

# REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8202180285 DOC. DATE: 81/12/15 NOTARIZED: NO DOCKET #  
 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397  
 AUTH. NAME: BOUCHEY, L.D. AUTHOR AFFILIATION: Washington Public Power Supply System  
 RECIP. NAME: SCHWENCER, A. RECIPIENT AFFILIATION: Licensing Branch 2

SUBJECT: Forwards responses to NRC 811112 request for addl financial info, 810927 & 1227 quarterly repts, 1981 annual rept & official statement. Response will be incorporated into FSAR amend within 2 months.

SEE R.F. 15

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## Washington Public Power Supply System

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December 15, 1981  
G02-81-525  
SS-L-02-CDT-81-106

8202180285 811215  
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Docket No. 50-397

Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555



Dear Mr. Schwencer:

Subject: NUCLEAR PROJECT NO. 2  
QUESTIONS CONCERNING FINANCIAL INFORMATION

Reference: Letter, A. Schwencer to R.L. Ferguson, "WNP-2 FSAR Request for Additional Information", dated November 12, 1981

Enclosed are sixty copies of the responses to the NRC questions transmitted to the Supply System by the reference letter. These questions will be incorporated into an amendment to the WNP-2 FSAR within two (2) months.

Seven copies of each of the following reports are being submitted as enclosures to this letter:

1. Washington Public Power Supply System Quarterly Report, dated September 27, 1981
2. Washington Public Power Supply System 1981 Annual Report
3. Washington Public Power Supply System \$750,000,000 Official Statement

Very truly yours,

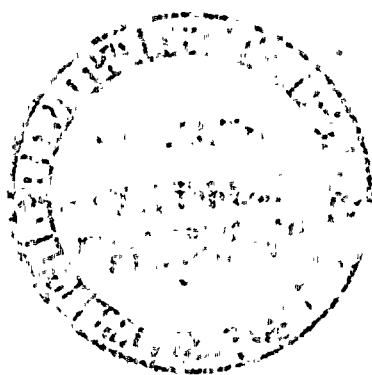
*Original Signed By:*

G. D. Bouchey  
Deputy Director, Safety and Security

CDT/rch

cc: R Auluck - NRC  
WS Chin - BPA  
R Feil - NRC Site

*B005  
5/17*





WNP-2

Q. 600.001

- a. Indicate the estimated annual costs by year to operate the subject facility for the first seven full years of commercial operation. The types of costs included in the estimates should be indicated and should include (but not necessarily be limited to) operation and maintenance expenses with fuel costs shown separately, depreciation, taxes, and reasonable return on investment. (Enclosed is a form which should be used for each year of the seven year period.) Indicate the projected plant capacity of each unit for each year. In addition, provide similar data assuming plant capacity factors of 50% and 60%.
- b. Indicate the average unit price per kWh experienced on system-wide sales of electric power to all customers for the most recent 12-month period.

Response:

- a. The estimated annual projected costs for the operation of WNP-2 for the seven-year period February 1984 through June 1991 are presented as Table 600.001-1, based on Supply System generation estimates. Tables 600.001-2 and 600.001-3 present WNP-2 operating costs for the same period based on 50% and 60% plant factors, respectively.
- b. The Supply System operates each Project as an independent utility and, accordingly, does not maintain financial records on a system-wide basis. Results for the Hanford Generating Project and the Packwood Lake Hydroelectric Project for the twelve-month period ending October 30, 1981, are as follows:

	HGP	Packwood
Revenues	\$15,703,000	\$794,000
Generation (mWh)	1,452,287	90,248
Mills per kWh	10.8	8.8



TABLE 600.001-1

ESTIMATED ANNUAL COST OF OPERATING  
NUCLEAR GENERATING UNIT WNP-2  
FOR FISCAL YEAR ENDING JUNE 30  
(Dollars in Thousands)

	1984 <sup>(1)</sup>	1985	1986	1987	1988	1989	1990	1991
Operation and Maintenance Expenses								
Nuclear Power Generation:								
Nuclear Fuel Expense (2)	\$ 39,364	\$ 99,066	\$ 88,792	\$ 91,847	\$ 99,066	\$ 109,359	\$ 120,671	\$ 128,638
Other Operating Expenses (3)	9,773	30,818	39,197	42,408	45,910	49,924	54,299	59,065
Maintenance Expenses	4,967	14,252	14,581	15,189	16,269	17,009	17,632	18,280
Total	54,104	144,136	142,570	149,444	161,245	176,292	192,602	205,983
Transmission Expenses (4)	-	-	-	-	-	-	-	-
Administrative and General Expenses								
Property and Liability Insurance	1,661	4,641	4,755	4,867	5,034	5,125	5,227	5,332
Other A&G Expenses	7,727	15,934	13,893	14,620	16,141	17,486	19,394	21,480
Total	9,388	20,575	18,648	19,487	21,175	22,611	24,621	26,812
Total O&M Expenses	63,492	164,711	161,218	168,931	182,420	198,903	217,223	232,795
Depreciation Expense	30,415	73,176	73,608	74,148	74,743	75,420	76,164	76,992
Taxes Other than Income Taxes:								
Property Taxes (5)	-	-	-	-	-	-	-	-
Other (5)	1,959	5,105	5,378	5,615	5,870	6,131	6,442	6,731
Total	1,959	5,105	5,378	5,615	5,870	6,131	6,442	6,731
Income Taxes (6)	-	-	-	-	-	-	-	-
Total Operating Expenses	\$ 95,866	\$242,992	\$240,204	\$248,694	\$263,038	\$280,454	\$299,829	\$316,518
Generation (kWh x 10 <sup>6</sup> )	2,376	5,980	6,461	6,745	6,745	6,745	6,745	6,745

(1) 5 months only

(2) Plant factor: 60%-1st 12 months; 65%-2nd 12 months; 70%-thereafter

(3) Includes provision for decommissioning

(4) Plant output is transmitted by the Bonneville Power Administration

(5) The Supply System is assessed a privilege tax in lieu of property taxes

(6) The Supply System is exempt from Income Tax liability



TABLE 600.001-2

ESTIMATED ANNUAL COST OF OPERATING  
NUCLEAR GENERATING UNIT WNP-2  
FOR FISCAL YEAR ENDING JUNE 30  
(Dollars in Thousands)

	1984 <sup>(1)</sup>	1985	1986	1987	1988	1989	1990	1991
Operation and Maintenance Expenses								
Nuclear Power Generation:								
Nuclear Fuel Expense (2)	\$ 32,803	\$ 79,822	\$ 70,604	\$ 66,011	\$ 65,605	\$ 70,433	\$ 74,703	\$ 79,213
Other Operating Expenses (3)	9,773	30,818	39,197	42,408	45,910	49,924	54,299	59,065
Maintenance Expenses	4,967	14,252	14,581	15,189	16,269	17,009	17,632	18,280
Total	47,543	124,892	124,382	123,608	127,784	137,366	146,634	156,558
Transmission Expenses (4)	-	-	-	-	-	-	-	-
Administrative and General Expenses								
Property and Liability Insurance	1,661	4,641	4,755	4,867	5,034	5,125	5,227	5,332
Other A&G Expenses	7,727	15,934	13,893	14,620	16,141	17,486	19,394	21,480
Total	9,388	20,575	18,648	19,487	21,175	22,611	24,621	26,812
Total O&M Expenses	56,931	145,467	143,030	143,095	148,959	159,977	171,255	183,370
Depreciation Expense	30,415	73,176	73,608	74,148	74,748	75,420	76,164	76,992
Taxes Other than Income Taxes:								
Property Taxes (5)	-	-	-	-	-	-	-	-
Other (5)	1,861	4,816	5,105	5,228	5,368	5,547	5,752	5,990
Total	1,861	4,816	5,105	5,228	5,368	5,547	5,752	5,990
Income Taxes (6)	-	-	-	-	-	-	-	-
Total Operating Expenses	\$ 89,207	\$ 223,459	\$ 221,743	\$ 222,471	\$ 229,075	\$ 240,944	\$ 253,171	\$ 266,352
Generation (kWh X 10 <sup>6</sup> )	1,980	4,818	4,818	4,818	4,818	4,818	4,818	4,818

- (1) 5 months only
- (2) Plant factor: 50%
- (3) Includes provision for decommissioning
- (4) Plant output is transmitted by the Bonneville Power Administration
- (5) The Supply System is assessed a privilege tax in lieu of property taxes
- (6) The Supply System is exempt from Income Tax liability



TABLE 600.001-3

ESTIMATED ANNUAL COST OF OPERATING  
NUCLEAR GENERATING UNIT WNP-2  
FOR FISCAL YEAR ENDING JUNE 30  
(Dollars in Thousands)

	1984 <sup>(1)</sup>	1985	1986	1987	1988	1989	1990	1991
Operation and Maintenance Expenses								
Nuclear Power Generation:								
Nuclear Fuel Expense (2)	\$ 39,364	\$ 95,786	\$ 80,004	\$ 78,842	\$ 82,945	\$ 89,460	\$ 97,116	\$ 104,676
Other Operating Expenses (3)	9,773	30,818	39,197	42,408	45,910	49,924	54,299	59,065
Maintenance Expenses	4,967	14,252	14,581	15,189	16,269	17,009	17,632	18,280
Total	54,104	140,856	133,782	136,439	145,124	156,393	169,047	182,021
Transmission Expenses (4)	-	-	-	-	-	-	-	-
Administrative and General Expenses								
Property and Liability Insurance	1,661	4,641	4,755	4,867	5,034	5,125	5,227	5,332
Other A&G Expenses	7,727	15,934	13,893	14,620	16,141	17,486	19,394	21,480
Total	9,388	20,575	18,648	19,487	21,175	22,611	24,621	26,812
Total O&M Expenses	63,492	161,431	152,430	155,926	166,299	179,004	193,668	208,833
Depreciation Expense	30,415	73,176	73,608	74,148	74,740	75,420	76,164	76,992
Taxes Other than Income Taxes:								
Property Taxes (5)	-	-	-	-	-	-	-	-
Other (5)	1,959	5,056	5,246	5,420	5,628	5,833	6,089	6,372
Total	1,959	5,056	5,246	5,420	5,628	5,833	6,089	6,372
Income Taxes (6)	-	-	-	-	-	-	-	-
Total Operating Expenses	\$ 95,866	\$ 239,663	\$ 231,284	\$ 235,494	\$ 246,675	\$ 260,257	\$ 275,921	\$ 292,197
Generation (kWh X 10 <sup>6</sup> )	2,376	5,782	5,782	5,782	5,782	5,782	5,782	5,782

(1) 5 months only

(2) Plant factor: 60%

(3) Includes provision for decommissioning

(4) Plant output is transmitted by the Bonneville Power Administration

(5) The Supply System is assessed a privilege tax in lieu of property taxes

(6) The Supply System is exempt from Income Tax liability





Q. 600.002

Indicate the estimated costs of permanently shutting down the facility, a list of what is included in such costs, the assumptions made in estimating the costs, the type of shutdown contemplated, and the source of funds to cover these costs.

Response:

It is planned to decommission the WNP-2 facility at the end of its operating life by placing the facility in protective storage for fifty years and then dismantle it with shipment of waste materials to appropriate repositories. The general activities necessary for placing it in protective storage are:

1. Detailed planning and preparation for placing in protective storage,
2. Final shutdown of the nuclear reaction,
3. Plant cooldown,
4. Fuel discharge into the spent fuel pool,
5. Shipment of the fuel to a permanent disposal site,
6. General decontamination of the facility,
7. Shipment of radioactive wastes to a disposal site,
8. Deactivation of plant systems not needed during the protective storage period,
9. Confinement of residual radioactivity, as appropriate,
10. Installation of intrusion alarms and barriers, and
11. Establishment of continuous surveillance.

Nonradioactive equipment and facilities will be salvaged, scrapped or converted to beneficial uses, as appropriate.

The total cost for decommissioning the facility is estimated to be \$57,000,000 in 1978 dollars, including \$26,800,000 for placing it in protective storage. A breakdown of the costs for shutting the plant down and placing it in protective storage is attached as Table 600.002-1.

TABLE 600.002-1

ESTIMATED COSTS FOR PREPARATIONS  
FOR PASSIVE STORAGE

Cost Category	Estimated Costs (\$ millions)
Disposal of Radioactive Materials (Radioactive Wastes)	\$ 1.2
Staff Labor	11.3
Energy	2.1
Special Tools and Equipment	0.4
Miscellaneous Supplies	1.4
Specialty Contractors	0.2
Nuclear Insurance	0.5
Spent Fuel Shipment	3.8
Fuel Channel Disposal	0.6
Contingency (25%)	<u>5.3</u>
TOTAL	\$26.8



The primary assumptions used for estimating these costs are:

1. 1978 dollars,
2. 1978 technology and nuclear regulations,
3. All radioactive wastes shipped to offsite repositories,
4. Thirty full power years of plant operation,
5. ALARA occupational exposure philosophy,
6. No unforeseen difficulties experienced while placing the plant in protective storage, and
7. Radiation dose rates based on measured data from operating plants.

Decommissioning of the Project will be financed by use of a decommissioning sinking fund. Payments into the fund during operation of the plant, together with investment income thereon, will result in the accumulation of sufficient monies to finance the subsequent decommissioning. Periodically, at intervals no longer than five years during commercial operations, the decommissioning technology and regulatory climate will be reviewed to determine if the payments into the sinking fund should be changed, and the payments will be adjusted accordingly.



Q. 600.003

Provide an estimate of the annual cost to maintain the shut down facility in a safe condition. Indicate what is included in the estimate, assumptions made in estimating the costs, and the source of funds to cover these costs.

Response:

The facility will be placed in protective storage as described above in the response to Question 600.002. The estimated annual cost for maintaining the protective storage is \$75,000 in 1978 dollars. A breakdown of these costs is attached as Table 600.003-1.

The primary assumptions used for estimating these costs are:

1. 1978 costs,
2. 1978 technology and nuclear regulations,
3. Multiple reactor site, and
4. Specialty contractors will be hired for site security, equipment maintenance, and radiation and environmental surveillance.

The source of funds for the protective storage will be the decommissioning sinking fund referred to in the response to Question 600.002.



WNP-2

TABLE 600.003-1

ESTIMATED ANNUAL COSTS FOR  
WNP-2 PROTECTIVE STORAGE

Cost Category	Estimated Annual Cost (\$)
Surveillance and Maintenance Representative	\$ 6,500
Secretary	5,075
Repairman	2,710
Security	8,800
Third Party Inspection	7,500
Environmental Radiological Monitoring Program Personnel	14,230
Quality Assurance Specialist	1,000
Equipment and Supplies	1,000
Annual Allowance for Repairs	5,000
Utilities and Services	5,000
License Fee	650
NEL-PIA Insurance	2,500
Contingency .(25%)	<u>14,991</u>
TOTAL	\$74,956





REFERENCE:

1. Letter G02-81-525, G. D. Bouchey to A. Schwencer,  
"Questions Concerning Financial Information", dated  
December 15, 1981.



Q. 600.004

Provide copies of WPPSS's quarterly financial report for the most recent period. Also, provide a copy of the most recent "Annual Financial Report".

Response:

A copy of the Supply System's most recent quarterly financial report covering the period July 1, 1981 through October 1, 1981, and a copy of the Supply System's 1981 Annual Report have been submitted to the NRC. (See Reference 1.)



Q. 600.005

Provide copies of the official statement for WPPSS's most recent security issue and copies of the preliminary statement for any pending issue(s).

Response:

A copy of the September 1, 1981 official statement for nuclear projects 1, 2, and 3 has been submitted to the NRC. (See Reference 1 to Question 600.004.)

The next bond issuance is anticipated for early 1982. No preliminary bond statement has as yet been prepared for that issue.



Q. 600.006

Describe the legal basis for WPPSS's rate-setting authority and how it may be used to ensure that sufficient funds will be available to operate the facility and to eventually shut it down and maintain it in a safe shutdown condition.

Response:

The Supply System is a joint operating agency and a municipal corporation of the State of Washington organized under Chapter 43.52 of the Revised Code of Washington, as amended. The Supply System is composed of 19 operating public utility districts of the State of Washington and the cities of Richland, Seattle, Tacoma, and Ellensburg, Washington. Pursuant to its statutory authority, the Supply System is empowered to acquire, construct, and operate plants and facilities for the generation and transmission of electrical power and energy, but, as a supply agency, does not distribute power or sell at retail. Rather, it is reimbursed, pursuant to the provisions of the WNP-2 Net Billing Agreements, by the 94 Participants for all WNP-2 costs, whether or not the Project is completed, operable, or operating. See response to Question 600.007.





Q. 600.007

Describe the contractual provisions between WPPSS and its member municipal systems and ensure that sufficient funds will be available to operate the facility and to eventually shut it down and maintain it in a safe shutdown condition. Describe the municipals' rate-setting authority and the rate covenants from the municipals to WPPSS that ensure satisfaction of these requirements.

Response:

WNP-2 will be used for the generation of electrical energy. It will be financed, constructed, operated, and owned by the Supply System. Net Billing Agreements between the Supply System, the Bonneville Power Administration ("BPA"), and 94 statutory preference customers of BPA ("the Participants"), provide for the payment of project costs and the allocation of project capability.

The 94 Participants in WNP-2 consist of 27 municipalities, 21 public utility districts, 1 irrigation district, and 45 cooperatives. Of the total capability of WNP-2, the municipalities have contracted to purchase 22.6%, the districts have contracted to purchase 56.9%, and the cooperatives have contracted to purchase 20.5%. Under the Net Billing Agreements, each Participant will assign its share of the project capability to BPA. BPA's purchase of the capability of WNP-2 was authorized and approved by Congress in the Public Works Appropriations Acts of 1970 and 1971. BPA is obligated under the Net Billing Agreements to pay the Participants of WNP-2, and such Participants are obligated to pay the Supply System, the total annual costs of WNP-2, including debt service on the Net Billed Bonds issued on the Project, less amounts paid from other sources, whether or not WNP-2 is completed, operable, or operating and notwithstanding the suspension, reductions, or curtailment of WNP-2's output. Payments of project costs by the Participants to the Supply System will be credited against the billing made by BPA to the Participants for power and certain services. Each Participant has covenanted that it will establish, maintain, and collect rates or charges for power and energy and other services furnished through its electric utility properties which shall be adequate to provide revenues sufficient to make required payments to the Supply System.



