

# **STATEMENTS A - F**

**Part 1 of 2**

**Prepared by**

**Bonneville Power Administration**

**U.S. Department of Energy**

**July 1996**

**WP-96-FS-BPA-08**

## **STATEMENT A**

## **STATEMENT B**

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## INTRODUCTION

Pursuant to section 300.11 of the Federal Energy Regulatory Commission's (FERC) regulations, 18 C.F.R. 300.11, the Bonneville Power Administration (BPA) submits Statements A-F as technical support for BPA's 1996 Wholesale Power and Transmission Rate Filings.

Each statement is preceded by an introductory discussion describing the information provided in that statement. Where appropriate, the data reported in these statements are disaggregated into transmission and generation components. The data contained in Statements A-F are based on the cost evaluation period used in development of BPA's 1996 Rate Filing, FYs 1996-2001. Data for FY 1995 has been updated to reflect historical audited actuals. The 5-year historical period reported is from FYs 1991-95. The data for the six years of the cost evaluation period (FYs 1996-2001) have been updated to reflect projections prepared in Spring 1996. For purposes of this document, reference to the rate test period is for FYs 1997-2001.

Key changes made in Statements A-F since they were last filed, in FERC Docket WP-95-FS-BPA-13 for BPA's 1995 Final Rate Proposal are summarized below.

Statement A: No format changes.

Statement B: No format changes.

Statement C: Key Database and Repayment Assumption Changes:  
Estimated increases in costs resulting from the 1995 Biological Opinion issued by the National Marine Fisheries Service (NMFS) in March 1995, which calls for various measures to strengthen endangered salmon runs, are reflected in generation repayment studies and revenue requirement. Particular emphasis is placed on Corps of Engineers (COE) investments. Projected COE investments for fish mitigation include three categories: (1) the pre-1995 Biological Opinion investment, which includes measures the COE was planning to take regardless of the Biological Opinion; (2) "planned investment" which includes those measures called for in the Biological Opinion and which the COE is including in their budget, and (3) "contingent investments", which includes investments called for in the Biological Opinion on a contingency basis, and which the COE and BPA deem likely to be installed. For a further discussion of this please see Section 3, DeWolf, *et al.*, (WP-96-E-BPA-14) and Chapter 14 of the Revenue Requirement Study Documentation, Vol. 1 (WP-96-FS-BPA-02A). Statement C reflects the projected implementation of the BPA Appropriations Refinancing Act. See Chapter 9 of the Revenue Requirement Study Documentation, Vol. 1 (FS-BPA-02A), and Section 4.1.3 of the Administrator's Record of Decision, WP-96-A-02. See also Appendix 1 to Statement C. Outstanding principal associated with transmission appropriations for FY 1977 have been reduced by \$41.8 million at the end of FY 1996, to incorporate in BPA's debt structure and repayment schedules the transfer of assets to Federal agencies outside the FCRPS (net of transfers to BPA). Please see Chapter 9 of the Revenue Requirement Study Documentation, Vol. 1 (FS-BPA-02A), pp. 229-230, and Section 4.1.3 of the Administrator's Record of Decision, WP-96-A-02. The plant-in-service amount for the Libby Dam project has been adjusted. This adjustment corrects a previous, erroneous transfer of three additional generators to plant-in-service for accounting purpose in 1988. Please see Chapter 9 of the Revenue Requirement Study Documentation, Vol. 1 (FS-BPA-02A), p. 233.



Statement D: Key Database and Repayment Assumption Changes:  
See Statement C above.

Statement E: No format changes.

Statement F: No format changes.

## STATEMENT A

### Introduction

The requirements for Statement A are as follows:

1. Statement A--Sales and Revenues. Statement A must include:
  - a. Sales and revenues for each rate schedule for the last 5 years of the historical period, as defined in section 300.1(b)(3);
  - b. For the rate test period, the estimated annual sales and revenues for the existing and each proposed rate schedule, including a separate aggregation of any revenues from sources not covered by the rate schedule according to general classifications of such revenues; and
  - c. Brief explanations of how sales and revenue estimates are prepared and explanations of any changes in sales or revenues during the last 5 years of the historical period. 18 C.F.R. 300.11(b)(1).

This Statement A consists of four sections. Section 1 contains historical sales and revenues for FY 1991, 1992, 1993, 1994, and 1995. Section 2 contains forecasted sales and revenues for FY 1996 (at current rates). In addition, forecasted revenues for FY 1997 through FY 2001 are shown using both current and proposed rates. Section 3 contains a brief explanation of how sales and revenue estimates are prepared. Finally, Section 4 includes the explanation for major changes in sales or revenues during the five historical years.

### Section 1: Historical Sales and Revenues

Tables A-1 through A-5 show BPA's actual sales and revenues for the 5-year historical period of FY 1991, 1992, 1993, 1994, and 1995. Data in these tables show sales and revenues for each rate schedule for the last 5 years of the historical period. Billing determinants are given for both energy (MWh) and demand (MW-mo).

### Section 2: Test Period Sales and Revenues

Tables A-6 through A-11 show BPA's forecasted sales and revenues for the cost evaluation period of FY 1996 through FY 2001 using existing (1995 rate filing) Wholesale and Transmission Rate Schedules. Tables A-12 through A-16 show BPA's forecasted sales and revenues for the rate test period FY 1997 through FY 2001 using proposed Wholesale and Transmission rate schedules. Table A-17 shows BPA's expected revenues from transactions under the FPS-96 rate schedule through FY 2006.

The tables summarize the forecasted sales and revenues both with and without the residential exchange. The residential exchange does not involve the actual delivery of power. Instead, it results in cash payments by BPA to exchanging utilities. However, in accord with the Northwest Power Act, BPA treats the exchange as a purchase and sale when developing rates.

### Section 3: Sales and Revenue Estimates

BPA uses different forecasting methods for each of the five broad categories of its sales and revenues: firm requirements sales; contract sales and exchanges; wheeling of non-Federal power; open market transactions; and miscellaneous services.

The firm requirement sales category includes sales to utilities, Federal agencies, and BPA's direct service industrial customers. Sales to these customers are estimated with econometric models. The expected output of customers' resources used to meet their own loads is subtracted from the forecast of customer loads to estimate BPA sales to these customers. For more details, refer to BPA's 1996 Final Rate Proposal, Loads and Resources Study, WP-96-FS-BPA-01, pages 2-11.

Contract sales and exchanges include capacity sales, Washington Public Power Supply System WNP -1 and 3 exchanges, sales associated with the Canadian Treaty and Columbia Storage Power Exchange, and sales of surplus firm power. The projected sales are determined from the contracts. (Ibid. pages 12-14).

Revenue from the sale of wheeling services are forecast and documented in the Transmission Rate Design Study (TRDS) WP-96-FS-BPA-07, Table 20. Wheeling revenues are estimated by multiplying projected billing determinants (kW or kWh) by the proposed rate. In most cases, the projected billing determinants for wheeling services are developed based on contract demands associated with individual contracts plus any projected changes in contracts demands. In other cases (particularly when no contract existed before) billing is estimated on an estimate of the amount of retail load that is expected to be served with non-Federal power. In some cases (e.g. transmission of nonfirm energy at the ET-96 and IS-96 rate) an average of four historical years is used. Miscellaneous transmission revenues are shown in Table 2 of the TRDS. Miscellaneous revenues are generally based on an average of historical revenues, but may be adjusted based upon contract information when appropriate. A more complete discussion is contained in the TRDS.

Open market transactions include sales of surplus firm power and nonfirm energy and incidental wheeling. The Nonfirm Revenue Analysis Program is used to estimate these sales and revenues. Assumptions used in the program include water conditions, thermal resource markets; natural gas prices, availability of secondary resources, operating plans, spot market conditions, and transmission capacity. In addition, nonfirm revenues were increased by \$11 million per year to reflect the expected benefits of changes in fish recovery operations which were not modeled, but are expected to be realized during the rate period. For more details, refer to BPA's 1996 Final Rate Proposal, Documentation for the Wholesale Power Rate Design Study, WP-96-FS-BPA-05A, chapter 5.

