHIEF JOSEPH SUBSTATION	23,535,065	498,609	72%	Network
73	CHIEF JOSEPH SUBSTATION	1,081,225	22,907	3%	Southern Intertie
74	CHIEF JOSEPH SUBSTATION	32,684,697	692,452	100%	Total
75	CONKELLEY SUBSTATION	5,164,221	93,812	45%	Network
76	CONKELLEY SUBSTATION	6,258,745	113,694	55%	DSI Delivery

Appendix B  
BP-16 Multi-Segmented Facilities Summary

77	CONKELLEY SUBSTATION	11,422,966	207,506	100%	Total
78	DRAIN SUBSTATION	2,664,627	35,132	91%	Network
79	DRAIN SUBSTATION	277,801	3,663	9%	Utility Delivery
80	DRAIN SUBSTATION	2,942,428	38,795	100%	Total
81	DWORSHAK SUBSTATION	4,502,639	23,383	18%	Generation Integration
82	DWORSHAK SUBSTATION	20,299,284	105,419	82%	Network
83	DWORSHAK SUBSTATION	24,801,923	128,802	100%	Total
84	EAGLE LAKE SUBSTATION	372,510	12,306	98%	Utility Delivery
85	EAGLE LAKE SUBSTATION	8,024	265	2%	Unsegmented
86	EAGLE LAKE SUBSTATION	380,534	12,571	100%	Total
87	FRANKLIN SUBSTATION	1,842,217	61,577	20%	Generation Integration
88	FRANKLIN SUBSTATION	7,519,624	251,347	80%	Network
89	FRANKLIN SUBSTATION	9,361,841	312,924	100%	Total
90	GARRISON SUBSTATION	47,828,951	335,935	66%	Network
91	GARRISON SUBSTATION	24,359,252	171,092	34%	Eastern Intertie
92	GARRISON SUBSTATION	72,188,203	507,027	100%	Total
93	GLADE SUBSTATION	444,475	9,642	89%	Utility Delivery
94	GLADE SUBSTATION	53,296	1,156	11%	Unsegmented
95	GLADE SUBSTATION	497,771	10,798	100%	Total
96	HOOD RIVER SUBSTATION	607,958	17,390	49%	Network
97	HOOD RIVER SUBSTATION	627,556	17,950	51%	Utility Delivery
98	HOOD RIVER SUBSTATION	1,235,514	35,340	100%	Total
99	INTALCO SUBSTATION	659,933	10,253	4%	Network
100	INTALCO SUBSTATION	16,403,546	254,840	96%	DSI Delivery
101	INTALCO SUBSTATION	17,063,479	265,093	100%	Total
102	IONE SUBSTATION	582,192	19,826	73%	Network
103	IONE SUBSTATION	210,675	7,174	27%	Utility Delivery
104	IONE SUBSTATION	792,867	27,000	100%	Total
105	JOHN DAY SUBSTATION	10,714,315	73,792	24%	Generation Integration
106	JOHN DAY SUBSTATION	21,916,385	150,944	49%	Network
107	JOHN DAY SUBSTATION	12,128,698	83,533	27%	Southern Intertie
108	JOHN DAY SUBSTATION	44,759,399	308,269	100%	Total
109	LIBBY SUBSTATION(BPA)	2,936,321	66,577	33%	Generation Integration
110	LIBBY SUBSTATION(BPA)	5,974,273	135,458	67%	Network
111	LIBBY SUBSTATION(BPA)	8,910,594	202,035	100%	Total
112	LITTLE GOOSE SUBSTATION	2,496,610	19,014	20%	Generation Integration
113	LITTLE GOOSE SUBSTATION	9,986,440	76,055	80%	Network
114	LITTLE GOOSE SUBSTATION	12,483,050	95,069	100%	Total
115	LOOKOUT POINT SUBSTATION	553,632	7,518	25%	Generation Integration
116	LOOKOUT POINT SUBSTATION	1,660,895	22,553	75%	Network
117	LOOKOUT POINT SUBSTATION	2,214,527	30,070	100%	Total
118	LOWER GRANITE SUBSTATION	2,095,395	26,432	25%	Generation Integration
119	LOWER GRANITE SUBSTATION	6,286,185	79,297	75%	Network
120	LOWER GRANITE SUBSTATION	8,381,580	105,730	100%	Total