WNP-2

For a more in-depth discussion of these contracts and their terms, see "Bonneville Contracts" under the caption "Bonneville Power Administration" in the September 1, 1981, official statement for Nuclear Projects 1, 2, and 3. (See Reference 1 to Question 600.004.)

Q. 600,008

Indicate the amount of WPPSS's most recent rate relief action and provide copies of the order authorizing the rates. Provide details of the amount and timing of any prospective rate increases.

Response:

The Supply System does not engage in the distribution of power to retail customers. It is authorized, among other things, to acquire, construct, and operate plants, works, and facilities for the generation and transmission of power to utilities. The Supply System does not have "rates", but is reimbursed for the costs of each project by the Participants therein. In any event, as a municipal corporation of the State of Washington, the Supply System is not under the jurisdiction of any regulatory agency having control over "rates and services" incidental to the proposed activity.

Q. 600.009

Indicate the current limit on WPPSS's bonded indebtedness and any prospective or requested increase in the limit. Indicate the current outstanding indebtedness that is applied to this limit.

Response:

The September 1, 1981 bond issuance for WNP-2 was for \$210,000,000. The Supply System has now issued \$1,695,000,000 of revenue bonds for WNP-2. It is estimated that the remaining financial requirements, based on the 1982 construction budget and the currently scheduled February 1984 commercial operation date, are \$811,000,000.

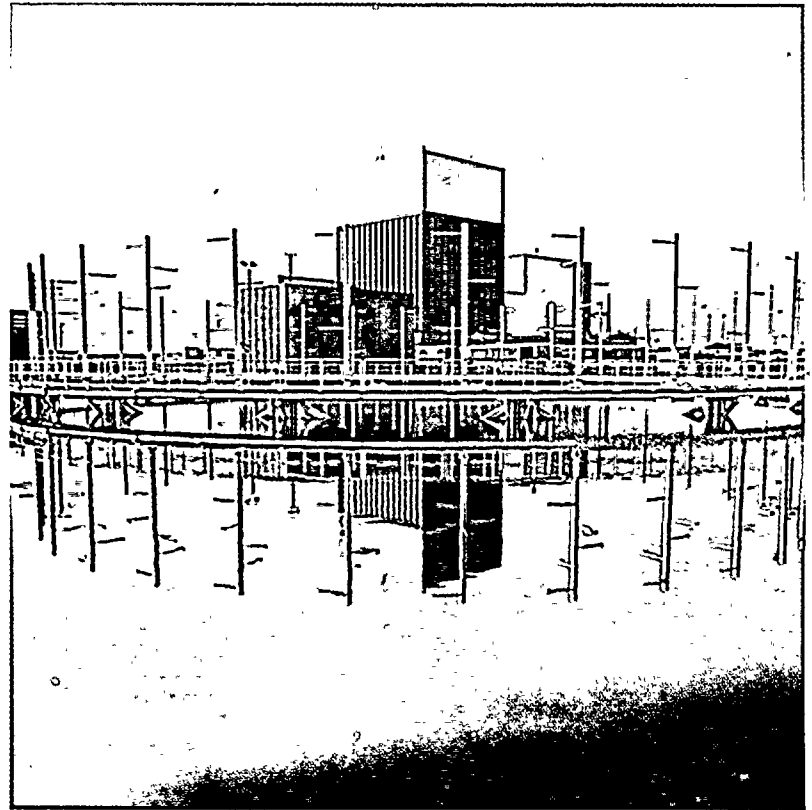
The WNP-2 1981 bonds are part of an issue of bonds authorized to be issued pursuant to the revised code of Washington, Chapter 43.52, as amended, and Resolution No. 640, adopted by the Board of Directors of the Supply System on June 26, 1973, as amended (the "Project No. 2 Resolution"), to pay the cost of the acquisition and construction of WNP-2. The WNP-2 1981 bonds were issued pursuant to a resolution supplemental to the Project No. 2 Resolution, Resolution No. 1184 (the "Project No. 2 Supplemental Resolution") adopted by such Board on September 4, 1981.

On November 3, 1981, the majority of voters of the State of Washington approved Initiative Measure No. 394. If enacted into law, the initiative will require the Supply System, after July 1, 1982, to obtain the approval of the voters of its 23 member governmental entities in order to issue bonds to finance the cost of construction of each of its projects. In the event voter approval for the issuance of bonds with respect to any project is not obtained and alternative sources or methods to finance completion of construction of such project is not available, the Supply System may be obligated to terminate the project. A termination of any of the Supply System's projects could have adverse effects on the projects of the Supply System not terminated. However, such termination would not affect the obligation of Bonneville or the Participants under the WNP-2 Net Billing Agreements.



December 27, 1981

# QUARTERLY REPORT



WASHINGTON PUBLIC POWER  
SUPPLY SYSTEM

Docket # 50-397  
Control # 8202180285  
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## QUARTERLY REPORT

Copies of the Supply System Annual Report and additional copies of this report may be obtained by writing to:

Public Affairs & Information  
Washington Public Power Supply System  
P.O. Box 968, Richland, Washington 99352



# BALANCE SHEETS (Unaudited)

December 27, 1981

Current Assets—Operating Fund	\$5,541	\$45,621	\$19,240	\$70,402
Restricted Assets:				
Special Funds	3,198	700,069		703,267
Debt Service Funds	6,490	896,549		903,039
	<u>9,688</u>	<u>1,596,618</u>		<u>1,606,306</u>
Utility Plant Equipment:				
In-Service (net)	41,190	8,806	5,331	55,327
Construction Work in Progress		6,294,294		6,294,294
	<u>41,190</u>	<u>6,303,100</u>	<u>5,331</u>	<u>6,349,621</u>
Other Assets & Deferred Charges	4,409	12,301	1,099	17,809
	<u>\$60,828</u>	<u>7,957,640</u>	<u>25,670</u>	<u>8,044,138</u>
LIABILITIES				
Current Liabilities—Operating Fund	\$1,926	\$39,621	\$19,317	\$60,864
Liabilities—Payable from Restricted Assets:				
Special Funds	418	431,077		431,495
Debt Service Funds	1,191	324,567		325,758
	<u>1,609</u>	<u>755,644</u>		<u>757,253</u>
Long-Term Debt	53,881	6,649,984		6,703,865
Other Liabilities & Deferred Credits	3,412	512,391	6,353	522,156
	<u>\$60,828</u>	<u>\$7,957,640</u>	<u>25,670</u>	<u>8,044,138</u>

# STATEMENTS OF SOURCE AND USE OF FUNDS (Unaudited)

FISCAL SIX  
MONTHS ENDED  
DECEMBER 27, 1981

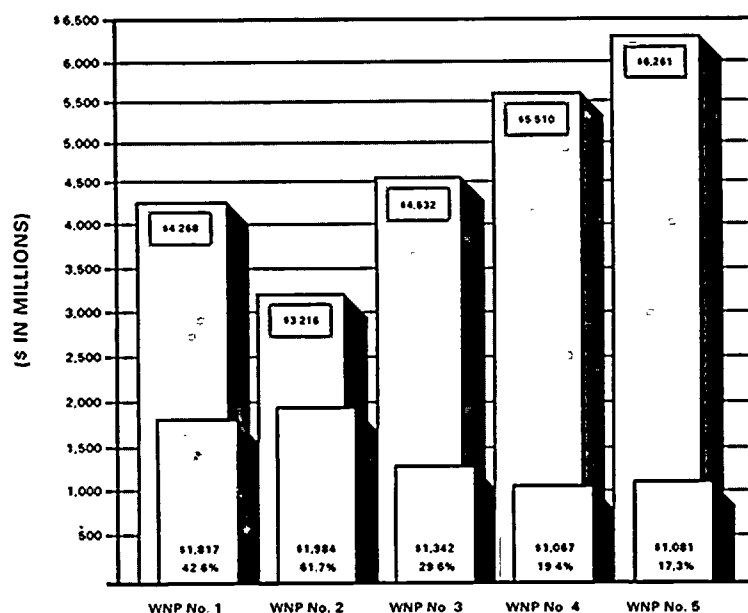
(\$ IN THOUSANDS)	Operating Projects Hanford & Packwood	Construction Nuclear Projects Nos. 1, 2, 3 & 4/5	Internal Service Fund	Combined
SOURCE OF FUNDS				
Operating Receipts	\$24,870			\$24,870
Collections Under Net Billing		\$121,061		121,061
Bond Proceeds		666,958		666,958
Interest Income	902	94,332		95,234
Charged to Joint Owners		90,316		90,316
Decrease in Restricted Funds	1,702	221,167		222,869
Net Change in Operating Fund	646	(5,331)	\$222	(4,463)
Other	2	19,511	761	20,274
	<u>\$28,122</u>	<u>1,208,014</u>	<u>\$983</u>	<u>\$1,237,119</u>
USE OF FUNDS				
Operating Expenses	\$23,969			\$23,969
Construction Costs		\$810,442		810,442
Interest Expense	920	261,530		262,450
Nuclear Fuel		89,890		89,890
Financing Expense		1,663		1,663
Increase in Restricted Funds	247	46,411		46,658
Revaluation of Investments	1	(6,970)		(6,969)
Other	2,985	5,048	\$983	9,016
	<u>\$28,122</u>	<u>\$1,208,014</u>	<u>\$983</u>	<u>\$1,237,119</u>

The Washington Public Power Supply System was organized in 1957 as a municipal corporation and joint operating agency of the State of Washington. Its membership consists of 19 public utility districts and 4 municipalities which own and operate electric systems within the State of Washington. It is empowered to acquire, construct and operate facilities for the generation and transmission of electric power and energy.

## PROJECT COSTS

WNP Nos. 1-5

□ TOTAL FUNDING REQUIREMENTS 1982 BUDGET  
□ CUMULATIVE COSTS

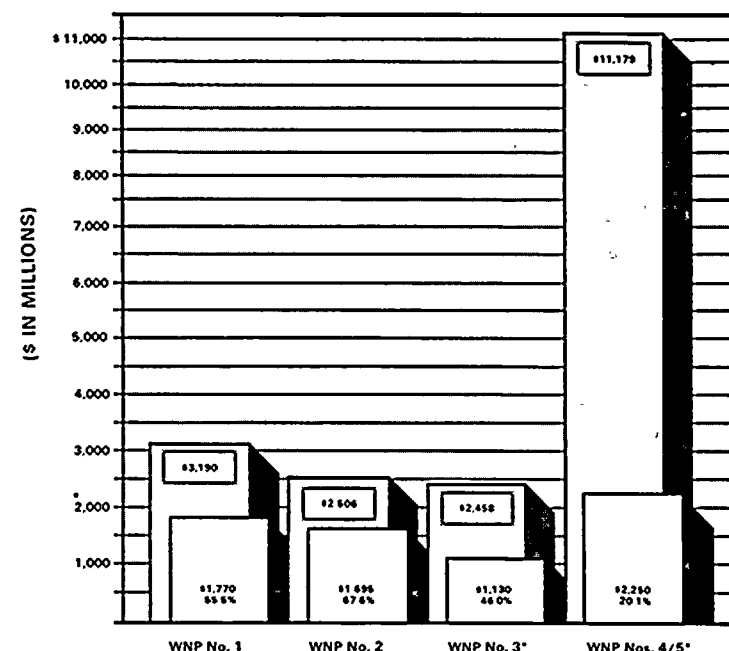


## FUNDING REQUIREMENTS

WNP Nos. 1-5

□ SUPPLY SYSTEM FUNDING REQUIREMENTS 1982 BUDGET  
□ FUNDED TO-DATE

\*SUPPLY SYSTEM OWNERSHIP SHARE: WNP No. 3, 70%  
WNP No. 5, 90%



## STATUS OF CONSTRUCTION

	Plant Size (MWe)	Date of Scheduled Commercial Operation*	% Construction Completed	
			Quarter Ended Dec. 27, 1981	Cumulative Dec. 27, 1981
Nuclear Project No. 1	1250	June 1986	6.2	52.9
Nuclear Project No. 2	1100	February 1984	*	*
Nuclear Project No. 3	1240	December 1986	6.1	42.1
Nuclear Project No. 4	1250	June 1987	1.0	24.0
Nuclear Project No. 5	1240	December 1987	.9	15.8

\*WNP-2 is in the system's completion phase—the last 15% of the project.

## SUMMARY

(\$ IN THOUSANDS)

ASSETS

Operating Projects  
Hanford & Packwood

Construction  
Nuclear Projects  
Nos. 1, 2, 3 & 4/5

Internal  
Service  
Fund

Combined

# Managing Director's Comments

## TERMINATION

The termination of Projects 4 and 5 is now underway. The Board of Directors approved the termination of the two projects on January 22, 1982 by a vote of 22 to 0. The resolution came after months of negotiations to mothball the projects—plans that failed to get the necessary financial backing of the projects' participants.

The goal of the termination process is to provide an orderly disposal of the projects with the maximum return from the assets. To achieve this, the Supply System has established a separate Program Office to deal with all termination-related activities. This group will give weekly financial reports and monthly status reports on its progress. The Supply System's legal office has outlined a procedure for the consistent closure of all contracts and obligations.

Three phases are included in the termination plan. The initial phase is aimed at discharging the Supply System's obligations to Pacific Power and Light Company. The Oregon-based private utility has 10 percent ownership in Project 5 and therefore has 90 days following notice of termination to make an offer on the project. Other possible markets are also being sought.

If no apparent buyers exist, the Supply System will move into Phase II—where it would seek a maximum return on sales of portions of the Project 4 and 5 assets. This might include using portions of the plants for Projects 1, 2 and 3 or selling components for use in other plants. Remaining material would be sold for salvage at the best return possible.

Phase III would be necessary if either or both of the terminated projects could not be disposed of as a unit. It would involve whatever site work and restoration necessary to comply with the Department of Energy lease at Project 4 and on the agreements with the Energy Facility Site Evaluation Council at Project 5.

The Supply System estimates that termination will cost about \$531 million including all expenses incurred since July 1981. This estimate does not include funds for site restoration work, interest costs, or revenue from disposal of the assets.

The Supply System has spent \$188 million since July 1981 to pay obligations for Projects 4 and 5. That leaves a balance of \$343 million.

Since participants' agreements do not require termination payments for this purpose during the first year of termination, financing must be secured to meet the obligations when currently available funds become insufficient. Project 4/5 participants aim to sign an agreement by mid-February to loan the Supply System \$70.5 million. This agreement will permit the Supply System to pay appropriate portions of the obligations during the next year.

In support of the termination plan, the Washington State Legislature passed and the Governor signed into law a bill that permits the Supply System to pay a 15 percent interest rate for the loans. The money will be advanced on an as-needed basis from June to December, 1982. It will be repaid with interest between January and June, 1983.

## FINANCING

In the second quarter, Supply System operating receipts totaled \$78,947,000. Operating plant receipts were \$11,401,000 for the Hanford Generating Project and \$287,000 for the Packwood Lake

Hydroelectric Project. Net billing receipts from the participants in Nuclear Projects 1 and 2 were \$67,259,000.

The termination of Plants 4 and 5 will not change the maturity schedule for the Supply System's outstanding bonds.

Should Initiative 394 prove constitutional in the courts (see the Initiative 394 section), the required steps are being taken to enable the Supply System to take its proposed financing program to the polls on September 21, 1982. Meanwhile, normal construction and financing activities continue.

Financings to be done prior to July 1, 1982 will fund Projects 1, 2 and 3 through December, 1982. The Supply System plans to issue around \$500 million in bonds during February, with an additional issue planned prior to July 1, 1982.

## INITIATIVE 394

On November 3, 1981, Washington State voters passed Initiative 394 which requires public agencies, including the Supply System, to conduct an election before issuing new bonds for energy projects of more than 250 megawatts. Election provisions for Supply System plants do not take effect until July 1, 1982. Meanwhile, the Supply System is financing and continuing construction of Projects 1, 2 and 3 in accordance with their current schedules and cost estimates.

Three trustees of the Supply System - Seattle First National Bank, Continental Illinois National Bank & Trust Company of Chicago, and Morgan Guarantee Trust Company of New York - filed suit against 394 in December. They maintain that the Initiative violates provisions of the Washington State and the U.S. Constitution.

If the Initiative is held to be constitutional, the Supply System anticipates it will request on July 1, 1982 that an election be held in September, 1982, to authorize issuance of bonds for the three projects.

## CONSTRUCTION

Record progress achievements at WNP-1, 2 and 3 continued despite the turmoil surrounding the termination of Projects 4 and 5.

Plant construction progress records were set at WNP-3 in October and November when the site achieved construction rates of 2.1 percent—the highest monthly rates ever reached at the Satsop project. These figures represent a doubling of the project's production rate since March. The plant, which was less than 25 percent complete in January 1981, is now 43 percent complete.

During November, a major part of the WNP-3 electrical generator—a 195-ton rotor—was set in place on the operating deck in the turbine building. The generator will eventually produce a net output of 1,240 megawatts of electricity.

And, at WNP-3, efforts now are concentrated on the immense task of pulling 5.5 million feet of permanent plant electrical cable through a network of cable trays at the project. The beginning of cable-pulling operations started nearly four months ahead of schedule. WNP-3 also continues to achieve unprecedented safety records with over 2.5 million hours worked without an injury.

Construction progress at WNP-1 also reached its highest monthly rate ever at 2.3 percent in November. The project is now 53 percent complete, and four months ahead of its overall schedule.

In November, the Final Safety Analysis Report for WNP-1 was

delivered to the Nuclear Regulatory Commission (NRC) five weeks ahead of schedule. The NRC also conducted an audit of WNP-1 construction during November, reporting no quality-related problems.

Scaffolding work at Project 1 is now consolidated under one contractor, saving the Supply System \$15 million. A similar action at WNP-3 is saving \$2.5 million.

At WNP-2, a major milestone was achieved in December when the 690-ton turbine made its first electrically powered revolution. The turning gear is now automatically operated from the control room.

Also, mechanical work in the WNP-2 wet well will be completed in January in time for the reactor vessel to be filled and flushed as scheduled in April, 1982.

## LABOR

A labor stabilization agreement that prohibits strikes and lockouts was signed January 20 by all unions and contractors working on Projects 1 and 2 at Hanford. A similar agreement was reached last February at the Satsop project, and both agreements are expected to keep craftsmen on the job during wage negotiations.

## OPERATIONS

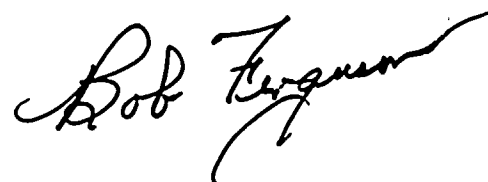
The Hanford Generating Plan generated its 50 billionth kilowatt hour on November 10 making the N-Reactor/HGP complex the second nuclear plant in the country to achieve this record. The Hanford Generating Plan delivered a total of 284,230,000 kWh for the quarter.