Estimates of miscellaneous revenue are based on several factors, including: transmission and generation property transfers expected during the rate period, past experience relating to some revenue categories, the estimated impact of new legislation on surplus sales which could not be reflected in models, and the impact of fiber optic services. In addition, miscellaneous revenues include credits provided by the BPA Appropriations Refinancing Act associated with payments to the Colville tribes under the Colville Settlement Act, the expected access to accumulated but-not-yet-used 4(h)(10)(C) credits in the Fish Cost Contingency Fund, and prospective 4(h)(10)(C) credits. Such credits are treated as power revenues for accounting and financial statement purposes. See WP-96-A-02, Sections 10.4.1 and 10.4.2, WP-96-FS-BPA-02, Section 5.1.3, 5.1.5, and 5.2, and DeWolf, *et al.*, WP-96-E-BPA-14, 5-7.

#### Section 4: Explanations of Major Changes in Sales or Revenues During the Last 5 Years of the Historical Period

##### A. FY 1991: Economy Leveling Off

The Northwest economy leveled off in 1991 from its previous high growth rate, but BPA revenues continued to climb. The main reason for the increase in revenues was that the FCRPS operated with average water conditions after a series of drier years. Revenues from the sale of nonfirm energy were the highest since 1986, the most recent year of average runoff in the Columbia River Basin. Total operating revenues increased by \$139 million to \$2,220 million, up 7 percent. Revenues from sales within the Pacific Northwest increased by \$110 million. Sales outside the region came to \$38 million more than 1990, after Northwest markets were met and reservoirs were full.

Revenues from sales to publicly owned utilities rose \$40 million, up 4 percent. Economic growth in the region slowed in 1991, but still moved ahead. About half of the year's increase in revenues came in December because of a prolonged cold spell.

Eight Northwest aluminum smelters buy power directly from BPA. They account for about 25 percent of BPA's total revenues. Since their need for energy can change dramatically with the world price for aluminum, BPA established a variable industrial rate for these customers in 1987. The variable rate helps stabilize their power purchases. When the aluminum market is soft, they can stay in business because they pay less for electricity. When aluminum prices increase, they pay BPA a higher rate. At the start of fiscal 1991, aluminum prices were 90 cents per pound, which corresponded to a BPA rate of 28.8 mills/kWh three months later, when the aluminum price is reflected in the rate. Aluminum prices fell during the year, and so did BPA's variable rate. At the end of the year aluminum was 56 cents a pound, and BPA's variable rate bottomed out at 16.9 mills. The average rate and total revenues for 1991, 22.5 mills and \$583 million, were virtually the same as the previous year. The region's aluminum companies remained at or near full production.

Revenues from power sales to eight Northwest investor owned utilities were \$304 million, up 27 percent from 1990. Sales increased because BPA had more low-cost nonfirm energy available.

Revenues from the sale of power outside the region in 1991 were \$196 million, up 24 percent from 1990. Improved reservoir levels and good runoff forecasts allowed BPA to make nonfirm sales earlier in 1991 than in 1990. Also, BPA converted some energy exchanges into energy sales, accepting dollars instead of energy in return for energy delivered south.

1991 Wheeling and other revenues were \$126 million, down 7 percent from 1990. Wheeling revenues decreased because the more BPA uses the intertie for its own energy sales, the less intertie capacity is available for other users.

##### B. FY 1992: Drought Conditions and Low Aluminum Prices

Drought conditions after an average water year in 1991 were the main reason for the drop in 1992 revenues. This was the Northwest's third driest year in the past 55 years. The Columbia River and its tributaries ran low, and as a result of the Endangered Species Act, more water than in prior years was dedicated to flows for fish. So, BPA had less power to sell.

Revenues from the sale of power within the Pacific Northwest decreased by \$166 million, or 9 percent. Sales of firm power to private and public utilities held steady, but revenues from sales to aluminum companies fell sharply. Revenues from power sales outside the region were down \$136

million from 1991 because BPA had little nonfirm energy available after Northwest markets were met.

Revenues from power sales to public utilities rose \$17 million, or 2 percent, to \$966 million in 1992. The Northwest experienced a mild winter and slow economic growth, but BPA's power rates increased slightly from 1991. Also because of dry weather in the region, public utilities that generate some of their own hydropower were not able to generate as much in 1992, so they bought more from BPA.

BPA revenues from aluminum companies dropped by \$175 million, or 30 percent, to \$408 million in 1992. Revenues fell mainly because BPA's power rates for the aluminum companies were down due to the variable industrial rate structure which ties the price of electricity these customers pay to the world market price of aluminum. In 1992 a worldwide recession cut the demand for aluminum. At the same time, republics of the former Soviet Union exported large amounts of aluminum to earn hard currency. The price of aluminum stayed low throughout the year, and BPA's variable rate for aluminum was at the minimum level for most of the year. The difference in the variable rate between 1991 and 1992 accounted for a drop in revenues of about \$120 million. Another, lesser factor was that BPA sold less power to aluminum companies in 1992 than in 1991. One of the regional aluminum smelters closed early in the fiscal year. In addition, in order to meet firm loads of other customers, in August 1992 BPA exercised its contractual right to withhold the top quartile of energy it normally sells to aluminum companies.

Revenues from power sales to Northwest investor-owned utilities were \$292 million, down 4 percent from 1991. New power sales contracts in 1992 helped to raise loads in this category, but their effect was more than offset by the mild winter and scarcity of nonfirm energy for spot-market sales.

Revenues from power sales outside the Pacific Northwest were \$60 million, less than one-third of the \$196 million in 1991. At the start of the year reservoirs were full and BPA did sell some power outside the region. But water conditions worsened. By springtime, the only energy BPA could sell outside the region was the energy generated by passing water through the dams to speed the outmigration of anadromous fish. Instead of accepting dollars in return for energy delivered south, BPA began converting these sales to exchanges. The energy was scheduled to be returned from California to the Northwest in the winter of 1992-93.

#### C. FY 1993: Continuing Weak Aluminum Market and Drought Conditions

Aluminum prices remained low in FY 1993, with an average annual price of 55.7 cents per pound. The Variable Industrial rate remained at the lower rate limit of 17.9 mills per kWh for the entire year. Revenues from the DSIs totaled about \$382 million in FY 1993, compared to about \$447 million in FY 1992. The largest reason for the reduction in revenues from FY 1992 was restriction of service to industrial loads. Despite the continuing drought, revenues from nonfirm sales increased to about \$74 million from about \$29 million in FY 1992. This was almost exactly what was expected when the 1993 rate filing was submitted, but almost \$140 million less than had been expected when the rates for FY 1993 were formulated two years earlier, in FY 1991. Most of the revenues from nonfirm energy sales were received during the spring runoff period.

Revenues from Surplus Power sales totaled about \$130 million in FY 1993, compared to \$146 million in FY 1992. The largest reason for this decline was that the Southern California Edison (SCE) power sales contract was being implemented as an inter-regional power exchange. The SCE contract had brought in revenues of about \$36 million in FY 1992. Revenues from Priority

Firm power sales to public utility customers were up about \$60 million from FY 1992. The reason for the increase was load growth in the region.

Revenues from transmission of non-Federal power (wheeling) were about \$115 million, compared to about \$124 million in the previous year, FY 1992. This reduction can be explained by a reduction in revenues from incidental wheeling. Incidental wheeling is available at the IS, IN, and ET transmission rates. Typically, these rate schedules are used to market economy energy for other generating utilities. The reduction was the result of the extended drought affecting all regional utilities.

D. FY 1994: Another Year of Drought and Continuing low Aluminum Prices

Total FCRPS operating revenues rose by \$253 million to \$2,196 million, an increase of 13 percent. Most of the difference was due to an average wholesale power rate increase of 15 percent for the 1994-95 rate period. The volume of sales did not change dramatically in any customer category. The year began with low reservoirs. Then came water releases and emergency spill related to the Endangered Species Act. While water releases did generate power, the surplus was available when Northwest temperatures were warm and power sold at lower rates. Prices were much higher when BPA had to buy power back, in the winter.

Revenues from power sales to public utilities rose \$173 million, or 17 percent, to \$1,204 million in FY 1994. Megawatt-hour sales to public utilities increased 12 percent over the preceding 5 years. In 1994, expanding economic growth in the region more than countered the revenue-limiting effects of a mild winter.

Revenues from nonfirm energy sales declined to about \$24 million in FY 1994 from about \$74 million in FY 1992. Aluminum prices averaged 57.9 cents per pound in FY 1994 compared to 55.7 cents per pound in FY 1993. The Variable Industrial rate was at the lower rate limit of 21.07 mills per kWh in FY 1994 except for 3 months (May, June, and September). Revenues from the eight aluminum companies that buy power directly from BPA rose \$40 million, or 11 percent, to \$391 million in FY 1994. Normally, revenues from sales to aluminum smelters make up about 25 percent of BPA's total revenues. In FY 1994, this fell to 17.8 percent.