Appendix B  
BP-16 Multi-Segmented Facilities Summary

121	LOWER MONUMENTAL SUBSTATION	2,255,228	13,916	12%	Generation Integration
122	LOWER MONUMENTAL SUBSTATION	16,646,615	102,719	88%	Network
	LOWER MONUMENTAL SUBSTATION	18,901,843	116,635	100%	Total
123					
124	MAPLETON SUBSTATION	387,996	19,533	68%	Network
125	MAPLETON SUBSTATION	183,012	9,213	32%	Utility Delivery
	MAPLETON SUBSTATION	571,008	28,747	100%	Total
126					
127	MARION SUBSTATION	32,148,738	358,076	91%	Network
128	MARION SUBSTATION	3,342,294	37,227	9%	Southern Intertie
	MARION SUBSTATION	35,491,031	395,303	100%	Total
129					
130	MCNARY SUBSTATION	5,959,309	47,694	12%	Generation Integration
131	MCNARY SUBSTATION	45,352,829	362,972	88%	Network
	MCNARY SUBSTATION	51,312,138	410,666	100%	Total
132					
133	NORTH BONNEVILLE SUBSTATION	4,146,013	62,961	37%	Generation Integration
134	NORTH BONNEVILLE SUBSTATION	7,070,403	107,370	63%	Network
	NORTH BONNEVILLE SUBSTATION	11,216,416	170,331	100%	Total
135					
136	PARKDALE SUBSTATION	628,684	10,296	51%	Network
137	PARKDALE SUBSTATION	604,963	9,908	49%	Utility Delivery
	PARKDALE SUBSTATION	1,233,647	20,204	100%	Total
138					
139	PORT ORFORD SUBSTATION	38,845	1,504	9%	Network
140	PORT ORFORD SUBSTATION	407,963	15,794	91%	Utility Delivery
	PORT ORFORD SUBSTATION	446,808	17,298	100%	Total
141					
142	POTLATCH SUBSTATION(BPA)	932,667	20,182	83%	Network
143	POTLATCH SUBSTATION(BPA)	188,784	4,085	17%	Utility Delivery
	POTLATCH SUBSTATION(BPA)	1,121,451	24,267	100%	Total
144					
145	REEDSPORT SUBSTATION (BPA)	2,819,692	35,352	79%	Network
146	REEDSPORT SUBSTATION (BPA)	734,116	9,204	21%	Utility Delivery
	REEDSPORT SUBSTATION (BPA)	3,553,808	44,556	100%	Total
147					
148	RINGOLD SUBSTATION	411,773	11,773	79%	Utility Delivery
149	RINGOLD SUBSTATION	110,507	3,159	21%	Unsegmented
	RINGOLD SUBSTATION	522,279	14,932	100%	Total
150					
151	SACAJAWEA SUBSTATION	187,186	455	1%	Generation Integration
152	SACAJAWEA SUBSTATION	23,153,747	56,286	99%	Network
	SACAJAWEA SUBSTATION	23,340,934	56,741	100%	Total
153					
154	SANDPOINT SUBSTATION(BPA)	991,943	23,438	76%	Network
155	SANDPOINT SUBSTATION(BPA)	312,508	7,384	24%	Utility Delivery
	SANDPOINT SUBSTATION(BPA)	1,304,451	30,823	100%	Total
156					
157	SANTIAM SUBSTATION	775,593	13,232	5%	Generation Integration
158	SANTIAM SUBSTATION	15,084,336	257,346	95%	Network
	SANTIAM SUBSTATION	15,859,929	270,578	100%	Total
159					
160	SCOOTENEY SUBSTATION	913,406	16,682	70%	Network
161	SCOOTENEY SUBSTATION	386,934	7,067	30%	Utility Delivery
	SCOOTENEY SUBSTATION	1,300,340	23,749	100%	Total
162					
163	SLATT SUBSTATION	73,092,471	178,792	97%	Network
164	SLATT SUBSTATION	2,295,096	5,614	3%	Southern Intertie

Appendix B  
BP-16 Multi-Segmented Facilities Summary

165	SLATT SUBSTATION	75,387,567	184,406	100%	Total
166	SUMMER LAKE SUBSTATION	2,269,369	37,293	43%	Network
167	SUMMER LAKE SUBSTATION	3,008,234	49,435	57%	Southern Intertie
168	SUMMER LAKE SUBSTATION	5,277,603	86,728	100%	Total
169	SWAN VALLEY SUBSTATION	5,493,001	55,051	92%	Network
170	SWAN VALLEY SUBSTATION	495,513	4,966	8%	Utility Delivery
171	SWAN VALLEY SUBSTATION	5,988,514	60,017	100%	Total
172	TACOMA SUBSTATION	17,545,371	447,441	93%	Network
173	TACOMA SUBSTATION	1,419,016	36,188	7%	Unsegmented
174	TACOMA SUBSTATION	18,964,387	483,629	100%	Total
175	TRENTWOOD SUBSTATION	3,391,935	31,139	49%	Network
176	TRENTWOOD SUBSTATION	3,533,679	32,440	51%	DSI Delivery
177	TRENTWOOD SUBSTATION	6,925,614	63,578	100%	Total
178	TROY SUBSTATION	114,273	3,278	12%	Network
179	TROY SUBSTATION	815,848	23,405	88%	Utility Delivery
180	TROY SUBSTATION	930,120	26,683	100%	Total
181	VALHALLA SUBSTATION	3,639,321	125,270	92%	Network
182	VALHALLA SUBSTATION	317,754	10,937	8%	Unsegmented
183	VALHALLA SUBSTATION	3,957,075	136,207	100%	Total
184	WALTON SUBSTATION	21,204	1,129	6%	Network
185	WALTON SUBSTATION	321,529	17,114	94%	Utility Delivery
186	WALTON SUBSTATION	342,734	18,243	100%	Total
187	WINTHROP SUBSTATION	1,167,692	27,434	76%	Network
188	WINTHROP SUBSTATION	361,348	8,490	24%	Utility Delivery
189	WINTHROP SUBSTATION	1,529,039	35,924	100%	Total