The Packwood Lake Hydroelectric Project netted a total of 13,016,625 kWh this quarter. About 980 hours of down time were scheduled for annual maintenance from October 3 through November 6.

## MANAGEMENT

Four outside members for the Supply System's Executive Board are now being recruited. The four vacancies occurred following the resignations of the initial four outside members who were appointed October 26, 1981. William Roberts, Vice President of Morgan Park, Inc., cited personal and business reasons for his resignation in November. The remaining three - C. Michael Berry, Charles F. Luce and Edward Carlson - resigned in mid-January when participants failed to approve the mothball plan for Projects 4 and 5. Their combined letter of resignation noted that the public perceived the Executive Board to have legal authority which in fact it did not have.

It should be noted that the Washington State Legislature is now keenly aware of the legal restraints on the Executive Board and is trying to better define its scope of responsibility.



Docket # 50-397  
Control # 8202/802x5  
Date \_\_\_\_\_ of Document  
REGULATORY DOCKET FILE

FINANCIAL  
SECTION

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WASHINGTON PUBLIC POWER  
**SUPPLY SYSTEM**  
**1981**  
**ANNUAL**  
**REPORT**

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# Balance Sheets

(\$ in thousands)

ASSETS	HANFORD PROJECT	PACKWOOD LAKE HYDRO- ELECTRIC PROJECT	NUCLEAR PROJECT NO. 1	NUCLEAR PROJECT NO. 2	NUCLEAR PROJECT NO. 3	NUCLEAR PROJECT NOS. 4/5	INTERNAL SERVICE FUND	COMBINED JUNE 30	
								1981	1980
<b>CURRENT ASSETS—OPERATING FUND</b>									
Cash and Investments .....	\$10,840	\$ 89	\$ 17,768	\$ 19,859			\$ 8,197	\$ 56,753	\$ 34,532
Accounts Receivable .....	90	211					640	941	738
Prepaid and Other .....	375	14					2,641	3,030	2,498
Due from Other Projects and Internal Service Fund .....	79	33	1,736						
Due from Other Funds .....	1,178	63	2,352	300				3,893	2,542
<b>TOTAL CURRENT ASSETS— OPERATING FUND .....</b>	<b>12,562</b>	<b>410</b>	<b>21,856</b>	<b>20,159</b>			<b>11,478</b>	<b>64,617</b>	<b>40,310</b>
<b>RESTRICTED ASSETS—NOTES B &amp; C</b>									
Special Funds (Primarily for Construction)									
Cash and Investments .....	3,177	203	262,990	164,374	\$ 178,628	\$ 127,919		737,291	647,270
Receivable from Joint Owners and Other Assets .....		59	479	124	19,129	5,471		25,262	15,960
Due from Other Projects and Internal Service Fund .....			251	1,133	1,182	2,045			
Due from Other Funds—Net .....		18			9,120	31,946		41,084	27,521
Debt Service Funds	3,177	280	263,720	165,631	208,059	167,381		803,637	690,751
Cash and Investments .....	7,228	740	108,750	51,383	144,258	535,982		848,341	555,128
<b>TOTAL RESTRICTED ASSETS .....</b>	<b>10,405</b>	<b>1,020</b>	<b>372,470</b>	<b>217,014</b>	<b>352,317</b>	<b>703,363</b>		<b>1,651,978</b>	<b>1,245,879</b>
<b>UTILITY PLANT AND EQUIPMENT— NOTE B</b>									
In Service .....	67,008	12,204		9,547			5,679	94,438	85,002
Improvements to U.S. Government Facilities .....	14,411							14,411	14,411
Less Allowance for Depreciation and Amortization .....	(46,674)	(4,357)		(604)			(940)	(52,575)	(49,163)
	34,745	7,847		8,943			4,739	56,274	50,250
Construction Work in Progress .....			1,165,590	1,566,404	910,774	1,731,310		5,374,078	3,919,439
Nuclear Fuel and Prepaid Enrichment Services .....			112,515	43,596	18,424	121,607		296,142	169,509
Less Amount Charged to Joint Owners ...					(260,179)	(80,133)		(340,312)	(221,665)
			1,278,105	1,610,000	669,019	1,772,784		5,329,908	3,867,283
<b>TOTAL UTILITY PLANT AND EQUIPMENT .....</b>	<b>34,745</b>	<b>7,847</b>	<b>1,278,105</b>	<b>1,618,943</b>	<b>669,019</b>	<b>1,772,784</b>	<b>4,739</b>	<b>5,386,182</b>	<b>3,917,533</b>
<b>OTHER ASSETS AND DEFERRED CHARGES</b>									
Unbilled Reimbursable Costs .....	1,412	3,031						4,443	4,827
Preliminary Survey and Investigation Costs .....									10,550
Unamortized Debt Expense .....	156	29	2,402	1,986	1,344	5,137		11,054	7,907
Other .....							371	371	
<b>TOTAL OTHER ASSETS AND DEFERRED CHARGES .....</b>	<b>1,568</b>	<b>3,060</b>	<b>2,402</b>	<b>1,986</b>	<b>1,344</b>	<b>5,137</b>	<b>371</b>	<b>15,868</b>	<b>23,284</b>
	<b>\$59,280</b>	<b>\$12,337</b>	<b>\$1,674,833</b>	<b>\$1,858,102</b>	<b>\$1,022,680</b>	<b>\$2,481,284</b>	<b>\$16,588</b>	<b>\$7,118,645</b>	<b>\$5,227,006</b>

LIABILITIES	HANFORD PROJECT	PACKWOOD LAKE HYDRO- ELECTRIC PROJECT	NUCLEAR PROJECT NO. 1	NUCLEAR PROJECT NO. 2	NUCLEAR PROJECT NO. 3	NUCLEAR PROJECT NOS. 4/5	INTERNAL SERVICE FUND	COMBINED JUNE 30	
								1981	1980
<b>CURRENT LIABILITIES—OPERATING FUND</b>									
Accounts Payable and Accrued Expenses .....	\$ 7,326	\$ 295	\$ 18,856	\$ 17,159			\$11,299	\$ 54,935	\$ 35,522
Due to Other Projects .....	1,736						400		390
<b>TOTAL CURRENT LIABILITIES—OPERATING FUND .....</b>	<b>9,062</b>	<b>295</b>	<b>18,856</b>	<b>17,159</b>			<b>11,699</b>	<b>54,935</b>	<b>35,912</b>
<b>LIABILITIES—PAYABLE FROM RESTRICTED ASSETS—NOTES B &amp; C</b>									
Special Funds (Primarily for Construction)									
Accounts Payable and Accrued Expenses .....			65,311	35,413	\$ 62,110	\$ 105,798		268,632	172,325
Amounts Withheld from Contractors ....			38,144	32,015	28,157	49,918		148,234	116,221
Due to Other Projects and Internal Service Fund .....			108	61					
Due to Other Funds—Net .....	677			124				801	1,508
	677		103,563	67,613	90,267	155,716		417,667	290,054
<b>Debt Service Funds</b>									
Accrued Bond Interest Payable .....	489	144	48,598		31,641	96,909		177,781	106,074
Due to Other Funds—Net .....	501	81	2,352	176	9,120	31,946		44,176	28,555
	990	225	50,950	176	40,761	128,855		221,957	134,629
<b>TOTAL LIABILITIES—PAYABLE FROM RESTRICTED ASSETS .....</b>	<b>1,667</b>	<b>225</b>	<b>154,513</b>	<b>67,789</b>	<b>131,028</b>	<b>284,571</b>		<b>639,624</b>	<b>424,683</b>
<b>LONG-TERM DEBT—NOTE C</b>									
Revenue Bonds Payable .....	46,045	11,809	1,455,000	1,459,000	905,000	2,250,000		6,126,854	4,568,783
Less Unamortized Discount on Bonds—Net	(856)	(109)	(24,344)	(13,143)	(13,348)	(53,287)		(105,087)	(42,103)
<b>TOTAL LONG-TERM DEBT .....</b>	<b>45,189</b>	<b>11,700</b>	<b>1,430,656</b>	<b>1,445,857</b>	<b>891,652</b>	<b>2,196,713</b>		<b>6,021,767</b>	<b>4,526,680</b>
<b>OTHER LIABILITIES AND DEFERRED CREDITS</b>									
Unearned Revenue .....			70,808	284,049				354,857	192,530
Deferred Gain on Revenue Bonds .....	1,962	117						2,079	2,212
Due to Other Projects .....							4,154		
Advances and Other .....	1,400			43,248			735	45,383	44,989
<b>TOTAL OTHER LIABILITIES AND DEFERRED CREDITS .....</b>	<b>3,362</b>	<b>117</b>	<b>70,808</b>	<b>327,297</b>			<b>4,889</b>	<b>402,319</b>	<b>239,731</b>
<b>COMMITMENTS AND CONTINGENCIES—NOTE D</b>									
	\$59,280	\$12,337	\$1,674,833	\$1,858,102	\$1,022,680	\$2,481,284	\$16,588	\$7,118,645	\$5,227,006

See accompanying notes to financial statements.

# Statements of Operations

(\$ in thousands)

## Hanford and Packwood Projects

	HANFORD PROJECT	PACKWOOD PROJECT	COMBINED YEAR ENDED JUNE 30	
			1981	1980
OPERATING REVENUES .....	\$12,471	\$ 861	\$13,332	\$38,441
OPERATING EXPENSES:				
Reactor Availability .....	6,700		6,700	32,063
Depreciation and Amortization .....	2,546	256	2,802	2,802
Power Production and Transmission .....	1,107	138	1,245	1,327
Maintenance .....	1,424	121	1,545	966
Administrative and General .....	488	52	540	614
	<u>12,265</u>	<u>567</u>	<u>12,832</u>	<u>37,772</u>
Net Operating Revenue .....	<u>206</u>	<u>294</u>	<u>500</u>	<u>669</u>
OTHER INCOME AND EXPENSE:				
Interest and Other Income .....	1,683	190	1,873	1,518
Interest Expense and Discount Amortization ..	<u>(1,889)</u>	<u>(484)</u>	<u>(2,373)</u>	<u>(2,187)</u>
	<u>(206)</u>	<u>(294)</u>	<u>(500)</u>	<u>(669)</u>
NET REVENUE .....	<u>\$ -0-</u>	<u>\$ -0-</u>	<u>\$ -0-</u>	<u>\$ -0-</u>

# Statements of Changes in Financial Position

(\$ in thousands)

## Hanford and Packwood Projects

Hanford and Packwood Projects	HANFORD PROJECT	PACKWOOD PROJECT	COMBINED YEAR ENDED JUNE 30	
			1981	1980
SOURCE OF FUNDS:				
Operations				
Net Revenue .....	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Items Not Affecting Working Capital:				
Depreciation and Amortization.....	2,613	260	2,873	2,873
Decrease (Increase) in Costs Reimbursable from Power Purchasers .....	414	(26)	388	251
Less Gain on Redemption of Revenue Bonds	(129)	(93)	(222)	(194)
Total from Operations.....	2,898	141	3,039	2,930
Contributions for Improvements .....	86	1	87	149
Advances from Participants for Working Capital	-0-		-0-	500
TOTAL SOURCE OF FUNDS .....	<u>\$2,984</u>	<u>\$142</u>	<u>\$3,126</u>	<u>\$3,579</u>
APPLICATION OF FUNDS:				
Net Improvements .....	\$ 86		\$ 86	\$ 149
Cost of Revenue Bonds Purchased and Retired	2,810	\$127	2,937	2,847
Increase in Restricted Assets .....	88	15	103	83
	<u>2,984</u>	<u>142</u>	<u>3,126</u>	<u>3,079</u>
Changes in Working Capital				
Cash and Investments .....	1,325	(79)	1,246	3,552
Receivables and Other .....	(359)	42	(317)	480
Payables and Other .....	(966)	37	(929)	(3,532)
Net Increase in Working Capital .....	-0-	-0-	-0-	500
TOTAL APPLICATION OF FUNDS .....	<u>\$2,984</u>	<u>\$142</u>	<u>\$3,126</u>	<u>\$3,579</u>

See accompanying notes to financial statements.



# Statements of Source and Use of Funds

(\$ in thousands)

Nuclear Projects Nos. 1 through 5	NUCLEAR PROJECT NO. 1	NUCLEAR PROJECT NO. 2	NUCLEAR PROJECT NO. 3	NUCLEAR PROJECTS NOS. 4 & 5	COMBINED YEAR ENDED JUNE 30	
					1981	1980
<b>SOURCE OF FUNDS:</b>						
Collected Under Net Billing .....	\$ 91,212	\$ 90,232			\$ 181,444	\$ 86,918
Bond Proceeds .....	394,104	193,875	\$217,289	\$735,253	1,540,521	738,890
Interest Income .....	34,866	34,536	30,345	67,387	167,134	132,343
Charged to Joint Owners .....			88,130	30,517	118,647	77,255
Net Decrease in Restricted Funds .....			13,383		13,383	399,088
Decrease in Amounts Due Participants .....		1,288			1,288	
Revaluation of Investments .....						992
Other .....	2,525				2,525	3,590
<b>TOTAL SOURCE OF FUNDS</b>	<b>\$522,707</b>	<b>\$319,931</b>	<b>\$349,147</b>	<b>\$833,157</b>	<b>\$2,024,942</b>	<b>\$1,439,076</b>
<b>USE OF FUNDS:</b>						
Construction Costs .....	\$241,507	\$204,422	\$295,100	\$491,367	\$1,232,396	\$1,063,671
Interest Expense .....	90,189	95,041	53,284	159,264	397,778	280,553
Nuclear Fuel .....	51,405	3,431	98	55,783	110,717	46,979
Financing Expense .....	963	635	492	1,967	4,057	1,703
Bonds Redeemed .....		6,500		27,400	33,900	32,240
Revaluation of Investments .....	1,311	2,604	173	6,892	10,980	
Net Increase in Restricted Funds .....	111,403	7,048		90,484	208,935	2,853
Increase in Amounts Due Participants .....	18,282				18,282	7,494
Increase in Operating Fund .....	2,610				2,610	
Transfers to the Hanford Project .....	5,037				5,037	
Preliminary Survey and Investigation Costs (Energy and Uranium Programs) .....						2,635
Other .....		250			250	948
<b>TOTAL USE OF FUNDS</b>	<b>\$522,707</b>	<b>\$319,931</b>	<b>\$349,147</b>	<b>\$833,157</b>	<b>\$2,024,942</b>	<b>\$1,439,076</b>

## **Note A—Organization**

The Washington Public Power Supply System was organized in 1957 as a municipal corporation and joint operating agency of the State of Washington. Its membership consists of 19 public utility districts and 4 municipalities that own and operate electric systems within the State of Washington. It is empowered to acquire, construct and operate facilities for the generation and transmission of electric power and energy.

The Supply System has constructed and is now operating the Packwood Lake Hydroelectric Project and the Hanford Generating Project and has five nuclear electric generating plants under construction (Nuclear Projects Nos. 1, 2, 3, 4 and 5). In addition, the Supply System has an Internal Service Fund (formerly General Fund) to account for the central procurement of certain common goods and services for the projects on a cost-reimbursement basis.

Nuclear Projects Nos. 1, 2, and 4 are owned by the Supply System.

Nuclear Project No. 3 is jointly owned by the Supply System (70%) and four investor-owned utilities (30%). Nuclear Project No. 5 is also jointly owned by the Supply System (90%) and one investor-owned utility (10%).

Each joint owner is responsible for its own financing costs, providing its share of the costs of construction and operation and will be entitled to its ownership share of the projects' capability. Budgeted construction costs of the projects are disclosed elsewhere in this annual report.

In accordance with the covenants of the bond resolutions, the Supply System is authorized to recover its cost of operation and debt service over the life of the plant or bonds outstanding. Accordingly, the Supply System realizes no income or loss and equity is not accumulated.

## **Note B—Summary of Significant Accounting Policies**

The Supply System has adopted accounting policies and practices that are in accordance with generally accepted accounting principles applicable to the utility industry. Separate books of account are maintained for each project except for Nuclear Projects Nos. 4 and 5, which are accounted for as a single entity.

### ***Principles of Combination***

The individual and combined financial statements have been prepared to facilitate an understanding of the financial position and results of operations of each project, the Internal Service Fund and, because of common management control, the Supply System as a whole. All significant inter-project due to and from balances have been eliminated from the combined columns.

### ***Restricted Funds***

In accordance with project bond resolutions and certain related agreements, separate restricted funds are required to be established for each of the projects. The assets held in these funds are restricted for specific uses including construction, debt service and other special reserve require-

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# **Notes to Financial Statements**

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## Notes to Financial Statements

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(Continued)

ments. Restricted funds currently include the following:

### Special Funds

- Construction
- Construction Revolving or Trust
- Construction Fuel
- Reserve and Contingency

### Debt Service Funds

- Bond Fund Principal
- Bond Fund Retirement
- Bond Fund Reserve
- Bond Fund Interest
- Construction Interest

Cash and investments in Special Funds of projects under construction include cash retainage amounts held in escrow for contractors of \$135,406,998 and \$104,790,195 at June 30, 1981 and 1980.

### *Current Assets and Current Liabilities*

Assets and liabilities shown as current in the accompanying balance sheets exclude current maturities on revenue bonds and accrued interest thereon because Debt Service Funds are provided for their payment.

### *Investments*

Investments include time certificates of deposit, repurchase agreements (secured by U.S. Government securities) and United States Government and Government Agencies securities. Investments are stated at cost or amortized cost as appropriate and include accrued interest.

Investments held in the Bond Fund Reserve Accounts (included in Debt Service Funds) and Reserve and Contingency Funds

(included in Special Funds) are stated at the lower of amortized cost or market as provided by their respective bond resolutions.

The market value of investments held in Debt Service and Special Funds and in Current Assets (Operating Fund) approximate the carrying value as of June 30, 1981 and 1980.

### *Income Earned on Investments*

Income earned on investments includes gains and losses from the sale of investments. Income earned on investments held by projects under construction is recorded as a reduction in construction costs. Income earned on investments held by operating projects accrues to the applicable project's Operating Fund.