Revenues from seven Investor-Owned Utilities were stable, rising only 1 percent, or \$3 million, to \$303 million in FY 1994. IOU's have power generating resources of their own. Power from BPA supplements their resources. BPA sells directly to seven Federal agencies and eight non-aluminum industries. Revenues from this group dropped to \$54 million, down from \$56 million in FY 1993. Energy sales to nonaluminum companies declined despite the general improvement in economic conditions. Revenues from sales outside the region totaled \$76 million in FY 1994, about equal to the \$75 million received in FY 1993.

Wheeling and Other revenues increased from \$128 million in FY 1993 to \$167 million in FY 1994. Revenues from wheeling increased because of the increase in wheeling rates. Miscellaneous revenues also included a Section 4(h)(10)(C) credit of \$18.7 million toward the cash transfers to the U.S. Treasury.

E. FY 1995: Revenues Recover Due to Higher Aluminum Prices and Increased Precipitation

Total FCRPS operating revenues rose by \$190 million to \$2,386 million, an increase of 9 percent. This increase primarily reflects improved water conditions and increased revenues from aluminum companies due to higher aluminum prices and therefore higher payments to BPA under the variable

industrial rate. BPA also received a Section 4(h)(10)(C) credit of \$56 million toward its cash transfers to the U.S. Treasury to help pay for fish and wildlife impacts of non-power uses of the Northwest's Federal dams.

Revenues from power sales to publicly owned utilities decreased by \$35 million, or 3 percent to \$1,169 million, reflecting a milder winter. Revenues from the eight aluminum companies that buy power directly from BPA rose \$99 million to \$491 million. Wetter weather and higher world-market prices for aluminum caused the improvement. Improved water conditions enabled BPA to restore service to the top quartile of the industrial load in January 1995. BPA's variable rate rose from its floor of 22.1 mills per kilowatt-hour in November 1994 to its cap of 31.7 mills per kWh before settling back to the plateau rate (which does not vary over a range of aluminum prices) of 25.9 mills per kWh by September 1995.

Revenues from Northwest investor-owned utilities rose \$22 million or 7 percent to \$325 million, primarily reflecting higher nonfirm energy sales on the spot market as water conditions improved. Revenues from sales to seven Federal agencies and eight non-aluminum companies rose \$11 million in FY 1995 to \$65 million. The increase was due to improved metals and chemicals markets, which caused several industrial customers to bring load on line, and restoration of the top quartile of industrial loads due to improved water conditions.

Sales outside the Pacific Northwest rose 73 percent to \$132 million in FY 1995, reflecting increased availability of seasonal surplus hydro-electricity. The increase in revenues from surplus sales reflects a return to something approaching average water conditions. Lower gas prices caused revenues from sales outside the Northwest to be lower than expected.

Wheeling and Other revenues increased 22 percent or \$37 million to \$204 million. Wheeling revenues were down slightly at \$130 million. The overall increase in the Other revenue category is due to a Section 4(h)(10)(C) \$56 million credit toward BPA's annual cash transfers to the U.S. Treasury, accounting for non-hydro related impacts of the region's Federal dams on fish and wildlife. This credit partially offsets a change in river operations which resulted in a substantial amount of power being saved for spring fish operations. This change in operations caused increased power purchases and reduced revenues from nonfirm energy sales.

## STATEMENT B

### Introduction

The requirements for Statement B appear as follows:

- (2) **Statement B--Power Resources.** Statement B must contain a list of the capacity and energy resources for the last 5 years of the historic period and for the rate test period, used to support the sales and revenues figures contained in Statement A. The statement should identify resources according to the powerplant and any purchase or exchange agreement. 18 C.F.R. 300.11(b)(2).

Table B-1 lists the hydroelectric resources in the Federal Columbia River Power System (FCRPS). Table B-1 also lists the operating agency, the location by state and generating capacity in megawatts.

Table B-2 lists those non-Federal thermal resources from which BPA has acquired capability under long-term net-billing agreements. In May 1994 the Washington Public Power Supply System's Board of Directors voted to terminate WNP-1 and 3 in January 1995. The Trojan Nuclear Plant ceased operations effective January 1993, and will not be in service during the cost evaluation period.

Table B-3 lists the purchase and exchange agreements in effect during the cost evaluation period. Also shown on Table B-3 are the contract number and termination date of each contract. This list includes agreements which enable BPA to make purchases if needed, or under which BPA has made purchases.



**TABLE B-2**

**Bonneville Acquired Non-Federal Thermal Projects  
Existing and Under Construction 1/**

<u>Project</u>	<u>Operating Agency</u>	<u>State <u>2/</u></u>	<u>FY in Service</u>	<u>FY out of Service</u>	<u>Capacity in Megawatts</u>
Project No. 1	Supply Sys	WA	--	--	1,250
Project No. 2	Supply Sys	WA	1985	--	1,100
Project No. 3 <u>3/</u>	Supply Sys	WA	--	--	868
Trojan <u>4/</u>	PGE	OR	1976	1993	<u>430</u>
Total					3,648

1/ Source: 1995 Annual Report, BPA.

2/ WA-- Washington; OR-- Oregon; ID-- Idaho.

3/ Represents 70 percent of the capability of Project No. 3 which BPA has acquired.

4/ Represents 30 percent of the capability of Trojan which BPA has acquired.

**TABLE B-3****Purchase and Acquisition Agreements**

<u>Purchase Agreements</u>	<u>Contract Number</u>	<u>Termination Date</u>
Idaho Falls	90917	3 years written notice
Cowlitz Falls	93106	June 30, 2030
PNGC	92687	until April 30, 1995
 <u>Coordination Agreements</u>		
Pacific Northwest Coordination	48221	June 30, 2003
Hourly Coordination	92401	June 30, 1997
Canadian Entitlement Exchange	(41 contracts)	March 31, 2003
Non-Treaty Storage Agreement	92754	June 30, 2003
 <u>WNP #3 Settlement</u>		
Puget Sound Power & Light	92185	June 30, 2017
Washington Water Power	92186	June 30, 2018
Portland General Electric	92187	June 30, 2018
 <u>Transmission and Exchange</u>		
WPPSS/Packwood	25457	October 25, 2011
BC Hydro	92793	January 9, 2011
PacifiCorp	92524	Conditional
 <u>Billing Credits</u>		
EWEB (James River-Wauna)	94381	2016
EWEB (Smith Creek)	93646	09/30/11
City of Seattle (So Fork Tolt)	93648	07/31/28
City of Tacoma (Wynoochee)	93649	07/31/37
Emerald PUD (Short Mtn)	93652	2012
 <u>Service and Exchange</u>		
Forest Grove	0009	1 year notice
McMinnville	0010	1 year notice
Milton Freewater	0011	1 year notice
Kittitas	69142	1 year notice
Okanogan	90015	1 year notice
 <u>Sale and Exchange/Sale and Purchase</u>		
Southern California Edison	92275	May 31, 2009
Burbank	92411	April 15, 2008
Glendale	92412	April 15, 2008
Pasadena	92413	April 15, 2008
PSP&L	92527	March 2, 2008
MSR	92499	20 years
Anaheim	92784	July 1, 2010
Riverside	92858	July 1, 2010
Riverside	92958	04/30/16
WWP	92871	09/30/10
PP&L	93757	08/30/92-07/31/95
SDG&E	95190	04/30/97
SDG&E	95237	04/30/98

**TABLE B-3  
(Continued)**

**Umbrella Agreements**

Umbrella Agreements

Burbank	92385	06/25/87-06/25/07
Glendale	92387	09/01/87-09/01/07
Los Angeles	92281	06/05-86-06/05/06
Pasadena	92462	07/25/88-07/25/08
Sacramento MUD	92420	09/24/87-09/24/07
San Diego G&E	92516	07/28/88-07/28/08
Pasadena	93658	09/30/04
City of Vernon	94672	09/30/98
Azuza-Banning-Colton	94611	09/30/04
City of Azuza	94883	09/30/04
SCE	92410	08/27/87-08/27/07
Turlock Irrigation District	92753	05/30/89-05/30/09
Vernon, CA	92360	04/07/87-04/07/07
CDWR	92422	09/05/87-09/05/07