### *Capitalization of Construction Costs and Overhead Expenses*

During the construction phase of a project, the Supply System will capitalize all costs of the project including general, administrative, interest, certain depreciation and other overhead expenses. The overhead expenses of the Supply System are allocated from the Internal Service Fund to the various projects primarily on the basis of direct labor cost or direct usage.

The preliminary survey and investigation costs carried as a deferred charge in Nuclear Projects Nos. 4 and 5 at June 30, 1980, have been included in Construction Work in Progress at June 30, 1981, as a result of the discontinuance of the Energy and Fuel Development Programs. Such costs will be amortized over the period of plant operations.

### ***Utility Plant and Equipment—At Cost***

Provisions for depreciation are computed by the straight-line method based on the estimated useful lives of the projects, which approximate the term of the related revenue bonds.

Provisions for amortization of improvements to U.S. Government-owned facilities are being amortized over the period covered by the contract for dual-purpose operation of the Department of Energy's New Production Reactor.

### ***Contributions Used for Purchase of Equipment—Packwood and Hanford Projects***

Monies provided by participants to acquire equipment since completion of the Project are recorded and accounted for as a reduction of the carrying value of such equipment included in Utility Plant.

### ***Debt Discount, Premium and Expenses***

Debt discount or premium and expenses relating to the issuance of revenue bonds are amortized by the straight-line method over the terms of the respective issues.

### ***Revenues***

Member purchasers of power are contractually obligated to pay project annual costs (excluding depreciation and amortization) and debt service. The Supply System records these reimbursable annual costs as operating revenues for the Hanford and Packwood Projects. In addition to recovery of such project annual costs, the Supply System records as revenue each year an amount equal to the provisions for depreciation and amortization, less the recorded

gains on bond redemption. This accounting policy is used in order to spread such revenues equally over the full term of the bonds.

Cumulative annual charges for depreciation and amortization, less payments by member purchasers for bond redemption, are reflected as Unbilled Reimbursable Costs in the accompanying balance sheets.

For Projects Nos. 1 and 2, payments received from member purchasers for bond redemption and interest are shown as Unearned Revenue in the accompanying balance sheets.

### ***Retirement Plan***

The Supply System participates in the Washington State Public Employees' Retirement System that provides retirement benefits to eligible employees. Cost of the plan to the Supply System is determined by the Retirement System's Board. The actuarially computed value of pension benefits exceeds the fund assets for the Retirement System. However, because the Retirement System is a multi-employer system, the amount of such excess, if any, that relates to the Supply System is not available. The Supply System's required contributions were \$3,829,798 in 1981 and \$2,907,523 in 1980.

### ***Note C—Long-Term Debt***

Except for Nuclear Projects Nos. 4 and 5, which are being financed together as one utility system, all Supply System projects are financed separately. The revenue bonds

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## **Notes to Financial Statements**

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## Notes to Financial Statements

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issued with respect to each project are payable solely from the revenues of that project.

Outstanding revenue bonds of the various projects as of June 30, 1981 and 1980, are presented on pages 14 through 19.

### *Security—Agreements and Contracts*

The United States of America, Department of Energy (DOE), acting by and through the Bonneville Power Administration (BPA) has purchased the entire capability of the Hanford Project and the Supply System's ownership share of the projects' capability in Nuclear Projects Nos. 1, 2 and 3 from its statutory preference customers and, in addition, with respect to Project No. 1, five of its private utility customers. Each of these customers has, in turn, purchased such capability from the Supply System, all under the Net Billing and Exchange Agreements. BPA is obligated to pay the participants, and the participants are obligated to pay the Supply System its pro rata share of the total annual costs of the projects including debt service on the bonds, whether or not the projects are completed, operable or operating and notwithstanding the suspension, reduction or curtailment of the projects' output.

The Supply System's Packwood Project revenue bonds are secured by Power Sales Contracts between the Supply System and each of its 12 member purchasers. Pursuant to these agreements, member purchasers pay for their percentage allocation of power specified therein at rates sufficient to

operate and maintain the project, and pay debt service on the bonds. Such payments continue until the bonds are paid or provision is made for their payment or retirement.

As security for the Generating Facilities revenue bonds for Nuclear Projects Nos. 4 and 5, the Supply System has entered into Participants' Agreements with 88 utilities operating principally in the western United States. Pursuant to the Participants' Agreements, the participants are obligated to pay their respective share of project annual costs, including debt service on the bonds, whether or not the projects are completed, operable or operating and notwithstanding the suspension, reduction or curtailment of the projects' output. Billings to the participants for Nuclear Projects Nos. 4 and 5 will begin on July 1, 1988, or the date of commercial operation for the respective projects, whichever is earlier. See Note D for a discussion of recent financing difficulties of Nuclear Projects Nos. 4 and 5 and contemplated amendments to the Participants Agreements.

### *Advances from Members and Participants and Unearned Revenue*

As of September 1, 1977, for Nuclear Project No. 2 and July 1, 1980, for Nuclear Project No. 1, project participants were required to fund debt service, working capital and reserve requirements as provided in the Net Billing Agreements.

The debt service portion of this funding has been classified as Unearned Revenue, a deferred credit, which will be recognized as earned revenue during the operating period of the plant.

## **Note D—Commitments and Contingencies**

### ***Contracts***

The Supply System has entered into substantial contracts covering a portion of total estimated costs for certain major equipment and material, and for services relating to financing, design and the supply of nuclear fuel for the projects under construction.

### ***Hanford Project and its Relationship to Nuclear Project No. 1***

The Department of Energy owns and operates a nuclear reactor, the New Production Reactor. This reactor provides by-product steam to the Hanford Project. Revenues and costs of the project were significantly reduced in 1981 because it operated for only a short period as a result of labor difficulties at the New Production Reactor. The Supply System's current agreement with DOE provides for the continuation of this dual-purpose operation of the reactor through June 1983.

It was initially intended that Nuclear Project No. 1 would be constructed adjacent to the Hanford Project and would provide the energy source to operate the project when DOE ceased operation of the New Production Reactor. Because studies indicated that generating resources in the Pacific Northwest would be inadequate in the late 1970's and early 1980's, the Supply System determined that the Hanford Project should be kept available for power production. Therefore, the Nuclear Project No. 1 Net Billing, Exchange and Project Agreements were amended to provide for the separation of Nuclear Project No. 1 from the Hanford Project and to provide that Hanford Project costs, to the extent not otherwise provided

for, will be treated as Nuclear Project No. 1 costs having a first claim on the revenues of that project.

The amended agreements provide for the payment by Nuclear Project No. 1 participants of all debt service costs of the Hanford Project, commencing July 1, 1980, regardless of continued operation of the reactor. If the plant ceases operations, revenues to the Hanford Project arising from the aforementioned payments will nevertheless be recorded each year thereafter in amounts that will result in full realization of the carrying value of the plant.

The U.S. Government has an option to acquire ownership of the Hanford Project upon obtaining Congressional approval. If the Government exercises its option, it must assume all rights and obligations of the project, including the obligation to pay all revenue bonds.

### ***Litigation***

The Supply System is involved in various legal actions as both a plaintiff and a defendant and in certain claims arising in the normal course of business for a large construction program. Although some suits and claims are significant in amount, final disposition is not determinable. In the opinion of management and legal counsel, the outcome of any such litigation or claims will not have a material effect on the financial positions of the projects. The estimated cost of the projects may either be increased or decreased as a result of the outcome of these matters.

### ***Initiative 394***

In July 1981, the Secretary of State of Washington certified that sufficient signa-

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# **Notes to Financial Statements**

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## Notes to Financial Statements

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(Continued)

tures had been obtained to qualify Initiative Measure No. 394 for submission to voters of the State of Washington at the general election to be held November 3, 1981. If enacted into law by a majority of such voters, the Supply System, after July 1, 1982, would be required to obtain the approval of the voters of its 23 member governmental entities in order to issue bonds to finance the cost of construction of each of its projects. In the event voter approval for the issuance of bonds with respect to any of its projects was not obtained and alternative sources or methods to finance completion of construction of any such projects were not available, the Supply System may be obligated to terminate such projects. A termination of any of the Supply System's projects could have adverse effects on the projects of the Supply System not terminated. However, such termination would not affect the obligation of Bonneville or the participants under the billing agreements (for Projects Nos. 1, 2 and 3) or the Participants Agreements (for Projects 4 and 5) as described in Note C Revenue Bonds.

### *Recent Financing Difficulties—Projects Nos. 4 and 5*

Because of uncertainty as to the ability to continue to finance remaining construction costs of Nuclear Projects Nos. 4 and 5, the Supply System has implemented a slowdown of construction work on the two projects. Although the construction slowdown has reduced the projects' cash flow requirements, additional financing will be required in mid-October 1981.

As a result of this need for financing, the Supply System and the Participants purchasing the capability of the projects (see Note C) are considering specific actions which may allow for continued financing of the projects (see Note E).

The specific actions being considered by the Participants—including certain amendments to the Participants' Agreements—may allow for continued financing of the projects (in a slowdown mode) beyond October 1981 and until March 1, 1982. If the Participants' Agreements are not amended to provide for a more secure financial basis by March 1, 1982, and the Supply System is unable to secure additional financing, one or both of the projects would likely be terminated.

If termination of Projects Nos. 4 and 5 occurs, the Participants in these projects would be obligated to pay the annual costs, including the debt service on bonds issued with respect to such projects and other costs of termination, beginning one year after the date of termination. Although there can be no reliable assessment at this time of the costs of termination of such projects, preliminary estimates indicate that the Supply System's Ownership Share of such costs could range from \$475,000,000 to \$760,000,000. Until payments from the participants begin, the Supply System may have insufficient funds to pay such termination costs. However, debt service on Projects Nos. 4 and 5 bonds is currently funded to March 1, 1983.

A termination of Projects Nos. 4 and 5 would cause the cost of certain services and facilities which are to be shared with Projects Nos. 1 and 3, respectively, to be

borne in whole or in part by Projects Nos. 1 and 3. The Supply System's preliminary estimates indicate that such costs could increase the direct construction costs to be incurred for Project No. 1 and the Supply System's Ownership Share of Project No. 3 in the order of \$450,000,000 and \$350,000,000, respectively. No assurance can be given that such costs will be within these estimates. In addition to these prospective costs of shared services and facilities, there may be claims that Projects Nos. 1 and 3 should reimburse Projects Nos. 4 and 5 for all or a portion of the costs of such services and facilities already paid by Projects Nos. 4 and 5. These costs in the approximate amount of \$181,000,000 and \$224,000,000 for Projects Nos. 4 and 5, respectively, could increase the costs of Projects Nos. 1 and 3 if such claims were allowed.

In the event of an insufficiency of funds available to pay creditors with respect to services, work or materials provided with respect to the construction of Projects Nos. 4 and 5, such creditors may, through legal process, seek to reach funds held by Projects Nos. 1, 2, 3, Hanford or Packwood, or the revenues pledged thereto. In the opinion of Bond Counsel and Special Counsel to the Supply System, the respective revenues and the funds held by such projects are not subject to claims of such creditors and no liens thereon are available to such creditors, except as any such creditors may obtain rights through a valid exercise of the sovereign police powers of the State of Washington or of the constitutional powers of the United States of America, or by a voluntary bankruptcy of the Supply System.

#### **Note E—Subsequent Events**

In order to meet their cash flow needs, Nuclear Projects Nos. 4 and 5 sold nuclear fuel and related enrichment contract rights to Nuclear Project No. 1 on August 14, 1981. The sales price was approximately \$61 million, which was \$55 million dollars less than the carrying value of these assets.

The Supply System believes that the terms of this transaction are not less favorable than Projects Nos. 4 and 5 could have obtained from an unrelated party.

On September 25, 1981, the Supply System began implementing the steps required to essentially halt construction and keep Projects Nos. 4 and 5 in an inactive preservation mode for approximately two years. This period will allow for certain power planning studies and actions required under the Regional Power Act to ascertain the need for these projects in the region.

The Supply System and the Participants purchasing the capability of the projects are considering specific actions for financing the continuing costs and debt service during this two-year period. If the Supply System were unable to secure additional financing, both projects would likely be terminated.

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## **Notes to Financial Statements**

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# Outstanding Long-Term Debt

(\$ in thousands)

Project	Series	Date of Sale	Effective Interest Rate	Offering Prices	Coupon Rate	Serial or Term Maturities	June 30	
							1981	1980
<b>Hanford Project</b>								
Revenue Bonds (\$2,915,000 and \$2,810,000 due within one year at June 30, 1981 and 1980 respectively)	1963	5-8-63	3.26%	(A) 98	2.90—3.10% 3.25	9-1-80/1986 9-1-1996	\$ 18,460 27,585	\$ 21,270 27,585
							<u>\$ 46,045</u>	<u>\$ 48,855</u>
<b>Packwood Lake Hydroelectric Project</b>								
(\$145,000 and \$140,000 due within one year at June 30, 1981 and 1980 respectively)								
Revenue Bonds	1962	3-20-62	3.66	99.425	3.625	3-1-2012	\$ 8,959	\$ 9,153
Revenue Bonds	1965	11-4-65	3.76	100.5	3.75	3-1-2012	2,850	2,875
							<u>\$ 11,809</u>	<u>\$ 12,028</u>
<b>Nuclear Project No. 1</b>								
Revenue Bonds (\$1,000,000 due July 1, 1981)	1975	9-18-75	7.73	(A) 100	5.75—7.40 7.70	7-1-81/2000 7-1-2010	\$ 42,000 58,300	\$ 42,000 58,300
				100	7.75	7-1-2017	74,700	74,700
							<u>175,000</u>	<u>175,000</u>
Revenue Bonds (\$1,215,000 due July 1, 1981)	1976A	2-4-76	6.84	(A) 100	6.00—6.25 6.90	7-1-81/1998 7-1-2010	37,020 66,485	37,020 66,485
				100	7.00	7-1-2017	76,495	76,495
							<u>180,000</u>	<u>180,000</u>
Revenue Bonds (\$1,480,000 due July 1, 1981)	1976B	8-31-76	6.37	(A) 100	5.00—5.90 6.50	7-1-81/1998 7-1-2010	41,825 66,940	41,825 66,940
				99.50	6.50	7-1-2017	71,235	71,235
							<u>180,000</u>	<u>180,000</u>
Revenue Bonds	1978A	3-21-78	5.69	(A) 100	5.00—5.50 5.80	7-1-84/2002 7-1-2010	64,270 50,920	64,270 50,920
				100	5.875	7-1-2017	64,810	64,810
							<u>180,000</u>	<u>180,000</u>

Project	Series	Date of Sale	Effective Interest Rate	Offering Prices	Coupon Rate	Serial or Term Maturities	June 30	
							1981	1980
Revenue Bonds	1978B	12-5-78	6.61 %	(A)	5.50—6.00%	7-1-84/1998	\$ 38,355	\$ 38,355
				100	6.35	7-1-2003	22,305	22,305
				100	6.60	7-1-2009	38,190	38,190
				99.50	6.80	7-1-2017	81,150	81,150
							<u>180,000</u>	<u>180,000</u>
Revenue Bonds	1979	6-19-79	6.64	(A)	6.00	7-1-84/1998	29,385	29,385
				100	6.40	7-1-2003	18,560	18,560
				100	6.70	7-1-2009	32,370	32,370
				100	6.80	7-1-2017	69,685	69,685
							<u>150,000</u>	<u>150,000</u>
Revenue Bonds	1980A	8-5-80	8.87	(A)	7.00—10.00	7-1-86/1995	55,500	
				100	9.00	7-1-2002	37,000	
				100	9.20	7-1-2005	16,950	
				99.00	9.25	7-1-2013	70,550	
				(A)	7.75	7-1-2017	30,000	
							<u>210,000</u>	
Revenue Bonds	1981A	4-13-81	11.30	(A)	11.30—13.00	7-1-96/2003	28,580	
				100	11.625	7-1-2012	91,420	
							<u>120,000</u>	
Revenue Bonds	1981B	4-13-81	11.30	(A)	10.00	7-1-2016	<u>40,000</u>	
Revenue Bonds	1981C	4-13-81	10.29	100	10.25	7-1-2015	<u>40,000</u>	
							<u>\$1,455,000</u>	<u>\$1,045,000</u>

# Outstanding Long-Term Debt (continued)

(\$ in thousands)

Project	Series	Date of Sale	Effective Interest Rate	Offering Prices	Coupon Rate	Serial or Term Maturities	June 30	
							1981	1980
Nuclear Project No. 2 Revenue Bonds (\$3,000,000 due July 1, 1981 and 1980)	1973	6-26-73	5.66%	(A)	5.00—5.10%	7-1-81/2010	\$ 13,600	\$ 16,600
				100	5.70	7-1-2012	124,400	124,400
							<u>138,000</u>	<u>141,000</u>
Revenue Bonds (\$2,500,000 due July 1, 1981 and 1980)	1974	7-23-74	7.21	(A)	6.50—6.90	7-1-81/1994	18,000	20,500
				100	7.00	7-1-1999	15,000	15,000
				100	7.375	7-1-2012	37,000	37,000
							<u>70,000</u>	<u>72,500</u>
Revenue Bonds (\$1,000,000 due July 1, 1981 and 1980)	1974A	11-26-74	7.67	(A)	7.20	7-1-81/1994	28,000	29,000
				100	7.40	7-1-1999	15,000	15,000
				100	7.75	7-1-2012	78,000	78,000
							<u>121,000</u>	<u>122,000</u>
Revenue Bonds	1975A	3-6-75	6.71	(A)	6.60	7-1-82/1994	32,000	32,000
				100	6.60	7-1-1999	15,000	15,000
				100	6.875	7-1-2012	78,000	78,000
							<u>125,000</u>	<u>125,000</u>
Revenue Bonds	1976	6-3-76	6.63	(A)	5.40—6.25	7-1-82/1998	27,840	27,840
				99.25	6.625	7-1-2006	42,300	42,300
				100	6.75	7-1-2012	49,860	49,860
							<u>120,000</u>	<u>120,000</u>
Revenue Bonds	1976A	11-18-76	5.87	(A)	5.50—5.875	7-1-82/2002	94,195	94,195
				100	6.00	7-1-2007	44,815	44,815
				99.50	6.00	7-1-2012	60,990	60,990
							<u>200,000</u>	<u>200,000</u>
Revenue Bonds	1978	7-11-78	6.71	(A)	5.50—6.60	7-1-82/2000	68,250	68,250
				100	6.80	7-1-2006	45,520	45,520
				100	6.875	7-1-2012	66,230	66,230
							<u>180,000</u>	<u>180,000</u>
Revenue Bonds	1979	3-13-79	6.49	(A)	5.50—6.00	7-1-82/1999	62,905	62,905
				100	6.40	7-1-2004	33,490	33,490
				100	6.75	7-1-2012	83,605	83,605
							<u>180,000</u>	<u>180,000</u>

Project	Series	Date of Sale	Effective Interest Rate	Offering Prices	Coupon Rate	Serial or Term Maturities	June 30	
							1981	1980
Revenue Bonds	1979A	10-17-79	7.69 %	(A) 100 100	6.40—7.30% 7.60 7.75	7-1-82/1999 7-1-2004 7-1-2012	\$ 44,950 23,050 57,000 <u>125,000</u>	\$ 44,950 23,050 57,000 <u>125,000</u>
Revenue Bonds	1980	10-21-80	9.36	(A) 100 100 (A) (A)	8.90—10.90 9.30 9.60 9.25 8.25	7-1-86/1997 7-1-2001 7-1-2006 7-1-2001 7-1-2012	35,230 23,735 46,070 75,045 19,920 <u>200,000</u> <u>\$1,459,000</u>	<u>\$1,265,500</u>
Nuclear Project No. 3 Revenue Bonds	1975	12-3-75	7.87	(A) 100 100	5.40—7.25 7.875 7.875	7-1-83/1998 7-1-2010 7-1-2018	\$ 26,145 52,695 71,160 <u>150,000</u>	\$ 26,145 52,695 71,160 <u>150,000</u>
Revenue Bonds	1976	4-13-76	6.48	(A) 99.625 100	5.50—6.00 6.50 6.60	7-1-83/1998 7-1-2010 7-1-2018	19,605 35,100 45,295 <u>100,000</u>	19,605 35,100 45,295 <u>100,000</u>
Revenue Bonds	1977	9-12-77	5.71	(A) 99.50 99.50	5.00—5.30 5.70 5.80	7-1-85/2000 7-1-2009 7-1-2018	59,305 63,535 107,160 <u>230,000</u>	59,305 63,535 107,160 <u>230,000</u>
Revenue Bonds	1978	9-12-78	6.27	(A) 100 99	5.90—6.00 6.375 6.40	7-1-85/2004 7-1-2010 7-1-2018	66,385 42,985 90,630 <u>200,000</u>	66,385 42,985 90,630 <u>200,000</u>

# Outstanding Long-Term Debt (continued)

Project	Series	Date of Sale	Effective Interest Rate	Offering Prices	Coupon Rate	Serial or Term Maturities	June 30	
							1981	1980
Revenue Bonds	1981A	2-11-81	10.80 %	(A) 100 99.50 88.50 88.50	9.50—12.50% 11.125 11.125 9.75 9.75	7-1-87/2001 7-1-2005 7-1-2010 7-1-2017 7-1-2018	\$ 64,375 40,535 80,310 18,950 20,830 <u>225,000</u> <u>\$905,000</u>	<u>\$680,000</u>
Nuclear Projects Nos. 4 and 5 Revenue Bonds (\$27,400,000 due within one year at June 30, 1980)	1975	7-24-75	7.04	(A)	6.75—6.90	6-1-80/1981		\$ 27,400
Revenue Bonds	1977A	2-3-77	5.93	(A) 100 100	5.50—5.75 5.90 6.00	7-1-89/2001 7-1-2008 7-1-2015	\$ 42,105 40,605 62,290 <u>145,000</u>	42,105 40,605 62,290 <u>145,000</u>
Revenue Bonds	1977B	5-24-77	6.32	(A) 100	6.00—6.20 6.40	7-1-89/2001 7-1-2012	33,485 56,515 <u>90,000</u>	33,485 56,515 <u>90,000</u>
Revenue Bonds	1977C	9-13-77	5.96	(A) 100	5.20—5.70 6.00	7-1-89/2001 7-1-2018	20,480 109,520 <u>130,000</u>	20,480 109,520 <u>130,000</u>
Revenue Bonds	1978A	1-31-78	6.07	(A) 99.75 100	5.50—5.75 6.00 6.125	7-1-89/2000 7-1-2010 7-1-2018	27,700 43,900 78,400 <u>150,000</u>	27,700 43,900 78,400 <u>150,000</u>
Revenue Bonds	1978B	5-23-78	6.86	(A) 100 100	6.00—6.60 6.80 6.90	7-1-89/2003 7-1-2010 7-1-2018	37,785 32,960 79,255 <u>150,000</u>	37,785 32,960 79,255 <u>150,000</u>
Revenue Bonds	1978C	10-12-78	6.81	(A) 99.50 100	6.00—6.50 6.75 7.00	7-1-89/2003 7-1-2010 7-1-2018	45,225 42,970 81,805 <u>170,000</u>	45,225 42,970 81,805 <u>170,000</u>
Revenue Bonds	1979A	2-14-79	7.16	(A) 100 100	6.30—6.90 7.125 7.25	7-1-89/2003 7-1-2010 7-1-2018	47,515 43,140 84,345 <u>175,000</u>	47,515 43,140 84,345 <u>175,000</u>

Project	Series	Date of Sale	Effective Interest Rate	Offering Prices	Coupon Rate	Serial or Term Maturities	June 30	
							1981	1980
Revenue Bonds	1979B	8-28-79	7.69 %	(A)	7.00—7.10%	7-1-89/1999	\$ 25,505	\$ 25,505
				100	7.40	7-1-2003	14,600	14,600
				100	7.60	7-1-2010	37,425	37,425
				99	7.625	7-1-2018	72,470	72,470
							<u>150,000</u>	<u>150,000</u>
Revenue Bonds	1979C	12-11-79	8.30	(A)	7.90—8.75	7-1-89/2002	39,145	39,145
				100	8.50	7-1-2010	54,020	54,020
				99.50	8.50	7-1-2017	89,185	89,185
				71.47	5.75	7-1-2018	17,650	17,650
							<u>200,000</u>	<u>200,000</u>
Revenue Bonds	1980A	5-9-80	9.23	(A)	7.90—8.70	7-1-89/1995	7,000	7,000
				100	9.30	7-1-2003	17,575	17,575
				99.25	9.375	7-1-2010	75,425	75,425
				93.50	8.50	7-1-2016	30,000	30,000
							<u>130,000</u>	<u>130,000</u>
Revenue Bonds	1980B	7-15-80	9.50	(A)	9.10—10.75	7-1-89/1999	55,000	
				99.50	9.875	7-1-2012	95,000	
				(A)	7.75	7-1-2018	30,000	
							<u>180,000</u>	
Revenue Bonds	1980C	9-23-80	10.69	(A)	10.00—12.00	7-1-89/1999	20,000	
				100	10.80	7-1-2007	33,550	
				99.50	10.875	7-1-2015	102,450	
				(A)	9.00	7-1-2017	24,000	
							<u>180,000</u>	
Revenue Bonds	1980D	12-19-80	12.44	(A)	14.60—15.25	7-1-89/1996	11,280	
				100	12.25	7-1-2000	18,145	
				100	12.50	7-1-2010	109,575	
				(A)	9.50	7-1-2013	11,000	
							<u>150,000</u>	
Revenue Bonds	1980E	12-19-80	11.83	(A)	11.75	7-1-2010	<u>50,000</u>	
Revenue Bonds	1981A	3-17-81	11.77	100	10.50—11.50	7-1-89/1995	15,255	
				99.50	11.75	7-1-2000	27,105	
				100	12.00	7-1-2009	102,640	
				(A)	10.25	7-1-2011	25,000	
							<u>170,000</u>	
Revenue Bonds	1981B	3-17-81	11.06	(A)	11.00	7-1-2009	<u>30,000</u>	
							<u>\$2,250,000</u>	<u>\$1,517,400</u>

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## Report of Independent Accountants

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Board of Directors  
Washington Public Power Supply System  
Richland, Washington

We have examined the individual and combined financial statements, as listed in the financial statements section of the table of contents, of Washington Public Power Supply System's Hanford Project, Packwood Lake Hydroelectric Project, Nuclear Project No. 1, Nuclear Project No. 2, Nuclear Project No. 3, Nuclear Projects Nos. 4 and 5, and the Internal Service Fund for the years ended June 30, 1981 and 1980. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements listed in the aforementioned table of contents present fairly the respective individual and combined financial positions of Washington Public Power Supply System's Hanford Project, Packwood Lake Hydroelectric Project, Nuclear Project No. 1, Nuclear Project No. 2, Nuclear Project No. 3, Nuclear Projects Nos. 4 and 5, and the Internal Service Fund at June 30, 1981 and 1980, and the respective individual and combined results of operations and changes in financial position of the operating projects and sources and uses of funds of the construction Projects Nos. 1, 2, 3, and 4 and 5 for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

*Ernst & Whinney*

Seattle, Washington  
August 28, 1981 except as to  
Note E as to which the date  
is September 25, 1981

# Statements of Debt Service Requirements June 30, 1981

(\$ in thousands)

## Hanford

Year	Principal	Interest	Annual Debt Requirements
1982	\$ 2,915	\$ 1,393	\$ 4,308
1983	2,915	1,303	4,218
1984	3,010	1,210	4,220
1985	3,125	1,114	4,239
1986	3,240	1,014	4,254
1987	3,255	913	4,168
1988	3,360	806	4,166
1989	3,485	693	4,178
1990	3,455	580	4,035
1991	5,065	425	5,490
1992	5,585	246	5,831
1993	5,835	58	5,893
1994	800	4	804
1995			
1996			
1997			
1998			
1999			
2000			
2001			
2002			
2003			
2004			
2005			
2006			
2007			
2008			
2009			
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
	<u>\$46,045</u>	<u>\$9,759</u>	<u>\$55,804</u>

## Packwood

Principal	Interest	Annual Debt Requirements
\$ 145	\$ 440	\$ 585
155	434	589
160	429	589
170	423	593
175	416	591
180	410	590
190	403	593
195	397	592
265	389	654
275	380	655
290	370	660
300	359	659
315	348	663
330	337	667
340	324	664
360	312	672
380	299	679
400	285	685
465	270	735
490	253	743
515	236	751
540	217	757
565	197	762
590	176	766
615	155	770
640	132	772
665	109	774
690	85	775
715	60	775
618	34	652
76	8	84
<u>\$11,809</u>	<u>\$8,687</u>	<u>\$20,496</u>

## WNP-1

Principal	Interest	Annual Debt Requirements
\$ 7,510	\$ 108,004	\$ 115,514
4,045	107,793	111,838
9,245	107,570	116,815
9,785	107,064	116,849
14,855	106,527	121,382
15,470	105,505	120,975
16,115	104,582	120,697
16,810	103,621	120,431
19,045	102,614	121,659
59,835	101,449	161,284
20,675	96,125	116,800
22,075	94,831	116,906
23,035	93,422	116,457
24,060	91,928	115,988
25,640	90,347	115,987
27,255	88,518	115,773
28,795	86,596	115,391
30,870	84,554	115,424
32,955	82,278	115,233
35,205	79,833	115,038
37,645	77,204	114,849
40,290	74,370	114,660
43,175	71,282	114,457
46,315	67,933	114,248
49,700	64,332	114,032
53,360	60,456	113,816
57,315	56,283	113,598
61,585	51,791	113,376
68,195	46,949	115,144
73,205	41,475	114,680
77,790	35,568	113,358
67,570	29,309	96,879
59,940	24,429	84,369
64,050	20,346	84,396
108,445	15,981	124,426
103,140	7,314	110,454
<u>\$1,455,000</u>	<u>\$2,688,183</u>	<u>\$4,143,183</u>



# Statements of Debt Service Requirements (continued)

(\$ in thousands)

## WNP-2

Year	Principal	Interest	Annual Debt Requirements
1982	\$ 14,130	\$ 100,876	\$ 115,006
1983	15,010	100,013	115,023
1984	15,940	99,096	115,036
1985	16,925	98,123	115,048
1986	19,675	97,090	116,765
1987	20,940	95,809	116,749
1988	22,245	94,488	116,733
1989	23,630	93,082	116,712
1990	25,115	91,579	116,694
1991	26,705	89,966	116,671
1992	28,410	88,238	116,648
1993	30,260	86,389	116,649
1994	32,235	84,433	116,668
1995	34,365	82,344	116,709
1996	36,655	80,095	116,750
1997	39,120	77,677	116,797
1998	41,775	75,068	116,843
1999	44,630	72,252	116,882
2000	47,700	69,220	116,920
2001	51,055	65,908	116,963
2002	54,675	62,335	117,010
2003	58,560	58,481	117,041
2004	62,740	54,333	117,073
2005	67,230	49,882	117,112
2006	72,085	45,065	117,150
2007	77,305	39,890	117,195
2008	82,930	34,356	117,286
2009	88,980	28,408	117,388
2010	95,485	22,014	117,499
2011	102,480	15,141	117,621
2012	110,010	7,750	117,760
2013			
2014			
2015			
2016			
2017			
2018			
	<u>\$1,459,000</u>	<u>\$2,159,401</u>	<u>\$3,618,401</u>

## WNP-3

Principal	Interest	Annual Debt Requirements
	\$ 67,283	\$ 67,283
\$ 1,680	67,283	68,963
1,785	67,191	68,976
6,175	67,093	73,268
6,530	66,757	73,287
8,925	66,401	75,326
9,525	65,769	75,294
10,170	65,087	75,257
10,870	64,395	75,265
11,625	63,682	75,307
12,440	62,913	75,353
13,315	62,082	75,397
14,270	61,179	75,449
15,310	60,190	75,500
16,430	59,109	75,539
17,055	57,932	74,987
18,910	56,708	75,618
20,345	55,313	75,658
21,920	53,769	75,689
23,630	52,078	75,708
25,500	50,231	75,731
27,525	48,195	75,720
29,720	45,987	75,707
32,105	43,590	75,695
34,715	40,965	75,680
37,550	38,111	75,661
40,635	35,008	75,643
43,995	31,632	75,627
47,645	27,957	75,602
30,025	23,947	53,972
32,040	21,975	54,015
34,190	19,870	54,060
36,485	17,622	54,107
38,940	15,222	54,162
41,555	12,659	54,214
63,300	9,922	73,222
68,165	5,152	73,317
<u>\$905,000</u>	<u>\$1,730,259</u>	<u>\$2,635,259</u>

## WNP-4&5

Principal	Interest	Annual Debt Requirements
	\$ 187,904	\$ 187,904
	187,904	187,904
	187,904	187,904
	187,904	187,904
	187,904	187,904
	187,904	187,904
	187,904	187,904
\$ 24,060	187,904	211,964
75,530	185,991	261,521
57,125	178,083	235,208
29,125	173,144	202,269
31,265	170,437	201,702
34,415	167,991	202,406
36,165	165,243	201,408
39,335	162,338	201,673
42,160	159,097	201,257
45,390	155,643	201,033
49,000	151,923	200,923
52,975	147,843	200,818
55,160	143,349	198,509
59,855	138,657	198,512
65,015	133,500	198,515
70,685	127,825	198,510
76,940	121,574	198,514
83,780	114,729	198,509
91,280	107,233	198,513
99,500	99,011	198,511
108,535	89,979	198,514
116,820	80,065	196,885
111,080	70,226	181,306
92,740	60,952	153,692
110,945	53,702	164,647
107,595	44,612	152,207
114,855	35,926	150,781
118,485	26,657	145,142
118,740	17,871	136,611
131,445	9,020	140,465
<u>\$2,250,000</u>	<u>\$4,795,853</u>	<u>\$7,045,853</u>

# Construction Projects Expenditures

(\$ in thousands)