Power Sales and Exchanges

Snohomish PUD	90512	June 30, 2001
Montana Power Co	90427	June 30, 2001
Cominco Ltd.	92397	Conditional
Colockun	83061	Conditional
PGE	37017	September 14, 1993
PSP&L	37050	January 29, 1997
PP&L	27295	January 29, 1997
Pend Oreille	91671	August 10, 1993
WWP	29242	August 11, 1993
Idaho Power Co	11493	Conditional
PG&E	Letter Agreements	July 30, 1996
Western Generation (Wauna)	94292	2016
CARES (Columbia Wind)	94367	Conditional
CARES (Columbia Wind)	94315	2023
PacifiCorp (Wyoming Wind)	94372	Conditional
PacifiCorp (Wyoming Wind)	94375	2023

Station Service and Exchange

Chelan PUD	92849	June 30, 2001
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Short-Term Agreements

BC Hydro	82BP90344	1 month notice
PGE Co.	85BP92178	Conditional
PSP&L	85BP92176	Conditional
WWP	85BP92177	Conditional
SMUD	86BP92282	09/14/91
SCE	91BP92681	12/31/91
San Diego G&E	91BP92685	12/31/91
CDWR	91BP92683	12/31/91
WWP	91BP92675	11/30/91
BCH/Powerex-PGE	91BP92694	11/30/91

**TABLE B-3  
(Continued)**

**Short-Term Agreements**

BCH/Powerex-WAPA	91BP92684	11/30/91
BCH/Powerex-SDG&E	91BP92680	11/30/91
BCH/Powerex	91BP92679	11/15/91
PGE.	92BP92711	April 30, 1995
PSP&L	93BP93383	April 15, 1997
Basin Electric	91BP92695	October 31, 1995
PNGC	93BP94057	December 31, 1993
BCHydro/TransAlta	91BP92696	July 31, 1995
Clark County (WA)	89BP92759	December 31, 1996
SMUD	92BP92730	December 31, 1995
PG & E	93BP93422	12/31/93
Montana Power Co	93BP93350	01/31/96
SDG & E	92BP93373	04/30/97
PSP&L	93BP93379	04/15/97
City of Vernon (CA)	93BP94015	12/31/97
Edmonton	93BP94433	10/31/94
BC Hydro	93BP94434	12/31/94
PacifiCorp	93BP94435	11/30/94
PGE	93BP94436	11/30/94
SCE	93BP94461	12/31/94
PacifiCorp	94BP94476	11/30/94
SCE	94BP94483	10/31/94
Montana Power Co	94BP94212	11/15/94
SCE	95BP94549	11/30/94
PGE	95BP94550	10/31/94
Pasadena	95BP94552	03/31/95
Edmonton	95BP94557	12/31/94
Louis Dreyfus	95BP94559	12/31/94
Louis Dreyfus	95BP94560	12/31/94
Montana Power Co	95BP94561	12/31/94
PGE	95BP94562	02/28/95
LADWP	95BP94563	01/31/95
Edmonton	95BP94564	12/31/94
Enron	95BP94565	11/30/94
Enron	95BP94566	12/31/94
PG&E	95BP94567	12/31/94
Louis Dreyfus	95BP94568	01/31/95
Vernon	95BP94571	12/31/94
EWEB	95BP94572	12/31/94
Louis Dreyfus	95BP94573	01/31/95
Montana Power Co	95BP94574	01/31/95
Louis Dreyfus	95BP94575	01/31/96
Louis Dreyfus	95BP95477	01/31/96
BC Hydro	95BP94578	01/31/95
Arizona PS	95BP94579	01/31/95
Turlock ID	95BP94580	01/31/95
Enron	95BP94581	01/31/96
Powerex	95BP94586	11/30/95

**TABLE B-3  
(Continued)**

**Short-Term Agreements**

Short-Term Agreements (cont.)

PacifiCorp	95BP94590	11/30/95
Deseret	Letter Agreement	12/31/94
PGE	95BP99001	11/30/95
TransAlta	95BP99028	09/30/95
Louis Dreyfus	95BP99033	09/30/95
Basin Electric	95BP94460	10/31/96
BC Hydro/Eurobrokers	95BP94587	11/30/95
Louis Dreyfus	95BP99071	11/30/95
Citizen' s	96BP99053	12/31/95

## STATEMENT C

### INTRODUCTION

The requirements for Statement C appear as follows:

- (3) Statement C-Capital Investments or Costs.
  - (i) Statement C must account for all capitalized investments to be repaid from power revenues.
  - (ii) The statement shall include a listing, by year, of the following:
    - (A) All initial investments and additions to plant, including interest during construction, that produced revenue during the historic period or are expected to produce revenue during the rate test period;
    - (B) Capitalized deferred expenses; and
    - (C) Replacements made during the historic period and replacements projected to be made during the balance of the repayment period.
  - (iii) For each such investment, the statement shall specify:
    - (A) Whether the investment is an initial investment, an addition, a replacement, or a capitalized deferred annual expense;
    - (B) The date the investment was made;
    - (C) The year in which repayment is due to be completed;
    - (D) Whether the investment was financed through the issuance of revenue bonds, the appropriate interest rate, and the terms and conditions for such bonds; and
    - (E) The authority or administrative procedure used for the adoption of such interest rate.
  - (iv) If available, the amount repaid on each investment to date must be stated, except that if repayment on individual investments is not recorded, the amount repaid to date on each group of investments having common interest rates should be stated.
  - (v) For each year, the sum of unpaid individual investments or the unpaid portion of interest groups shown above must equal the unamortized investment shown in the power repayment study for that year.
  - (vi) The statement must describe the methods used to forecast replacements and the price level used to estimate replacement costs.

18 C.F.R. 300.11(b)(3).

“Investments” in Statements C and D is defined as principal associated with plant placed in service that is financed either by appropriations, by bonds issued by BPA to the U.S. Treasury, or by irrigation assistance. “Project” refers to FCRPS projects of the COE and BOR and to BPA capital investments in transmission, fish and wildlife, and conservation. “Project” also refers to COE and BOR investments that are direct-funded by BPA consistent with the Energy Policy Act of 1992 (Pub. L. 102-486, 1992 U.S. Code Cong. & Admin. News (106 Stat.) 2776).

Statement C provides a listing of all capitalized investments assigned to be repaid to the U. S. Treasury from power and transmission revenues. Statement C reports the investment data by project, by in-service year, and by interest rate. Totals are provided for each in-service year as well as for total historical investments and total projected investments.

Statement C reports investment data for the generation function and transmission function in two sections to show the impact on principal and interest rates of the refinancing transaction that occurs under the BPA Appropriations Refinancing Act (the Act). In Section 1, Statement C reflects all principal outstanding as of September 30, 1996. As such, it includes capital investments funded by

appropriations that are projected to be refinanced on October 1, 1996, under the Act. [See Revenue Requirement Study Documentation, Volume 1, Chapter 9 \(WP-96-FS-BPA-02A\) for a copy of the Act and a detailed explanation of its implementation in this rate proposal.](#) Section 2 reflects the same principal, interest rates and due dates associated with bonds issued to Treasury as in section 1. Section 2, however, shows the projected results of the refinancing transaction that will occur under the Act on October 1, 1996. The Act requires that principal on appropriations outstanding as of September 30, 1996, be reset and that interest rates be reassigned on October 1, 1996. Section 2 also includes future generation and transmission replacements as required under RA 6120.2, paragraph 10.1, investments funded by appropriations, and by bonds that are projected to be placed in service during the FY 1997 - 2001 rate period. [Id.](#)

Column A details the Federal investment by year and by project. For each in-service year, the total amount of each investment and the amount amortized on each investment are reported. Column B displays the interest rate associated with each investment. Column C shows the date the investment is placed in service. Column D shows the year in which repayment was or is due to be completed. Column E displays the term (in years) over which the investment is financed. (Where BPA issues bonds to the U.S. Treasury to finance FCRPS investment, the maturity date of the bond may be earlier than the allowable repayment period of the investment.) Column F displays the total capitalized amount of each investment related to a particular project. Column G shows the unpaid investment outstanding as of the end of FY 1996 for Section 1 and the beginning of FY 1997 for Section 2. Column H identifies the amount of investment amortized as of the end of FY 1996 for Section 1 and the beginning of FY 1997 for Section 2. Column I indicates whether a particular investment is an initial investment, a major addition to an existing project, or a replacement at an existing project. (See below for further discussion of initial investments, replacements, and additions.) Column J specifies if an investment was financed through the issuance of revenue bonds to the U.S. Treasury; all other investment was financed through appropriations.

Statement C incorporates the following definition of initial investments:

(4) Initial capital investment means the cost of acquisition or construction of a power facility or non-power facility which has been assigned to be repaid from the power revenues, including but not limited to any cost of planning, design, land acquisition, construction, interest during construction, and testing incurred before the date on which the facility becomes operational or revenue-producing.