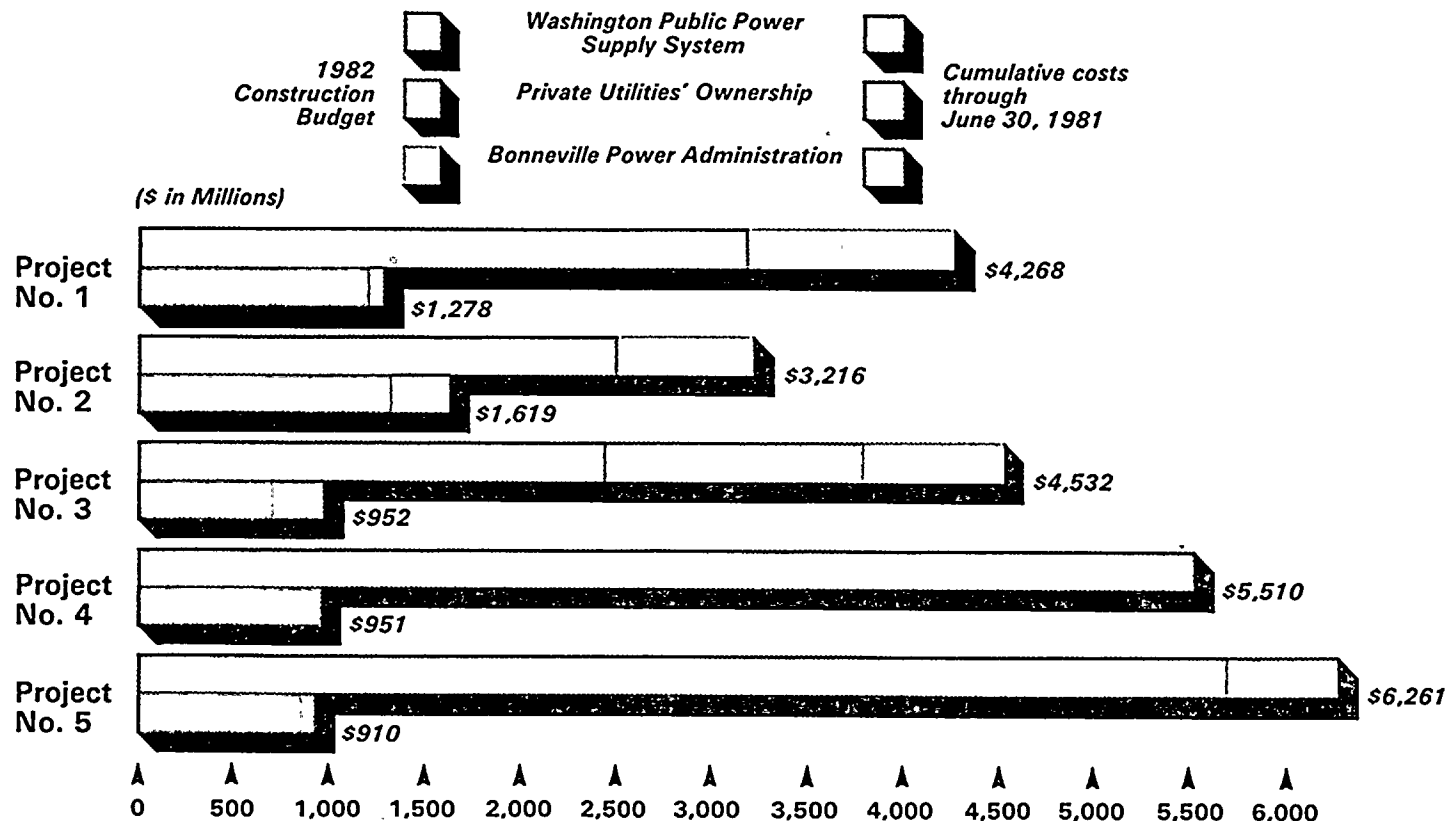
	Cumulative Costs Thru June 30, 1981	1982 Construction Budget	Percent Expended
<b>NUCLEAR PROJECT NO. 1</b>			
Construction & Fuel .....	\$ 975,140	\$2,260,907	43.1
Engineering & Construction Management.....	118,703	391,821	30.3
Owner's Cost .....	52,736	315,790	16.7
Net Interest, Financing & Reserves .....	131,526	1,299,482	10.1
Total Funding Requirements .....	1,278,105	4,268,000	29.9
Less: Interest, Financing & Reserves Funded by BPA ....	(70,808)	(1,078,000)	6.6
Total Supply System Funding Requirements.....	<u>\$1,207,297</u>	<u>\$3,190,000</u>	37.8
<b>NUCLEAR PROJECT NO. 2</b>			
Construction & Fuel .....	\$1,053,804	\$1,624,316	64.9
Engineering & Construction Management.....	189,758	391,900	48.4
Owner's Cost .....	133,984	405,806	33.0
Net Interest, Financing & Reserves .....	241,397	793,978	30.4
Total Funding Requirements .....	1,618,943	3,216,000	50.3
Less: Interest, Financing & Reserves Funded by BPA ....	(327,297)	(710,000)	46.1
Total Supply System Funding Requirements.....	<u>\$1,291,646</u>	<u>\$2,506,000</u>	51.5
<b>NUCLEAR PROJECT NO. 3</b>			
Construction & Fuel .....	\$ 724,080	\$2,502,609	28.9
Engineering & Construction Management.....	108,495	292,763	37.1
Owner's Cost .....	43,864	366,715	12.0
Net Interest, Financing & Reserves* .....	75,370	1,369,913	5.5
Total Funding Requirements .....	951,809	4,532,000	21.0
Less: Interest, Financing & Reserves Funded by BPA ....		(756,971)	
Private Utilities' Funded Ownership* .....	(282,790)	(1,317,083)	21.5
Total Supply System Funding Requirements.....	<u>\$ 669,019</u>	<u>\$2,457,946</u>	27.2
<b>NUCLEAR PROJECT NO. 4</b>			
Construction & Fuel .....	\$ 678,728	\$2,413,101	28.1
Engineering & Construction Management.....	118,701	391,822	30.3
Owner's Cost .....	52,737	331,826	15.9
Net Interest, Financing & Reserves .....	101,301	2,373,251	4.2
Total Supply System Funding Requirements.....	<u>\$ 951,467</u>	<u>\$5,510,000</u>	17.3

\* Assumes that net financing costs applicable to the private utilities' ownership shares are proportionally the same as the Supply System's.

# Construction Projects Expenditures (continued)

(\$ in thousands)

	Cumulative Costs Thru June 30, 1981	1982 Construction Budget	Percent Expended
<b>NUCLEAR PROJECT NO. 5</b>			
Construction & Fuel .....	\$ 671,862	\$2,722,135	24.7
Engineering & Construction Management .....	108,496	292,764	37.1
Owner's Cost .....	43,874	379,850	11.6
Net Interest, Financing & Reserves* .....	85,798	2,866,251	3.0
<b>Total Funding Requirements .....</b>	<b>910,030</b>	<b>6,261,000</b>	<b>14.5</b>
Less: Private Utility's Funding Ownership* .....	(88,713)	(592,076)	14.9
<b>Total Supply System Funding Requirements .....</b>	<b>\$ 821,317</b>	<b>\$5,668,924</b>	<b>14.5</b>

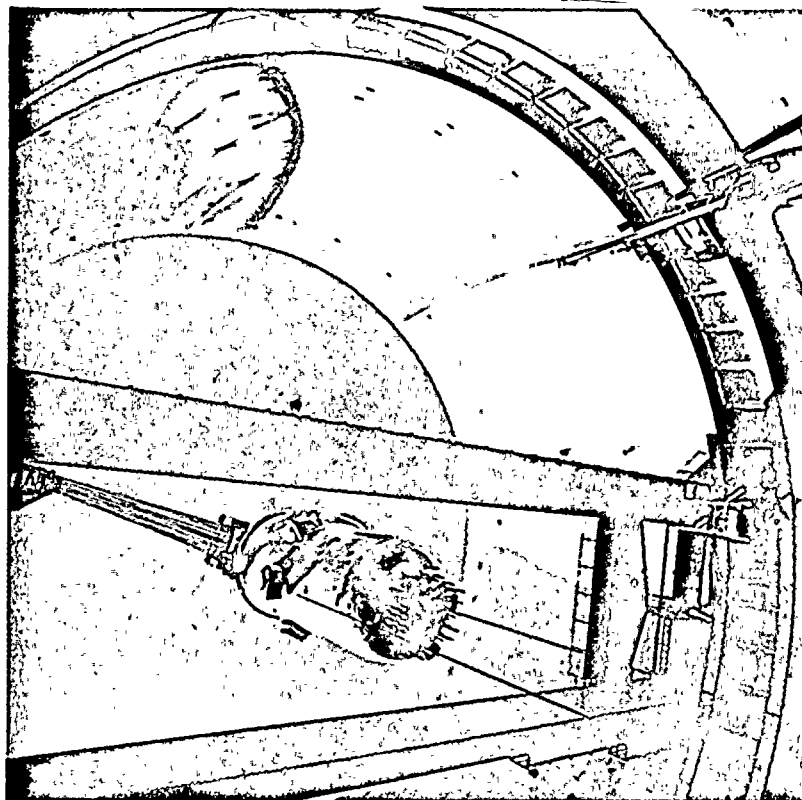


\* Assumes that net financing costs applicable to the private utilities' ownership shares are proportionally the same as the Supply System's.

Washington Public Power Supply System 1981 Annual Report

SEPTEMBER 27, 1981

# QUARTERLY REPORT



WASHINGTON PUBLIC POWER  
SUPPLY SYSTEM

WASHINGTON PUBLIC POWER  
SUPPLY SYSTEM

3040 GEORGE WASHINGTON WAY  
RICHLAND, WA 99352

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## QUARTERLY REPORT

of the Supply System Annual Report and additional copies of this  
report may be obtained by writing to:

Public Affairs & Information  
Washington Public Power Supply System  
P.O. Box 968, Richland, Washington 99352

# Managing Director's Comments

## WNP-4/5 MOTHBALL DECISION

On September 18, the Governors' Blue Ribbon Panel released the results of its study on WNP-4 and 5. Their recommendation, which the Board of Directors adopted at its October 23 meeting, puts the projects in a preservation mode until at least June 30, 1983. By the end of this period, the WNP-4 and 5 study mandated by the Washington State Legislature will have been completed. Also, the Regional Power Council will have finished its plan and will be in a position to consider whether or not to recommend Bonneville's acquisition of power from WNP-4 and 5.

The plan to preserve the projects involves participation by the 88 participants in the projects, three investor-owned utilities and the region's direct service industries. The participants agreed to pay \$91 million of the \$150 million cost to defer construction as well as 100 percent of the interest during construction beginning March 1, 1983. The three investor owned utilities—Puget Sound Power & Light, Washington Water Power Co. and Pacific Power & Light Co.—agreed to pay \$29.5 million. The remaining \$29.5 million will come from the region's direct service industries.

The immediate and orderly shutdown of Projects 4 and 5 is being implemented. In addition, the Supply System has taken the following steps to preserve the assets of the projects at the least possible cost:

- Ordered a two-month hiring freeze, except for jobs critical to the completion of WNP-1, 2 and 3.
- Implemented a reduction in force of approximately 344 Supply System employees. This reduction will cut the Supply System's salary cost by nearly \$9 million annually.
- Directed a re-evaluation of impact payments to school districts based on construction of three plants rather than five.

These steps reflect the transformation of an organization constructing five nuclear power generating plants to one that is now constructing three.

Both the region and the Supply System have demonstrated their commitment to providing for the energy needs of the Northwest. In a sense, the \$150 million needed to preserve WNP-4 and 5 is similar to an insurance premium—one that guarantees that the assets are there if needed in the future. The agreement to preserve WNP-4 and 5 puts those units in the background for the time being. It also allows the Supply System to move aggressively ahead with construction of its other three projects.

## FINANCIAL

In the first quarter, Supply System operating receipts totaled \$66,984,000. Operating plant receipts were \$12,898,000 for the Hanford Generating Project and \$284,000 for the Packwood Lake Hydroelectric Project. Net billing receipts from the participants in Nuclear Projects 1 and 2 were \$53,802,000.

During the quarter, the Supply System's single largest bond sale was completed. The net proceeds of the \$750 million are expected to provide enough funds to continue construction of WNP-1, 2 and 3 through early 1982. The bonds sold at an average interest rate of about 14.5 percent. The funds have been apportioned as follows: WNP-1, \$315 million; WNP-2, \$210 million; and WNP-3, \$225 million. It was the first negotiated sale since the Washington State Legislature passed a law to allow that financing option. Prior to that, the Supply System was compelled to offer bonds on a competitive bid basis before a sale could be negotiated.

In July, the Board of Directors approved a \$23.8 billion construction budget which covered the total estimated costs for completing all five projects during the next six years. It was the first construction budget prepared under the new Supply System management philosophy—one which uses a zero-based budgeting concept.

## CONTRACTS

Bechtel Power Corporation was selected as the System's Completion Contractor at WNP-2 in late August. The project is about 86 percent complete and is scheduled for fuel loading in September 1983. New legislation adopted by the Washington State Legislature earlier this year allows the Supply System to negotiate a "systems completion contract" once a project is 80 percent complete. This enables the Supply System to consolidate the finishing work under one contractor.

In September, a contract including an incentive clause, which could mean up to \$45 million in profits, was signed with Ebasco Services, Incorporated. Ebasco will be paid that sum only if it finishes WNP-3 and 5 at least 10 months ahead of schedule. It represents a potential savings of up to \$1 billion for the ratepayers, since the projects would produce revenues during those 10 months and avoid additional construction and financing costs. The previous Ebasco contract was essentially a cost-plus arrangement that required negotiations for any change—a process that added cost and delays to the projects.

## CONSTRUCTION/OPERATIONS

The three vital components of the nuclear steam supply system for WNP-3 were installed in late August—a week ahead of schedules set more than a year ago. The productivity at the project was a record 1.6 percent in August, with a total for the quarter of 4.3 percent.

Construction progress is also ahead of schedule at WNP-1 with construction progress at 1.8 percent in August, and a total of 5.5 percent for the quarter. Work is nearing completion on the containment dome.

At WNP-2, a week-long inspection by the Nuclear Regulatory Commission in September indicated no violations. It included examination of management programs including project controls, quality assurance, design and construction.

A draft environmental impact report on WNP-2, completed this summer, stated "operation of the nuclear plant would have no adverse social or economic effect on Hanford or the surrounding communities." The final environmental report will be published in December and a safety evaluation will be issued in March 1982.

Following the recommendation by the Board of Directors to preserve WNP-4 and 5 for two to two-and-one-half years, the Supply System organized a team to direct the orderly and immediate shutdown of the plants. At WNP-4, the craft work force is below 50, with activities geared toward auditing and securing contractors' documentation, disposing of contractors' inventories and maintaining equipment and buildings. Similar activities are taking place at WNP-5, where critical construction is continuing to natural stopping points so that the project can be preserved for future use.

The Hanford Generating Project returned to service August 1 after its scheduled summer outage. From August 1 to August 20, operation was intermittent. Full generation was reattained August 24 and the project continued operating without interruption in September for a total of 619,880,000 kWh.

The Packwood Lake Hydroelectric Project netted a total of 19,470,500 kWh this quarter. About 430 hours of down time were scheduled due to decreased stream flow into the lake.

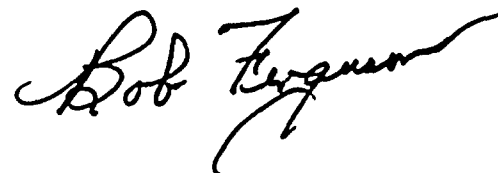
## MANAGEMENT

In September, the Supply System's top management was realigned to include 12 rather than 15 directors.

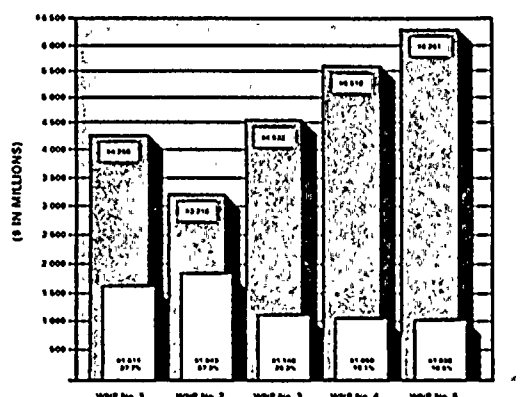
Safety and Security is the new corporate unit responsible for all health, safety and security, environmental programs and regulatory matters related to licensing by the Nuclear Regulatory Commission. Its director is John W. Shannon, previously manager of Safety and Security.

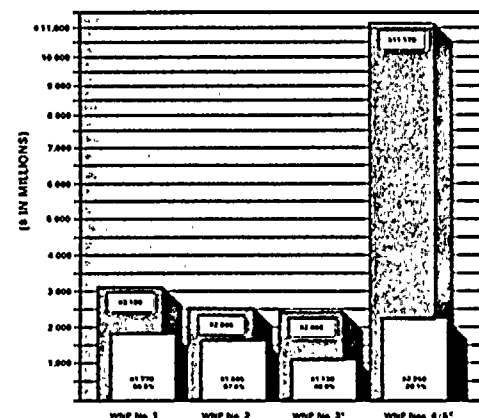
Former administrative director Dwight R. Frindt is the new director of Business Programs. Added to his directorate are management policy and systems, contracts and materials management and internal auditing.

The Supply System recently initiated a program to reduce the 1982 administrative and general expenditures by 25 percent. The Supply System staff was also reduced by 12½ percent. These decisions have been difficult, but were deemed necessary to fulfill our commitment to complete WNP-1, 2 and 3 within their projected cost estimates.





PROJECT  
COSTS  
WNP Nos. 1-5FUNDING  
REQUIREMENTS  
WNP Nos. 1-5

\*SUPPLY SYSTEM OWNER'S SHARE: WNP No. 3, 70%  
WNP No. 5, 90%STATUS OF  
CONSTRUCTION

	Plant Size (MWs)	Date of Scheduled Commercial Operation*	% Construction Completed	
			Quarter Ended Sept. 27, 1981	Cumulative Sept. 27, 1981
Nuclear Project No. 1	1250	June 1986	5.5	45.9
Nuclear Project No. 2	1100	February 1984	0	0
Nuclear Project No. 3	1240	December 1988	4.8	36.8
Nuclear Project No. 4	1250	June 1987	1.0	24.0
Nuclear Project No. 5	1240	December 1987	.9	15.8

\*WNP-2 is in the system's completion phase—the last 15% of the project.

SUMMARY  
BALANCE  
SHEETS  
(Unaudited)

SEPTEMBER 27, 1981

(\$ IN THOUSANDS)	Operating Projects Hanford & Packwood	Construction Nuclear Projects Nos. 1, 2, 3 & 4/5	Internal Service Fund	Combined
<b>ASSETS</b>				
Current Assets—Operating Fund	\$6,770	\$39,868	\$6,208	\$54,846
Restricted Assets:				
Special Funds	3,665	1,051,366		1,055,031
Debt Service Funds	4,968	797,759		802,727
	<u>8,631</u>	<u>1,849,125</u>		<u>1,857,756</u>
Utility Plant Equipment:				
In-Service (net)	41,892	8,874	4,960	55,726
Construction Work in Progress	<u>41,892</u>	<u>5,742,511</u>	<u>4,960</u>	<u>5,742,511</u>
		<u>5,751,385</u>		<u>5,798,237</u>
Other Assets & Deferred Charges	4,515	23,835	870	29,220
	<u>\$61,808</u>	<u>\$7,664,213</u>	<u>\$14,038</u>	<u>\$7,740,059</u>
<b>LIABILITIES</b>				
Current Liabilities—Operating Fund	\$3,155	\$33,868	\$8,020	\$45,043
Liabilities—Payable from Restricted Assets:				
Special Funds	885	391,512		392,397
Debt Service Funds	<u>407</u>	<u>158,393</u>		<u>158,800</u>
	<u>1,292</u>	<u>549,905</u>		<u>551,197</u>
Long-Term Debt	\$3,916	6,628,973		6,682,889
Other Liabilities & Deferred Credits	3,445	451,467	6,018	460,930
	<u>\$61,808</u>	<u>\$7,664,213</u>	<u>\$14,038</u>	<u>\$7,740,059</u>

STATEMENTS  
OF SOURCE  
AND USE  
OF FUNDS  
(Unaudited)FISCAL THREE  
MONTHS ENDED  
SEPTEMBER 27, 1981

(\$ IN THOUSANDS)	Operating Projects Hanford & Packwood	Construction Nuclear Projects Nos. 1, 2, 3 & 4/5	Internal Service Fund	Combined
<b>SOURCE OF FUNDS</b>				
Operating Receipts	\$13,182			\$13,182
Collections Under Net Billing		\$53,802		\$53,802
Bond Proceeds		666,958		666,958
Interest Income	642	37,673		38,315
Charged to Joint Owners		33,501		33,501
Decrease in Restricted Funds	2,437	69,471		61,908
Net Change in Operating Fund	(320)	422	(42)	80
Other	2		295	297
	<u>\$15,843</u>	<u>\$851,827</u>	<u>\$253</u>	<u>\$867,923</u>
<b>USE OF FUNDS</b>				
Operating Expenses	\$11,990			\$11,990
Construction Costs		\$366,498		\$366,498
Interest Expense	468	119,940		120,408
Nuclear Fuel		18,350		18,350
Financing Expense		345		345
Increase in Restricted Funds	243	342,961		343,204
Revelation of Investments	182	(718)		(536)
Other	2,960	4,451	623	7,664
	<u>\$15,843</u>	<u>\$851,827</u>	<u>\$253</u>	<u>\$867,923</u>

The Washington Public Power Supply System was organized in 1957 as a municipal corporation and joint operating agency of the State of Washington. Its membership consists of 19 public utility districts and 4 municipalities which own and operate electric systems within the State of Washington. It is empowered to acquire, construct and operate facilities for the generation and transmission of electric power and energy.

Interest is exempt, in the opinion of Bond Counsel, from Federal income taxation under existing laws, regulations and rulings issued by the Internal Revenue Service.

**NEW ISSUE**

**RATINGS—**Moody's: Aaa  
S&P : AAA  
(See "Ratings" herein)

**\$750,000,000**

**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**

**\$315,000,000 Nuclear Project No. 1 Revenue Bonds, Series 1981D**

**\$210,000,000 Nuclear Project No. 2 Revenue Bonds, Series 1981A**

**\$225,000,000 Nuclear Project No. 3 Revenue Bonds, Series 1981B**

**Dated: September 1, 1981**

**Due: July 1, as shown below**

Principal of and semi-annual interest (payable January 1, 1982 and each January 1 and July 1 thereafter) on the above series of bonds (collectively the "1981 Net Billed Bonds") are payable at the offices of banking institutions in the cities of Seattle, Washington, Chicago, Illinois and New York, New York, as set forth herein. The 1981 Net Billed Bonds are subject to redemption prior to maturity as set forth herein.

The 1981 Net Billed Bonds and the interest thereon are payable from the revenues derived by the Supply System through the ownership and operation by it of the related Net Billed Project, as more fully described herein.

The United States of America, Department of Energy, acting by and through the Bonneville Power Administrator, has purchased the entire capability of the Net Billed Projects from certain of its statutory preference customers and investor-owned utility customers who, in turn, purchased such capability from the Supply System, all under the Net Billing Agreements and the Project No. 1 Exchange Agreements. Bonneville is obligated to pay, pursuant to the net billing arrangements and from the sources described herein, the total annual cost of each Net Billed Project, including the debt service on the related 1981 Net Billed Bonds, whether or not the Net Billed Project is completed, operable or operating and notwithstanding the suspension, reduction or curtailment of project output.

The below listed maturities are a consolidation of the above three series of 1981 Net Billed Bonds offered hereby. For a description of the terms relating to each separate series, see the caption "Description of 1981 Net Billed Bonds" herein.

\$ 50,000,000	14 $\frac{3}{8}$ %	Term Bonds Due July 1, 2001—Price	100%
\$150,000,000	8 $\frac{1}{4}$ %	Term Bonds Due July 1, 2003—Yield	14.25%
\$ 50,000,000	14 $\frac{1}{2}$ %	Term Bonds Due July 1, 2006—Price	99%
\$ 50,000,000	13 $\frac{1}{4}$ %	Term Bonds Due July 1, 2012—Price	100%
\$265,000,000	15 %	Term Bonds Due July 1, 2017—Price	100%
\$185,000,000	15 %	Term Bonds Due July 1, 2018—Price	100%

(plus accrued interest from September 1, 1981)

The Net Billed Bonds due July 1, 2012 will be payable at the option of the holders on July 1, 1991 or any July 1 thereafter upon notice given by the holders, as more fully described herein.

The 1981 Net Billed Bonds are offered when, as and if issued and received by the Underwriters, subject to the approval of legality by Wood & Dawson, New York, New York, Bond Counsel to the Supply System, and Houghton Cluck Coughlin & Riley, Seattle, Washington, Special Counsel to the Supply System, and to certain other conditions. Certain legal matters will be passed upon by General Counsel to the Bonneville Power Administration. Certain legal matters will be passed upon for the Underwriters by Mudge Rose Guthrie & Alexander, New York, New York, Counsel to the Underwriters. It is expected that the 1981 Net Billed Bonds in definitive form will be available for delivery in New York, New York, on or about September 17, 1981.

**Merrill Lynch White Weld Capital Markets Group**  
Merrill Lynch, Pierce, Fenner & Smith Incorporated

**Goldman, Sachs & Co.**

**Salomon Brothers**

**Smith Barney, Harris Upham & Co.**  
Incorporated

**Blyth Eastman Paine Webber**  
Incorporated

**Bank of America NT & SA**

**Bear, Stearns & Co.**

**Continental Bank**  
Continental Illinois National Bank  
and Trust Company of Chicago

**Donaldson, Lufkin & Jenrette**  
Securities Corporation

**The First Boston Corporation**

**Kidder, Peabody & Co.**  
Incorporated

**Lehman Brothers Kuhn Loeb**  
Incorporated

**Morgan Guaranty Trust Company of New York**

**John Nuveen & Co.**  
Incorporated

**Dain Bosworth**  
Incorporated

**Foster & Marshall Inc.**

**The Robinson-Humphrey Company, Inc.**

**Seattle-Northwest Securities Corporation**

September 4, 1981



# WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968  
Telephone (509) 372-5000  
Richland, Washington  
99352

<u>Members</u>	<u>Representatives to the Board of Directors</u>
Public Utility District No. 1 of Benton County .....	Donald Clayhold*
Public Utility District No. 1 of Chelan County .....	Robert O. Keiser
Public Utility District No. 1 of Clallam County .....	Alvin E. Fletcher
Public Utility District No. 1 of Clark County .....	Ed Fischer*
Public Utility District No. 1 of Cowlitz County .....	Howard B. Richman*
Public Utility District No. 1 of Douglas County .....	Howard Prey
City of Ellensburg .....	Larry Nickel
Public Utility District No. 1 of Ferry County .....	William G. Kuehne
Public Utility District No. 1 of Franklin County .....	Kenneth R. Cochran
Public Utility District No. 2 of Grant County .....	Harold F. Nelson
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Public Utility District No. 1 of Kittitas County .....	Roger Sparks
Public Utility District No. 1 of Klickitat County .....	Marion C. Babb
Public Utility District No. 1 of Lewis County .....	Leonard M. Allen
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Public Utility District No. 1 of Okanogan County .....	Stanton H. Cain
Public Utility District No. 2 of Pacific County .....	Hal Norman
City of Richland .....	Thomas M. Logston
City of Seattle .....	Joseph P. Recchi*
Public Utility District No. 1 of Skamania County .....	Rolf E. Jemtegaard
Public Utility District No. 1 of Snohomish County .....	C. Stanford Olsen*
City of Tacoma .....	Paul J. Nolan*
Public Utility District No. 1 of Wahkiakum County .....	Charles F. Emerick

\* Executive Committee Member

## OFFICERS

Stanton H. Cain  
John J. Welch  
Marion C. Babb

President  
Vice President  
Secretary

## ADMINISTRATIVE STAFF

Managing Director  
Deputy Managing Director  
Nuclear Projects Nos. 1 and 4 Program Director  
Nuclear Project No. 2 Program Director  
Nuclear Projects Nos. 3 and 5 Program Director  
Treasurer  
Acting Chief Counsel  
Internal Auditing Manager

R. L. Ferguson  
A. Squire  
D. W. Mazur  
R. G. Matlock  
R. S. Leddick  
J. D. Perko  
G. E. C. Doupe  
J. J. Wentz

## ADMINISTRATIVE AUDITOR

J. A. Hare

FINANCIAL ADVISOR  
Lazard Frères & Co.

BOND COUNSEL  
Wood & Dawson

SPECIAL COUNSEL  
Houghton Cluck Coughlin & Riley

CONSULTING ENGINEER  
R. W. Beck and Associates

## CONSTRUCTION MANAGERS

*Projects Nos. 1 and 2*  
Bechtel Power Corporation

*Project No. 1*  
United Engineers & Constructors Inc.

*Project No. 3*  
Ebasco Services Incorporated

No dealer, broker, salesman or other person has been authorized by the Supply System or by the Underwriters to give any information or to make any representations, other than as contained in this Official Statement, and if given or made such other information or representations must not be relied upon as having been authorized by the Supply System or the Underwriters. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the 1981 Net Billed Bonds by any person in any jurisdiction in which it is unlawful for such persons to make such offer, solicitation or sale.

The information set forth herein has been furnished by the Supply System and includes information obtained from other sources which are believed to be reliable, but is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation by, the Underwriters. The information and expressions of opinion contained herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Supply System since the date hereof.

IN CONNECTION WITH THE OFFERING OF THE 1981 NET BILLED BONDS, THE UNDERWRITERS MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF SUCH BONDS AT LEVELS ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

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## OFFICIAL STATEMENT

**\$750,000,000**

### WASHINGTON PUBLIC POWER SUPPLY SYSTEM

**\$315,000,000 Nuclear Project No. 1 Revenue Bonds, Series 1981D**

**\$210,000,000 Nuclear Project No. 2 Revenue Bonds, Series 1981A**

**\$225,000,000 Nuclear Project No. 3 Revenue Bonds, Series 1981B**

September 4, 1981

Washington Public Power Supply System, a municipal corporation and a joint operating agency of the State of Washington (the "Supply System"), proposes to issue \$315,000,000 Nuclear Project No. 1 Revenue Bonds, Series 1981D (the "Project No. 1 1981 Bonds"), \$210,000,000 Nuclear Project No. 2 Revenue Bonds, Series 1981A (the "Project No. 2 1981 Bonds") and \$225,000,000 Nuclear Project No. 3 Revenue Bonds, Series 1981B (the "Project No. 3 1981 Bonds" and, together with the Project No. 1 1981 Bonds and the Project No. 2 1981 Bonds, the "1981 Net Billed Bonds") and furnishes this Official Statement, which includes the cover page hereof and the exhibits hereto in connection with the sale of the 1981 Net Billed Bonds and for the information of all who may become holders of the 1981 Net Billed Bonds.

#### INTRODUCTION

*The Supply System.* The Supply System was organized in 1957. Its members are 19 operating public utility districts and the cities of Ellensburg, Richland, Seattle and Tacoma, all located in the State of Washington. The Supply System has the authority, among other things, to acquire, construct and operate plants, works and facilities for the generation and transmission of electric power and energy. The Supply System is operating generating facilities of approximately 888 MW capacity and has under construction five nuclear projects, aggregating approximately 6,080 MW of capacity, all located in the State of Washington.

*Authorization and purpose of Project No. 1 1981 Bonds.* The purpose of the \$315,000,000 Project No. 1 1981 Bonds is to finance a portion of the cost of constructing and acquiring Washington Public Power Supply System Nuclear Project No. 1 ("Project No. 1"). The Supply System has heretofore issued \$1,455,000,000 of revenue bonds for Project No. 1 and it is estimated that the remaining financing requirements for Project No. 1, including the Project No. 1 1981 Bonds, based on the 1982 Project No. 1 construction budget and the currently scheduled June 1986 commercial operation date, are \$1,735,000,000.

Project No. 1 is being financed and accounted for as a system separate from all other current or future Supply System projects. Project No. 1 is located about 140 miles southeast of Seattle, Washington, near Richland on the United States Department of Energy's Hanford Reservation and will consist of a pressurized water nuclear electric generating plant with a net generating capability of approximately 1,250,000 kilowatts, together with the necessary facilities to deliver the output to the 500 kV transmission facilities of the Federal Columbia River Power System located in the vicinity of Project No. 1. Based on the 1982 Project No. 1 construction budget, construction of Project No. 1 was approximately 41% complete as of July 1, 1981.

The Project No. 1 1981 Bonds are part of an issue of bonds (the "Project No. 1 Bonds") authorized to be issued pursuant to the Revised Code of Washington, Chapter 43.52, as amended (the "Act"), and

Resolution No. 769 adopted by the Board of Directors of the Supply System on September 18, 1975, as amended (the "Project No. 1 Resolution"), to pay the cost of the acquisition and construction of Project No. 1. The Project No. 1 1981 Bonds will be issued pursuant to a resolution supplemental to the Project No. 1 Resolution, Resolution No. 1183 (the "Project No. 1 Supplemental Resolution") adopted by such Board on September 4, 1981.

*Authorization and Purpose of Project No. 2 1981 Bonds.* The purpose of the \$210,000,000 Project No. 2 1981 Bonds is to finance a portion of the cost of constructing and acquiring Washington Public Power Supply System Nuclear Project No. 2 ("Project No. 2"). The Supply System has heretofore issued \$1,485,000,000 of revenue bonds for Project No. 2 and it is estimated that the remaining financing requirements for Project No. 2, including the Project No. 2 1981 Bonds, based on the 1982 Project No. 2 construction budget and the currently scheduled February 1984 commercial operation date, are \$1,021,000,000.

Project No. 2 is being financed and accounted for as a system separate from all other current or future Supply System projects. Project No. 2 is also located near Richland, Washington on the Hanford Reservation and will consist of a boiling water nuclear electric generating plant with a net generating capability of approximately 1,100,000 kilowatts, together with the necessary facilities to deliver the output to the 500 kV transmission facilities of the Federal Columbia River Power System located in the vicinity of Project No. 2. Based on the 1982 Project No. 2 construction budget, construction of Project No. 2 was approximately 86% complete as of July 1, 1981.

The Project No. 2 1981 Bonds are part of an issue of bonds (the "Project No. 2 Bonds") authorized to be issued pursuant to the Act and Resolution No. 640 adopted by the Board of Directors of the Supply System on June 26, 1973, as amended (the "Project No. 2 Resolution"), to pay the cost of the acquisition and construction of Project No. 2. The Project No. 2 1981 Bonds will be issued pursuant to a resolution supplemental to the Project No. 2 Resolution, Resolution No. 1184 (the "Project No. 2 Supplemental Resolution") adopted by such Board on September 4, 1981.

*Authorization and Purpose of Project No. 3 1981 Bonds.* The purpose of the \$225,000,000 Project No. 3 1981 Bonds is to finance a portion of the cost of constructing and acquiring Washington Public Power Supply System Nuclear Project No. 3 ("Project No. 3"). The Supply System has entered into an agreement with four investor-owned utilities (the "Project No. 3 Owners") which provides that Project No. 3 will be owned 70% by the Supply System (the "Ownership Share") and 30% by such utilities. The Supply System's Ownership Share of Project No. 3, Project No. 1 and Project No. 2 are hereinafter called the "Net Billed Projects". The Supply System has heretofore issued \$905,000,000 of revenue bonds for Project No. 3 and it is estimated that the Supply System's remaining financing requirements for Project No. 3, including the Project No. 3 1981 Bonds, based on the 1982 Project No. 3 construction budget and the currently estimated December 1986 commercial operation date, are \$1,553,000,000.

The Supply System's Ownership Share of Project No. 3 is being financed and accounted for as a system separate from all other current or future Supply System projects. Project No. 3 is located about three miles south of the community of Satsop in Grays Harbor County, approximately 66 miles southwest of the City of Seattle, and will consist of a pressurized water nuclear electric generating plant with a net generating capability of approximately 1,240,000 kilowatts, together with the necessary facilities to deliver the output to the 500 kV transmission facilities of the Federal Columbia River Power System located in the vicinity of Project No. 3. Based on the 1982 Project No. 3 construction budget, construction of Project No. 3 was approximately 32% complete as of July 1, 1981.

The Project No. 3 1981 Bonds are part of an issue of bonds (the "Project No. 3 Bonds" and, together with the Project No. 1 Bonds and the Project No. 2 Bonds, the "Net Billed Bonds") authorized to be issued pursuant to the Act and Resolution No. 775 adopted by the Board of Directors of the Supply System on December 3, 1975, as amended (the "Project No. 3 Resolution" and, together with the Project No. 1 Resolution and the Project No. 2 Resolution, the "Net Billed Resolutions"), to pay the Supply System's Ownership Share of the cost of the acquisition and construction of Project No. 3. The Project No. 3 1981 Bonds will be issued pursuant to a resolution supplemental to the Project No. 3

Resolution, Resolution No. 1185 (the "Project No. 3 Supplemental Resolution" and, together with the Project No. 1 Supplemental Resolution and the Project No. 2 Supplemental Resolution, the "Net Billed Supplemental Resolutions") adopted by such Board on September 4, 1981.

*Security for the Net Billed Bonds.* Principal and interest on each series of Net Billed Bonds are payable from (i) the revenues derived by the Supply System through ownership and operation by it of the related Net Billed Project, including all payments to be made to the Supply System pursuant to the related Net Billing Agreements referred to below and, with respect to Project No. 1, the Project No. 1 Exchange Agreements referred to below and (ii) related Net Billed Bond proceeds.

The United States of America, Department of Energy, acting by and through the Bonneville Power Administrator ("Bonneville"), has purchased the entire capability of the Net Billed Projects from certain of its statutory preference customers and investor-owned utility customers who, in turn, purchased such capability from the Supply System, all under the Net Billing Agreements and the Project No. 1 Exchange Agreements. Bonneville is obligated to pay, pursuant to the net billing arrangements and from the sources described herein, the total annual costs of each Net Billed Project, including the debt service on the related Net Billed Bonds, whether or not the Net Billed Project is completed, operable and operating and notwithstanding the suspension, reduction or curtailment of project output. See the caption "Security for the Net Billed Bonds".

Bonneville is obligated by law to establish rates for electric power and transmission of electric power which will recover the cost of acquisition (including all payments under the Net Billing Agreements), conservation and transmission of electric power including the amortization of the Federal investment in the Federal Columbia River Power System and other costs and expenses incurred. See "Federal System Rates" under the caption "Bonneville Power Administration".

The Regional Power Act (as hereinafter defined) does not dilute or diminish Bonneville's existing obligations under the Net Billing Agreements, which remain as pre-existing Bonneville obligations.

*Schedules and Budgets.* As a result of the reevaluation and preparation of new construction schedules and cost estimates for the Supply System's nuclear projects, including Projects Nos. 4 and 5 referred to below, the 1982 project construction budgets total estimated cost at completion approved by the Board of Directors of the Supply System for all five projects is \$23.8 billion, an increase of \$7.9 billion over the 1981 total budget of \$15.9 billion. The 1982 project construction budgets also reflect delays ranging from 6 months to 13 months in the commercial operation dates for each of the Supply System's nuclear projects. See "Schedules and Budget Estimates" under the caption "Recent Developments".