18 C.F.R. 300.1(b)(4). An initial investment begins at the time the first unit at a particular site is placed in service and ends when all units related to that initial investment are placed in service.

The following definition was used for replacements:

(9) Replacement means any substitution of a unit of property with another unit of like character.

18 C.F.R. 300.1(b)(9).

Statement C incorporates a change in procedure for setting repayment periods for COE and BOR replacement investments. In the past, repayment periods for COE and BOR replacement investments have been defined as the period from the in-service year of the replacements to the year when the original investment (appropriation) is due to be repaid in full to Treasury. Starting with this 1996 rate filing, repayment periods for COE and BOE replacement investments at a given project will be set at the weighted average service life of all replacements going into service at that project in that year. The procedure will be applied to COE and BOE

replacement investments that are funded by appropriations and that are placed in service in FY 1995 or later. This brings BPA's practice into closer conformance with RA 6120.2 policy which specifies in section 10.d

“Unless otherwise prescribed by law, each dollar of investment is to be repaid within a period not-to-exceed 50 years. Repayment periods of less than 50 years may be established when the facilities involved have useful life expectancies of less than 50 years. Such shorter repayment periods are appropriate for...replacement of power facilities....In such cases, the expected useful life of the facility involved generally will be used as the repayment period.”

Thus the new procedure is consistent with RA 6120.2 policy that repayment periods for appropriations that fund FCRPS replacements should be based on the useful service life of the facility or equipment, just as our new procedure would do.

This change in procedure is also consistent with the BPA Appropriations Refinancing Act which specifies that appropriated capital investments to be refinanced under subsection d, that were not assigned a repayment period before October 1, 1994, must be assigned a repayment period in accordance with paragraph 10(d)(1) of RA 6120.2. See subsection (b)(3)(A)(ii) of the Act. This change in procedure does not include investments placed in service prior to October 1, 1994. Such investments will retain their existing repayment dates, as directed by subsection (b)(3)(A)(i) of the Act.

Repayment studies for generation and transmission incorporate a schedule of Federal investment with the replacements that are expected to occur over the repayment period for existing generation projects and transmission system investments. The COE and BOR estimate replacements for each project by service life. The data received from the COE and BOR are expressed in constant year dollars. The COE estimates its replacement costs for each piece of equipment by project, and by expected service life. The BOR estimates its replacement cost by project and by expected service life to create a single figure for each service life category. BPA uses the Iowa Curve Methodology to forecast replacements for the transmission system. The Iowa Curve Methodology, a set of curves with different shapes corresponding to how much of the initial asset survives as a function of time, is used to calculate future replacements for the transmission system. See Revenue Requirement Study Documentation, Volume 1, Chapter 12 (WP-96-FS-BPA-02A). See also Draft Record of Decision, 1996 Rate Proposal section 4.4 (WP-96-A-01).

Tables C-1 through C-8 provide historical information on BPA bonds issued to the U.S. Treasury for investment in transmission construction, conservation, and fish and wildlife.

Table C-1 provides a consolidated historical summary of bonds issued by BPA over the period FY 1978-95.

Tables C-2 and C-3 provide information specific to bonds issued to finance transmission construction investment. Table C-2 provides an association of plant-in-service to the bonds issued. This association has been further expanded in Table C-3.

Tables C-4 and C-5 provide similar information (as in Tables C-2 and C-3) for bonds issued to finance BPA conservation investment. Tables C-6 and C-7 utilize the same format, and show information specific to bonds issued for Fish and Wildlife investment.



Table C-8 contains a summary listing of BPA bonds issued or projected to be issued through the remainder of the cost evaluation period (FYs 1997-01) and over the out years for the 7(b)2 rate test period (FYs 2002-2005).

Appendix 1 to Statement C addresses FCRPS interest rate authorities. Appendix 2 shows, by project, the cumulative cash amortization payments that BPA has made to the U.S. Treasury through FY 1995.

## STATEMENT C - APPENDIX 1

### INTEREST RATE AUTHORITIES

#### **Bonds Issued by Bonneville Power Administration to US Treasury**

In 1974 the Federal Columbia River Transmission System Act, 13(a), 16 U.S.C. 838(a) (1982), established BPA as a self-financed agency, authorized the sale of bonds to the US Treasury, and specified an interest rate policy. The Act states:

Such bonds shall bear interest at a rate determined by the Secretary of the Treasury taking into consideration the current average market yield on outstanding marketable obligations of the United States of comparable maturities, plus an amount in the judgment of the Secretary of the Treasury to provide for a rate comparable to the rates prevailing in the market for similar bonds.

16 U.S.C. 838k(a). The present interest rate policy for BPA bonds was established on December 5, 1980, by the Pacific Northwest Electric Power Planning and Conservation Act, Pub. L. No. 96-501, 8(d)(2), 94 Stat. 2697, 2729 (1980), which revised the language of 16 U.S.C. 838k(a), in pertinent part, as follows:

Such bonds shall bear interest at a rate determined by the Secretary of the Treasury taking into consideration the current average market yield on outstanding marketable obligations of the United States of comparable maturities, plus an amount in the judgment of the Secretary of the Treasury to provide for a rate comparable to the rates prevailing in the market for similar bonds issued by Government corporations. [Emphasis added.]

Other terms of the bonds are prescribed by the Secretary of Treasury under authority of Section 13 of the Transmission System Act.

#### **FCRPS Capital Investments Funded by Appropriations Interest Rate Assignments Through FY 1996**

##### **Bonneville Power Administration Investments.**

BPA capital investments were funded by congressional appropriations prior to implementation of the Federal Columbia River Transmission System Act in the mid 1970' s. The interest rate on these appropriations varied from a low of 2½ percent to a high of 6.125 percent. See Table 1. BPA, with the concurrence of the Federal Power Commission, originally set its interest rates on appropriations at 2-½ percent based on the average market interest rates paid on long-term Treasury bonds issued from 1933 to 1943. Bonneville Project, 4 F.P.C. 950, 955 (1945). BPA continued to use the 2-½ percent interest rate for new investments through FY 1963.

In 1964, BPA adopted the policy of calculating interest that was set out in "Policies, Standards, and Procedures in the Formulation, Evaluation, and Review of Plans for Use and Development of Water and Related Land Resources," S. Doc. No. 97, 87 Cong., 2d Sess. (1962). The formula provided for averaging the interest rates paid by the US Treasury on outstanding bonds with a maturity of 15 years or more. The formula reflected the average yield of bonds outstanding in the previous fiscal year. BPA followed this formula until FY 1970.

In January 1970, the Secretary of the Interior issued Order No. 2929, 45 Fed. Reg. 2,796 (1970), establishing a new policy for determining interest rates for the repayment of new power and transmission investments. Order No. 2929 established a base rate of 4-7/8 percent for FY 1970. Thereafter, a new interest rate was to be determined each fiscal year based on the average yield on long-term Treasury bonds over the preceding fiscal year. However, to reduce fluctuating interest rates, the repayment rate could not increase or decrease from year to year by more than ½ percent. For example, the average yield on Treasury bonds during FY 1970 was 6.42 percent; however, due to the ½ percent allowable increase, the repayment rate for FY 1971 was limited to 5-3/8 percent. During FY 1971 the average yield was 6.07 percent, which resulted in the repayment rate advancing to 5-7/8 percent for FY 1972. Order No. 2929 did not change the interest rates established previously for projects completed or under construction at the time of the order.

On March 22, 1976, the Department of the Interior issued Chapter 4 of Part 730 of the Departmental Manual to codify financial reporting requirements for the Department of the Interior's power marketing agencies. Included therein are standard policies and procedures for preparing power system repayment studies as well as interest rate authorities identical to Order No. 2929.

BPA and other former Department of the Interior power marketing agencies were transferred to the newly established Department of Energy (DOE) in October 1977. See Department of Energy Organization Act, 42 U.S.C. 7101-7375 (1982). The DOE adopted the policies set forth in Part 730 of the Department of the Interior Manual by issuing Interim Management Directive No. 1701 on September 28, 1977, which subsequently was replaced by DOE Order RA 6120.2 on September 20, 1979. The DOE Order was amended on October 1, 1983, principally to remove the interest rate cap established in Order 2929 with this revision, rates used to calculate interest during construction and to assign to investments placed in service were set equal to market rates on Treasury long-term bonds prevailing when construction was initiated.

### **Bureau Of Reclamation Investments.**

Two BOR projects on the Columbia River System have specific statutes regulating their interest rates. See Table 2. The first of these projects is the Kennewick division of the Yakima project. The minimum interest rate for this project is established in the Act of June 12, 1948, ch. 453, 62 Stat. 382, which provides for “interest on the unpaid balance at a rate of not less than 2-½ per centum per annum.”

The second project, the third powerhouse of Grand Coulee Dam, has specific interest rate directives provided in 80 Stat. 200. These directives provide that:

The interest rate used for computing interest during construction and interest on the unpaid balance of the cost allocated to power shall be determined by the Secretary of the Treasury as of the beginning of the fiscal year in which the initial request for appropriations for the construction of the third power plant is made by computing the average interest rate payable by the Treasury on all interest bearing marketable public debt obligations of the United States then outstanding which, upon original issue, had terms to maturity of fifteen years or more, and by adjusting such average rate to the next lowest multiple of one-eighth of one per centum.

The remaining projects fall into the general provisions of 43 U.S.C. 485h(c) (1982). This section provides:

Any sale of electric power or lease of power privileges, made by the Secretary in connection with the operation of any project or division of a project, shall be for such periods, not to exceed forty years and at such rates as in his judgment will produce power revenues at least sufficient to cover an appropriate share of

the annual operation and maintenance cost, interest on an appropriate share of the construction investment at not less than 3 per centum per annum, and such other fixed charges as the Secretary deems proper.

The Bureau of Reclamation projects affected by this provision are Boise, Columbia Basin (Grand Coulee), Hungry Horse, Minidoka, and the Roza division of the Yakima project.

RA 6120.2 as amended, which superseded Order No. 2929 and DM 730, specifically requires that replacements, additions, betterments, and new transmission and power related investments made after September 30, 1983, must bear a market-based interest rate, except where otherwise specified by law.

The Energy Policy Act of 1992 (Pub. L. 102-486, 1992 U.S. Code Cong. and Admin. News [106 Stat.] 2776) clarified BPA's authority to provide funds directly and up front to the BOR and COE to fund hydroelectric generation additions, improvements, and replacements, as well as operations and maintenance expenses, at Federal projects of the FCRPS. BPA plans to finance certain BOR and COE investments with bonds issued to Treasury under the same interest rate provisions described in Bonds Issued by Bonneville Power Administration to US Treasury. See Table C-8, "BPA Projected Federal Borrowing."

### **Corps Of Engineers Investments.**

The interest rate assigned to projects built by the Corps of Engineers is the interest rate used in the evaluation of the project that resulted in the appropriation of construction funds by Congress. The project evaluation rates are updated annually until construction funds are first appropriated. See Table 2.

There was no formally prescribed interest rate policy for Federal water projects prior to the early 1950s. The rate for Bonneville Dam was established at 2-1/2 percent by the Federal Power Commission, Bonneville Project, 4 F.P.C. 950, 955 (1945). The Commission based the rate on the average weighted cost of money to the United States obtained by the issuance of bonds during the 11 year period of 1933 through 1943.

In 1952, the Bureau of the Budget issued Circular No. A-47, which established the first guidelines for establishing interest rates in the evaluation of water projects. Section 15 of Circular A-47 provided that "[i]nterest . . . shall be calculated at a rate based upon the average rate of interest payable by the Treasury on interest-bearing marketable securities . . . which upon original issue had terms to maturity of 15 years or more."

In May 1962, the Bureau of Budget Circular was replaced by Senate Document 97, which provided for a rate based on the coupon rate of outstanding U.S. Treasury securities that upon issue had 15 years or more to maturity. The rate was to be adjusted downward to the nearest 1/8 of 1 percent. The interest rate under Senate Document 97 reached 3-1/4 percent in 1968 (FY 1969), when it was replaced in December 1968 by the Water Resource Council's (WRC) regulations.

The WRC regulations, 18 C.F.R. 704.39 (1968), tied the interest rate to the yield of long-term U.S. securities with 15 years or more remaining to maturity. The regulation provided for an adjustment of the rate to the nearest 1/8 of 1 percent, but limited rate changes to no more than 1/4 percent per year.

In October 1973, the WRC adopted a new interest formulation formula, 38 Fed. Reg. 24,777 (1973). The new formula set the interest rate at 6-7/8 percent for FY 1974. The present interest rates were based on a formula that was set by Congress in the Water Resources Development Act of 1974 80, 42 U.S.C. 1962d-17 (1982). Section 80 readopted the method used to calculate interest in the WRC regulation 18 C.F.R. 704.39 (1968).

Both Section 80 and the WRC regulation contained grandfather clauses. These clauses established a 3-1/2 percent interest rate for projects authorized prior to the close of the 90th Congress.

RA 6120.2 as amended, which superseded Order No. 2929 and DM 730, specifically requires that replacements, additions, betterments, and new transmission and power related investments made after September 30, 1983, bear a market-based interest rate, except where otherwise specified by law.

### **Analysis Of BOR And COE Interest Rate Assignments.**

Following BPA's 1987 general rate filing, Commission staff expressed concern that the categorization of various investments in Statement C should be reexamined in order to assure that any replacement or addition investments bore current market-based interest rates as required by DOE regulations. See letter to John A. Cameron, Jr., BPA Asst. General Counsel, from Jerry R. Milbourn, Director - Div. of Electric Power Application Review at 3-4; DOE Order RA 6120.2 at 11 - Interest Rate Formula (October 6, 1987).

In response, BPA took steps to coordinate more closely with the COE and BOR to assure both the proper categorization of investments as either initial plant, replacements, additions, or betterments, and the corresponding assignment of interest rates. This coordination led BPA to determine that certain FY 1988 COE and BOR investments reported to BPA were not properly categorized as initial project investments and should therefore not be assigned the original project interest rate. As included in the Revenue Requirement Study (WP-91-FS-BPA-01) for BPA's 1991 General Rate Filing, and in subsequent rate filings, these FY 1988 and subsequent historical investments we assigned interest rates consistent with the requirements of RA 6120.2.

Construction of the Columbia River Fish Bypass (CRFB) began in 1988. Initially the CRFB was not treated as a separate project but was distributed among the Lower Snake Projects: Ice Harbor, Little Goose, Lower Granite, Lower Monumental, and McNary. The CRFB was financed with construction funds and was at this time assigned the initial project interest rate of 2.5 percent. In 1991, the CRFB was removed from the Lower Snake Projects, reflected as a single project and reassigned a project interest rate of 8.5 percent, see S. Rep. No. 100-159, 1st Sess. 9 1987.

Projected investments resulting from the National Marine Fisheries Service (NMFS) 1995 Biological Opinion fall into three categories: (1) measures the COE would plant to take regardless of the Biological Opinion; (2) "planned investment" which includes measures called for in the Biological Opinion and which the COE is including in its budget; and (3) "contingent investment" which includes investments called for in the Biological Opinion on a contingency basis, and which the COE and BPA deem likely to be installed. For years prior to FY 1997, IDC for these investments has been calculated in accordance with RA 6120.2, which states that a separate interest rate is to be established for any unit or separable power feature, or group of such units or features. Each new 1995 Biological Opinion investment activity is treated as a new unit or separable power feature; these investment activities are identified in Chapter 14, Revenue Requirement Study Documentation Volume 1 (WP-96-FS-BPA-02A). The IDC rate used is the long-term Treasury interest rate projected to be in effect for the year expenditures for the new unit or separable feature are projected to first occur. *Id.* If the facility is placed in service prior to FY 1997, the repayable investment is assigned the same long-term Treasury interest rate as the IDC rate. The long-term Treasury interest rate is the rate determined by Treasury under Section 11b of RA 6120.2, as amended October 1, 1983, which is the average yield during the preceding fiscal year on interest-bearing securities with terms of 15 years or more remaining to maturity.

### **Interest Rate Assignment under the BPA Appropriations Refinancing Act**

In April 1996 Congress passed and the President signed the BPA Appropriations Refinancing Act (the Act) as part of an omnibus FY 1996 Appropriations Act. See Chapter 9 of the

Revenue Requirement Study, Documentation Volume 1 (WP-96-FS-BPA-02A). See also Administrator's ROD, WP-96-A-02, Section 4.1.3. Under the Act, principal outstanding on each FCRPS capital investment as of the end of FY 1996 is reset on October 1, 1996:

- At the present value of the principal and interest payments BPA would pay to the U.S. Treasury in the absence of the Act, assuming that: (1) outstanding the principal were paid in full at the end of the investment's repayment period; (2) interest were paid at either the interest rates assigned by Administrator by the end of FY 1994 or, in the case of investments placed in service in FY 1995 and FY 1996, at the Treasury yield curve rates prevailing in September 1994 and September 1995, respectively,
- Plus: a prorata share of \$100 million.

Subsection (b)(1)(A) and (B) and (b)(3).

The discount rate used to determine the present value of each investment's principal and interest payments is a:

. . . rate determined by the Secretary of the Treasury, taking into consideration prevailing market yields, during the month preceding October 1, 1996, on outstanding interest-bearing obligations to the United States with periods to maturity comparable to the period between October 1, 1996, and the repayment date of the (investment).

Subsection (a)(6)(A) of the Act.

The new principal amount for each capital investment is assigned an interest rate that is the same as the discount rate used to reset the principal. Subsection (c) of the Act.

The Act also prescribes the rate and method to be used to calculate interest during construction (IDC) for construction work in progress (CWIP) on investments funded by appropriations beginning in FY 1997. Subsection (f)(1) of the Act requires that:

The principal amount of a new capital investment includes interest in each fiscal year of construction of the related project, facility, or separable unit or feature at a rate equal to the one-year rate for the fiscal year on the sum of -- (A) construction expenditures that were made from the date construction began through the end of the fiscal year, and (B) accrued interest during construction.

Subsection (f)(3) defines “one-year rate” as

For the purposes of this section, “one-year rate” for a fiscal year means a rate determined by the Secretary of the Treasury, taking into consideration prevailing market yields, during the month preceding the beginning of the fiscal year, on outstanding interest-bearing obligation of the United States with periods to maturity of approximately one-year.

The Act also specifies the basis for interest rate assignments to investments placed in service after September 30, 1996. Interest rates are to be based on the Treasury yield curve prevailing in September prior to the fiscal year investment is placed in service. The yield curve rate assigned to an investment is based on a correlation between debt maturities on the curve and the expected service life of the investment. Subsection (g) of the BPA Refinancing Act states

[T]he unpaid balance on the principal amount of a new capital investment bears interest at the Treasury rate for the new capital investment from the date that the related project, facility or separable unit or feature is placed in service until the earlier of the date the new capital investment is repaid or the repayment date for the new capital investment.

Subsection (a)(6)(B) defines Treasury rate in this context as:

. . . a rate determined by the Secretary of the Treasury, taking into consideration prevailing market yields, during the month preceding the beginning of the fiscal year in which the related project, facility, or separable unit or feature is placed in service, on outstanding interest-bearing obligations of the United States with periods to maturity comparable to the period between the beginning of the fiscal year and the repayment date for the new investment.

Thus, beginning in FY 1997, the Act supersedes BPA’s traditional practice for calculating IDC and assigning interest rates for investments financed by appropriations. IDC is no longer calculated separately for each investment using the prior-year, average long term rate that prevailed in the year the investment’s construction was initiated, as specified in RA 6120.2, Section 11, “Interest Rate Formula”. Rather, the same, prevailing one-year rate is applied to all appropriated investment CWIP balances. Further, the prior-year, average long-term rate that is used to calculate IDC is no longer assigned to investments when placed in service. Rather, the yield curve prevailing in September of each year is used to assign interest rates to investments placed in service in the following fiscal year, with rates from the curve appropriate to investments’ expected service lives.

## STATEMENT D

### INTRODUCTION

The requirements for Statement D appear as follows:

- (4) Statement D - Interest Expenses; Repayment of Investment and Debt Capital.
  - (i) For each capitalized investment and cost listed in Statement C, Statement D must describe, by interest group:
    - (A) The total unpaid balance outstanding at the end of the historic period;
    - (B) Payments made on principal and interest during each of the last 5 years of the historic period; and
    - (C) Annual payments expected to be made through the cost evaluation period.
  - (ii) The statement must describe how the interest expense was determined for each type of investment and include examples of such computations.

18 C.F.R. 300.11(b)(4). [Statement D reports investment data in two sections.](#) Section 1 of Statement D describes, by interest rate group, for each capitalized investment listed in Statement C, the total unpaid balance outstanding at the end of the historic period (September 30, 1996). The appropriated investment outstanding on this date is reset and interest rates are reassigned on October 1, 1996, under subsections (b) and (c) of the BPA Appropriations Refinancing Act (the Act). See Statement C narrative and Revenue Requirement Study Documentation, Volume 1, Chapter 9 (WP-96-FS-BPA-02A). Section 2 of Statement D describes, by interest rate group, for each capitalized investment listed in Statement C, the annual payments projected through the rate test period, as of October 1, 1996. In both sections, the top left-hand side of each page shows the applicable interest rate. Column A specifies the projects in the FCRPS. Column B provides the date the Federal investment was made. Column C provides the year in which repayment is due to be completed. Column D displays the total capitalized amount of each investment related to a particular project. In Section 1, column E lists the unpaid balance of the Federal investment as of [September 30, 1996](#). [In Section 2, column E lists the unpaid balance of the Federal investment as of October 1, 1996.](#) (This is the same as Column G in Statement C.) Column F lists the years of the historic period through the end of the cost evaluation period during which principal and interest payments have been or will be made. Column G indicates the annual interest expense associated with the unpaid balance of the Federal investment. If the annual interest expense does not round to \$1,000, this will be indicated in Column G by "<1". Column H shows the amount of bond premiums incurred when the bond is paid off. Column I provides the annual principal payments made or expected to be made.

Totals of interest expense are provided for each of the last 5 historical years and for each year of the rate test period for each of the generation and transmission functions. A combined transmission and generation summary for each year is also provided. The interest expense is determined by multiplying the unpaid balance by the appropriate interest rate.

Three separate Tables D-1, D-2, and D-3, are included, which detail gross interest expense; bond premiums; interest income on funds collected during the fiscal year for annual payments to the Treasury for COE and BOR O&M, interest, and amortization; the Allowance for Funds Used During Construction (AFUDC) credit to expenses [see [Revenue Requirement Study Documentation: Volume 1](#) (WP-96-FS-BPA-02A), Chapter 4]; interest expense on notes; and the interest income on cash balances (reserves) [see [Revenue Requirement Study Documentation: Volume 1](#) (WP-96-FS-BPA-02A), Chapter 6]. This detail is provided for the generation and transmission functions and for the total of both functions for the last 5 years of the historic period and for each year of the repayment period. These tables were prepared to assist the Commission in tracking each of the components comprising Net Interest Expense included in BPA's revenue requirements.



To assist the Commission in identifying scheduled amortization reflected in Statement D, summary tables are included for generation and transmission.

## EXPLANATORY NOTES FOR TABLES D-1, D-2, AND D-3

Column A covers the fiscal years of the historical period and the repayment period.

### For the historical period:

FYs 1991-95 appear as displayed in Response No. 4 to the information requests submitted by the Commission to BPA by letter of November 9, 1989, concerning BPA's 1989 Rate Proposal. It should be noted that historical data are prepared for general information only. As explained in the above-referenced data response, actual data are not maintained precisely as depicted on Tables D-1, D-2, and D-3. (This is especially true regarding interest income being split between columns D and G and having direct association with either the generation or transmission functions.) Where historical determinations have not been made in accounting records for individual components or functionalization of those components, the assumptions used in rate case forecasting have been employed to prepare the historical data in a form consistent with the projected data.

### For the cost evaluation and repayment periods:

Column B contains the gross interest, which, for FYs 1996-2001, can be found in Statement D on the Total Interest Expense Summary, Combined Transmission and Generation, Column G, Interest (to be paid). These data for the entire repayment period can be found in the 1996 Rate Proposal Revenue Requirement Study Documentation: Volume 2 (WP-96-FS-BPA-02B), pp. 455-532 (Generation) and pp. 542-591 (Transmission) in the column "Interest."

Column C contains the bond premiums, which, for FYs 1996-2001, can be found in Statement D on the Total Interest Expense Summary, Combined Transmission and Generation, Column H, Bond Premiums (to be paid). These data for the entire repayment period can be found in the 1996 Rate Proposal Revenue Requirement Study Documentation: Volume 2 (WP-96-FS-BPA-02B), pp. 455-532 (Generation) and pp. 542-591 (Transmission) in the column "Premiums".

Column D contains the interest credit calculation on revenues collected during each year before payments to Treasury are made at the end of that year. This interest credit calculation occurs in BPA's repayment program, and is separate from the interest credit calculation on BPA cash reserves (Column G). See Documentation, Volume 1 to the 1996 Rate Proposal Revenue Requirement Study Documentation Volume 1 (WP-96-FS-BPA-02A), Chapter 6. See also Revenue Requirement Study Documentation Volume 2 (WP-96-FS-BPA-02B, pp. 455-532 (Generation) and pp. 542-591 (Transmission) in the line "Interest Income."

Column E contains AFUDC, which can be found in the 1996 Rate Proposal Revenue Requirement Study Documentation: Volume 1 (WP-96-FS-BPA-02A), p. 97, (line 11) and pp. 99-100.

Column F is the subtotal of Columns B + C + D + E.

Column G contains the Capitalization Adjustment, related to the projected implementation of the BPA Appropriations Refinancing Act, which is explained in Chapter 9 of the 1996 Rate Proposal Revenue Requirement Study Documentation: Volume 1 (WP-96-FS-BPA-02A).

Column H contains the Interest Credit on Cash Reserves, which can be found in the 1996 Rate Proposal Revenue Requirement Study Documentation: Volume 1 (WP-96-FS-BPA-02A), Chapter 1 and Chapter 6 as functionalized. The calculation appears on p. 176.

Column I is the Total Net Interest Expense, computed as Columns F + G + H.

## STATEMENT E

### INTRODUCTION

The requirements for Statement E appear as follows:

- (5) Statement E - Operation, Maintenance, and Other Annual Expenses. Statement E must contain, for the last 5 years of the historic period and for the rate test period, as appropriate, a tabulation of actual and projected operation and maintenance, administrative and general, purchased power, wheeling, and any other expenses, other than interest. Statement E must:
- (i) List expenses for each individual source, if purchased power and other similar expenses are derived from more than one source;
  - (ii) Explain any significant deviations from trends in expenses or any extraordinary expenses; and
  - (iii) Explain the price level used for estimating expenses.

18 C.F.R. 300.11(b)(5). For convenience of review, the complete functionalized data for each year are compiled on individual pages. The component costs of the Residential Exchange Program, however, are tabulated on separate tables in order to provide the full source detail of that program. In addition, the debt service and operation and maintenance (O&M) components of BPA's capitalized contract obligations for purchase power have been provided as supplemental information.

Tables E-1 through E-5 tabulate the functionalized O&M and purchase and exchange power expenses of the FCRPS for the last 5 years of the historical period (FYs 1991-95). Wheeling expenses are included among the O&M programs. BPA administrative and general costs are included in the expenses of the individual O&M programs.

Tables E-6 - E-11 tabulate the functionalized current estimates of O&M and purchase and exchange power expenses for the cost evaluation period, FYs 1996-2001 (rate test period is FYs 1997-2001). Tables E-12-16 incorporates the revisions, for FYs 1997-2001, for costs that are modified in and as a result of the rate development process (short-term power purchases and Residential Exchange Program).

Table E-17 itemizes the component costs of the Residential Exchange Program for the last 5 years of the historic period. Tables E-18-23 itemizes the estimated component costs of the Residential Exchange Program for FYs 1997-2001 based on current rates. Tables E-24-28 (FYs 1997-2001) itemizes the estimated component costs of the Residential Exchange Program that result from the proposed rates.

Table E-29 tabulates the principal payments on debt associated with BPA's capitalized contract obligations for purchase power for the rate test period and through the repayment period. These payments of non-Federal bonds are for Trojan nuclear project, Washington Public Power Supply System nuclear projects 1, 2, and 3 (WNP 1, 2, and 3), Eugene Water and Electric Board (EWEB) Conservation financing, City of Idaho Falls Hydroelectric project, Cowlitz Falls Hydroelectric project, Emerald People's Utility District (PUD) Conservation financing, Conservation and Renewable Energy System (CARES) Conservation financing, and Northern Wasco Co. PUD's McNary Dam Fishway Hydroelectric Project. Included also is a payment stream of Tacoma Public Utilities/Ft. Lewis to acquire conservation although not a capitalized contract, it entails a long-term, fixed duration contractual obligation (see Revenue Requirement Study (WP-96-FS-BPA-02), Chapter 3, and Revenue Requirement Study Documentation: Volume 1 (WP-96-FS-BPA-02A), Chapter 10). Table E-30 tabulates the interest expense (net of any interest income) for the aforementioned non-Federal bonds. Table E-31 shows O&M and other annual expenses (excluding interest) related to the non-Federal projects. Table E-32 is a summary total of Tables E-29, E-30, and E-31, and represents the total purchase power costs associated with the capitalized contract obligations. [The use of escalation factors

in developing program levels are explained in Revenue Requirement Study Documentation: Vol. 1 (WP-96-FS-BPA-02A), Chapter 7.]

## EXPLANATORY NOTES FOR TABLES E-29, E-30, E-31, and E-32

FYs 1997-2001: The principal, interest, and O&M components of the capitalized contract obligations are BPA's current estimates of these costs, developed in September 1995, and updated in May 1996. The total costs of these non-Federal projects are displayed in Tables E-6 - 11 under Purchase Power.

### The Repayment Period:

This data for the entire repayment period can be found in BPA's 1996 Rate Proposal Revenue Requirement Study Documentation: Volume 1 (WP-96-FS-BPA-02A), July 1996 Chapter 10.

Trojan: principal and interest are summarized on Table 7 (where interest is "interest" plus "investment income" and "reserve account freeups").

WNP-1: principal and interest are summarized on Table 1 (where interest is "interest" plus "investment income" and "reserve account freeups").

WNP-2: principal and interest are summarized on Table 3 (where interest is "interest" plus "investment income" and "reserve account freeups").

WNP-3: principal and interest are summarized on Table 5 (where interest is "interest" plus "investment income" and "reserve account freeups").

EWEB Conservation: principal and interest are shown on Table 8 (where interest is "interest" plus "investment income" and "reserve account freeups").

Idaho Falls Project: principal and interest are shown on Table 9 (where interest is "interest" plus "investment income" and "reserve account freeups").

Cowlitz Hydroelectric Project: principal and interest are summarized on Table 10 (where interest is "interest" plus "investment income" and "reserve account freeups").

Tacoma City Light: principal and interest are summarized on Table 14 (where interest is "interest" plus "investment income" and "reserve account freeups").

Tacoma City Light/Ft. Lewis: payment stream is shown in principal column on Table 15.

Emerald PUD Conservation: principal is shown on Table 12 (where interest is "interest" plus "investment income" and "reserve account freeups").

CARES Conservation: principal is shown on Table 13 where interest is "interest" plus "investment income" and "reserve account freeups").

Northern Wasco PUD's McNary Dam Fishway Hydroelectric Project: principal is shown on Table 11 (where interest is "interest" plus "investment income" and "reserve account freeups").

## STATEMENT F

### INTRODUCTION

The requirements for Statement F appear as follows:

(6) Statement F - Cost Allocations

(i) Statement F must contain, for each multiple-purpose reservoir project, unit, division, or system, a table or other summary showing total investment costs, the total annual operation and maintenance costs, and the allocation of all such costs, among the various authorized purposes.

(ii) The statement must show the amount of power costs suballocated to irrigation functions, any changes from previous allocations, and the procedure used in allocating such costs. Currently valid allocations previously submitted to the Commission need not be furnished, if referenced.

18 C.F.R. 300.11(b)(6). Table F-1 lists the total FCRPS plant investment as of September 30, 1995, by project and the allocation of plant investment among the various authorized purposes as reported in BPA's FY 1995 Annual Report.

Table F-2 lists the total FCRPS O&M expense for FY 1995 allocated to the various authorized purposes.

Table F-3 shows the percent of O&M expense allocated to power in FYs 1994-95 for all COE and BOR projects. Changes in the percentage of O&M expense returnable from commercial power revenues for BOR projects can be expected to occur from year to year as discussed in the footnote included on Table F-3. Table F-4 shows the percent of plant costs allocated to power for FY 1995 for all COE and BOR projects. No changes have occurred in plant allocations since FY 1987. See Revenue Requirement Study Documentation, Volume 1, Chapter 14, Attachment 5 for a discussion of the plant allocations. For discussion on related issues please see the Revenue Requirement Study, WP-96-FS-BPA-02, Section 5.2.1.3, and Administrator's Record of Decision, WP-96-A-02, Section 10.4.1.

The allocation methodology used to allocate the joint plant investment and O&M costs among the various authorized purposes is developed by the constructing agencies and, in the case of the COE projects, is approved by the Federal Energy Regulatory Commission.