*Initiative Petition.* In July 1981, the Secretary of State of Washington certified that sufficient signatures had been obtained to qualify Initiative Measure No. 394 for submission to voters of the State of Washington at the general election to be held November 3, 1981. If enacted into law by a majority of such voters, the Supply System, after July 1, 1982, would be required to obtain the approval of the voters of its 23 member governmental entities in order to issue bonds to finance the cost of construction of each of its projects. In the event voter approval for the issuance of bonds with respect to any of its projects was not obtained and alternative sources or methods to finance completion of construction of any such projects were not available, the Supply System may be obligated to terminate such projects. A termination of any of the Supply System's projects would have adverse effects on the projects of the Supply System not terminated. See "Initiative Petition" under the caption "Recent Developments".

*Status of Projects Nos. 4 and 5.* On June 18, 1981, a slowdown of construction work was implemented by the Supply System at the Supply System's Nuclear Projects Nos. 4 and 5 ("Projects Nos. 4 and 5"). The Supply System does not currently have sufficient funds to pay for invoices being received and for site work being performed, and the Supply System must depend upon additional funds becoming available. In order to provide such additional funds, the Supply System is proceeding with the preparation of a bond issue for Projects Nos. 4 and 5 for sale in October. There can be no assurance that such bonds can be sold, and if such bonds are not sold, there is a likelihood that both Projects Nos. 4 and 5 will be terminated. Such termination would result in increased costs and possible schedule delays on the Net Billed Projects. See "Status of Projects Nos. 4 and 5, and Possible Effect on Net Billed Projects" under the caption "Recent Developments".

### ESTIMATED APPLICATION OF PROCEEDS OF 1981 NET BILLED BONDS

	Project No. 1 1981 Bonds	Project No. 2 1981 Bonds	Project No. 3 1981 Bonds
Deposit to Construction Fund .....	\$269,421,550	\$150,544,550	\$151,831,700
Capitalized Interest(1) .....	—	—	32,300,000
Deposit to Reserve Account(2) .....	22,550,000	11,768,750	24,791,450
Underwriters' Discount .....	9,440,550	6,293,700	6,743,250
Original Issue Discount .....	12,012,900	40,343,000	8,208,600
Financing Expenses .....	1,575,000	1,050,000	1,125,000
<b>Total .....</b>	<b>\$315,000,000</b>	<b>\$210,000,000</b>	<b>\$225,000,000</b>

(1) Interest was capitalized on Project No. 1 Bonds and Project No. 2 Bonds to September 1, 1980 and September 1, 1977, respectively, and thereafter paid pursuant to the respective Net Billing Agreements. Interest will be capitalized on Project No. 3 Bonds to September 1, 1982 and thereafter paid pursuant to the Project No. 3 Net Billing Agreements.

(2) Based on maximum six months' interest accruing on the 1981 Net Billed Bonds.

### ESTIMATED FINANCING PROGRAM FOR NET BILLED PROJECTS

#### Supply System Financing Programs Net Billed Projects(1)

	Calendar Year	Project No. 1	Project No. 2	Project No. 3	Total
(Dollars in Thousands)					
Financing to Date(2) .....		\$1,770,000	\$1,695,000	\$1,130,000	\$4,595,000
1982 .....		435,000	811,000	525,000	1,771,000
1983 .....		500,000	—	250,000	750,000
1984 .....		250,000	—	250,000	500,000
1985 .....		235,000	—	250,000	485,000
1986 .....		—	—	53,000	53,000
Total Remaining Financing .....		\$1,420,000	\$ 811,000	\$1,328,000	\$3,559,000
Total Financing Requirements .....		\$3,190,000(3)	\$2,506,000	\$2,458,000	\$8,154,000

(1) Does not include any possible impacts on Projects Nos. 1 and 3 which may result from a termination of either Project No. 4 or Project No. 5.

(2) Includes the 1981 Net Billed Bonds.

(3) Does not reflect the fuel acquisition from Projects Nos. 4 and 5 discussed under "Nuclear Fuel" under the caption "Project No. 1".

Based upon the 1982 project construction budgets and current cash flow projections, the Supply System estimates that moneys currently available (including the proceeds of the 1981 Net Billed Bonds) together with investment income thereon, will be sufficient to meet cash flow requirements on Projects Nos. 1, 2 and 3 until April 1982. Additional moneys for construction of the Net Billed Projects are intended by the Supply System to be obtained from borrowings. For the status of financing with respect to Projects Nos. 4 and 5 see "Status of Projects Nos. 4 and 5 and Possible Effect on Net Billed Projects" under the caption "Recent Developments".

In the event of the inability of the Supply System to finance continued construction of any of the projects, such inability could result in a further delay and increased costs of such project or possible termination of such project. See "Initiative Petition" under the caption "Recent Developments".

### SECURITY FOR THE NET BILLED BONDS

#### Purchase of Capability by Bonneville

Bonneville has purchased the entire capability of Project No. 1 from 104 of its statutory preference customers (the "Project No. 1 Participants") and five investor-owned utilities (the "Project No. 1 Companies") who, in turn, have purchased such capability from the Supply System, all under net billing agreements (the "Project No. 1 Net Billing Agreements") and Exchange Agreements (the "Project

No. 1 Exchange Agreements"), respectively. Bonneville has purchased the entire capability of Project No. 2 from 94 of its statutory preference customers (the "Project No. 2 Participants") who, in turn, have purchased such capability from the Supply System, all under net billing agreements (the "Project No. 2 Net Billing Agreements"). Further, Bonneville has purchased the capability of the Supply System's Ownership Share of Project No. 3 from 103 of its statutory preference customers (the "Project No. 3 Participants" and, together with the Project No. 1 Participants and the Project No. 2 Participants, the "Participants"), who, in turn, have purchased such capability from the Supply System, all under net billing agreements (the "Project No. 3 Net Billing Agreements" and, together with the Project No. 1 Net Billing Agreements and the Project No. 2 Net Billing Agreements, the "Net Billing Agreements"). Bonneville's purchase of the capability of the Net Billed Projects was authorized and approved by Congress in the Public Works Appropriations Acts of 1970 and 1971.

Certain capitalized terms not herein defined shall have the meaning as set forth in the Net Billing Agreements. For a summary of certain provisions of the Net Billing Agreements see the caption "The Net Billing Agreements".

#### **Source of Payments**

The principal of, premium, if any, and interest on each series of the Net Billed Bonds are payable solely from the income, revenues and receipts derived by the Supply System through the ownership and operation by it of the respective Net Billed Project, including the revenues derived by the Supply System from the respective Net Billing Agreements and respective Net Billed Bond proceeds and, in the case of Project No. 1, the Project No. 1 Exchange Agreements. The revenues of the Supply System derived or to be derived from Projects Nos. 4 and 5, Hanford Project, Packwood Lake Hydroelectric Project and any other project which may hereafter be undertaken by the Supply System are not pledged to the payment of the Net Billed Bonds. The Net Billed Resolutions provide for the benefit of the holders from time to time of the respective Net Billed Bonds, a legally valid and binding pledge of and lien on the funds and accounts pledged to such Net Billed Bonds under such Net Billed Resolutions and the revenues pledged to such funds and accounts under such Net Billed Resolutions, as provided in and contemplated by such respective Net Billed Resolutions.

With respect to each Net Billed Project, Bonneville is obligated to pay the Participants in such Project, and such Participants are obligated to pay the Supply System, in the manner and from the sources described below, the total annual costs of such Project, including debt service on the Net Billed Bonds issued for such Project (and, in the case of Project No. 1, certain Hanford Project costs) less amounts paid from other sources, whether or not each such Project is completed, operable or operating and notwithstanding the suspension, reduction or curtailment of each such Project output. See "Project No. 1" below.

#### **Net Billing Payment Procedure**

*Net Billing Credits.* The Participants are municipalities, districts and electric cooperatives, all of whom are statutory preference customers of Bonneville and purchase all or a portion of their power supply directly from Bonneville under power sales contracts with Bonneville. For a discussion of these contracts and their terms see "Bonneville Contracts" under the caption "Bonneville Power Administration". These power sales contracts provide for monthly billings and payments. Under the Net Billing Agreements, in payment for the share of each Net Billed Project capability purchased by each Participant, such Participant will pay the Supply System its share of the Supply System's costs for such Net Billed Project less amounts payable from any other sources. For each Net Billed Project Bonneville will pay for such Project capability sold by the Participants to Bonneville under the Net Billing Agreements by giving the Participants credits against the amounts the Participants owe Bonneville under the aforesaid power sales contracts and under any contracts for power and certain services, and the Participant is obligated to pay the Supply System the amount so credited. This crediting procedure is called "net billing".

Under the Net Billing Agreements, prior to each Contract Year the Supply System will adopt an Annual Budget for each Net Billed Project covering all the Supply System's costs for such Net Billed Project, including debt service on the respective Net Billed Bonds. Thereafter the Supply System



will prepare Billing Statements for each Net Billed Project for each Participant therein which will show the Participant's share of the Annual Budget for such Net Billed Project less amounts payable from any other sources. The Annual Budget and Billing Statements may be amended during a Contract Year if necessary.

Each Participant is a party to at least two agreements with Bonneville providing for net billing. In the month preceding the beginning of each Contract Year, the Bonneville bill to each Participant for power supply and other services under the Participant's power sales contracts with Bonneville will show an offsetting credit equal to the Participant's obligations to the Supply System and others, as shown on its Billing Statements and billing statements under its other net billing agreements, up to the full amount of such bills if necessary. In each month thereafter such crediting will continue until credits equal to the total amount shown on the Participant's Billing Statements and other billing statements have been made to the Participant. The credits received by the Participant from Bonneville in each month under all net billing agreements are required to be allocated pro rata among the Participant's net billing obligations. In each month of the Contract Year, and within 30 days of receiving the credit, the Participant must pay the Supply System an amount equal to the pro rated credit for the Net Billed Projects received from Bonneville in the preceding month. The effect of this payment procedure is that moneys in the amount due Bonneville from the Participants, up to the Participants' total obligations to the Supply System as shown on their Billing Statements for the Net Billed Projects, are required to be paid to the Supply System and would not become available to pay other Bonneville obligations.

If Bonneville estimates that a Participant's obligation to Bonneville under its power sales contracts will not equal or exceed the Participant's obligations during a Contract Year to the Supply System and others under its Net Billing Agreements and its other net billing agreements, thus resulting in a net billing deficiency, the Net Billing Agreements provide that Bonneville shall use its best efforts to make assignments of such Participant's share of capability in a Net Billed Project to other Participants and other customers of Bonneville to the extent necessary to eliminate such Participant's net billing deficiency and, if such assignments are not sufficient to eliminate such deficiency, the Net Billing Agreements provide for mandatory assignments to the other Participants in such Net Billed Project. Such mandatory assignments to any Participant may not exceed 25% of that Participant's original share of such Net Billed Project capability or be such as to cause its obligation to the Supply System to exceed the credits available to it from Bonneville.

If a Participant defaults under its Net Billing Agreement, each other respective Participant's share of respective Net Billed Project capability will be automatically increased for the remaining term of the respective Net Billing Agreement pro rata with that of other nondefaulting Participants up to an accumulated maximum of 25% of its original share of respective Net Billed Project capability; provided that such increase shall not cause the estimate of the payments to be made by such Participant to the Supply System to exceed the estimate of the credits available to it from Bonneville's billings to the Participant for power and certain services.

*Bonneville Cash Payments.* The Net Billing Agreements provide that if assignments cannot be made in amounts sufficient to bring into balance the respective dollar obligations of Bonneville and a Participant, and an accumulated balance in favor of such Participant from a previous Contract Year is expected by Bonneville to be carried for an additional Contract Year, such balance and any subsequent monthly net balances that cannot be net billed will be paid in cash to such Participant by Bonneville. Bonneville may make expenditures from its revenues in the Bonneville Power Administration Fund (the "Fund") without further appropriation by Congress for any purpose necessary or appropriate to carry out the duties imposed upon Bonneville pursuant to law, including making any cash payments required under the Net Billing Agreements. While Bonneville's expenditures from its revenues in the Fund do not require formal approval by Congress, Congress may impose specific directives or limitations on such expenditures. This procedure remains unchanged by the Regional Power Act.

Bonneville is obligated to pay from its revenues in the Fund any cash payments required under the Net Billing Agreements, subject to the power of Congress to impose specific directives or limit such cash expenditures, prior to any payments by Bonneville to the Treasury for repayment of (i) the Federal

investment in the Federal Columbia River Power System (the "Federal System"), (ii) Corps of Engineers and the Bureau of Reclamation costs connected with the Federal System and (iii) bonds issued to the United States Treasury pursuant to the Federal Columbia River Transmission System Act and the Regional Power Act.

Bonneville has stated by letter to the Supply System and each Participant that, in accordance with the provisions of the Transmission Act, it will pay in cash from the Fund any costs billed to a Participant not paid through net billing credits on a parity with other Bonneville operating expenses including payments for additional resources acquired under the Regional Power Act. Bonneville has executed agreements with 90 of the Participants which permit it to make such cash payments directly to the Supply System without notice to these Participants.

Bonneville is obligated by law to establish rates for electric power and transmission of electric power which will recover the cost of acquisition (including all payments under the Net Billing Agreements), conservation and transmission of electric power including the amortization of the Federal investment in the Federal Columbia River Power System and other costs and expenses incurred.

Bonneville currently estimates that its revenues from Participants subject to net billing credits will exceed Bonneville's net billing obligations through September 30, 1985, the last fiscal year for which revenues have been estimated. To the extent that net billing obligations may exceed such revenues in later years, Bonneville is obligated to pay such deficiencies under the assignment and net billing procedures or by cash payments from the Fund in the manner described above. Net billing deficiency payment obligations are on a parity with Bonneville's obligation to pay its operation and maintenance expenses, including payments for additional resources acquired under the Regional Power Act. To the extent that Participants enter into new power sales contracts with Bonneville under the provisions of the Regional Power Act, Participants' obligations to Bonneville may be expected to increase, which will increase the Bonneville revenues subject to net billing. For a discussion of Bonneville revenues available from preference customers for net billing credits and cash payments, as described above, see "Estimated Bonneville Revenues from Preference Customers" under the caption "Bonneville Power Administration".

#### **Additional Net Billing Requirements**

Each Participant is obligated to pay the Supply System the amount set forth in its Billing Statement by the end of the Contract Year, whether or not it has received equivalent net billing credits or cash payments from Bonneville. No Participant will be required to make payments to the Supply System except from revenues derived from the ownership and operation of its electric utility properties and from cash payments made by Bonneville. Each Participant has covenanted that it will establish, maintain and collect rates or charges for power and energy and other services furnished through its electric utility properties which shall be adequate to provide revenues sufficient to make required payments to the Supply System.

Payments under the Project No. 1 Net Billing Agreements began in July 1980 and payments under the Project No. 2 Net Billing Agreements began in January 1977, in each case for all costs not capitalized, including debt service on the respective Net Billed Bonds. The Project No. 3 Net Billing Agreements provide that payments will commence on the date when Project No. 3 is ready to be operated on a commercial basis, or January 1, 1981, whichever is earlier; provided, that such payments prior to the date Project No. 3 is ready to be operated on a commercial basis or September 1, 1981, whichever is earlier, are limited to such amounts as Bonneville and the Supply System agree may be included in the Annual Budgets for Project No. 3. Since interest on the Project No. 3 Bonds is capitalized to September 1, 1982, it is now expected that the first Annual Budget providing for net billing payments will be the Annual Budget for the Contract Year beginning July 1, 1982.

Each Net Billed Resolution provides for a Reserve Account in the respective Bond Fund equal to one-half of the maximum annual interest on each series of respective Net Billed Bonds. The requirement for the outstanding Project No. 1 Bonds has been provided from Project No. 1 Bond proceeds. The requirement for the Project No. 1 1981 Bonds will be provided from Project No. 1 1981 Bond proceeds and the requirement for future Project No. 1 Bonds will be provided from Project No. 1 Bond proceeds or from payments received under the Project No. 1 Net Billing Agreements and Project No. 1

Exchange Agreements prior to the issuance of such Bonds. The requirement for outstanding Project No. 2 Bonds has been provided from payments received under the Project No. 2 Net Billing Agreements and Project No. 2 Bond proceeds. The requirement for the Project No. 2 1981 Bonds will be provided from Project No. 2 1981 Bond proceeds, and for subsequent series of Project No. 2 Bonds will be provided either from Project No. 2 Bond proceeds or from payments received under the Project No. 2 Net Billing Agreements prior to the issuance of such Bonds. As of September 1, 1982, the requirement for each series of Project No. 3 Bonds then outstanding must be deposited in the Reserve Account for Project No. 3. The Supply System will deposit \$24,791,458 from Project No. 3 1981 Bond proceeds to provide the balance of such requirement. As of July 1, 1981, \$25,000,000 has been deposited in the Reserve Account from Project No. 3 Bond proceeds.

#### **Project No. 1**

In addition to the revenues and funds described above, the revenues derived by the Supply System from the Project No. 1 Exchange Agreements are also pledged to the payment of the principal of and interest on the Project No. 1 Bonds. The Project No. 1 Companies are five investor-owned utility customers of Bonneville, each of which has purchased 6.494% of Project No. 1 capability during the period 1980 to 1996, and will pay the Supply System therefor the amount provided in the Project No. 1 Exchange Agreements. Such payments began in July 1980. As payment for the sale of this portion of Project No. 1 to Bonneville, Bonneville has agreed to furnish to each such Company 80,000 kilowatts of capacity and 68,000 kilowatts of average annual energy.

Under the Project No. 1 Net Billing Agreements and the Project No. 1 Exchange Agreements, the annual costs of Project No. 1 include, to the extent not otherwise provided for, the costs of the Hanford Project. Payment of the principal of and interest on the Project No. 1 Bonds is subject to the prior payment from income, revenues and receipts of the costs of the Supply System's Hanford Project not provided from such project's revenues. It is estimated that such costs to be paid from the revenues of Project No. 1 will average approximately \$3,212,000 per year during the fiscal years 1982 through 1991 when they will terminate. (See "Estimated Project No. 1 Annual Costs and Payments" and "Hanford Project and its Relationship to Project No. 1" under the caption "Project No. 1".)

The Project No. 1 Annual Budget will include, to the extent not otherwise provided, the cost of the Hanford Project, and the Billing Statements will reflect credits for amounts paid by the Project No. 1 Companies under the Project No. 1 Exchange Agreements. Amounts payable by Project No. 1 Participants pursuant to the Project No. 1 Net Billing Agreements will be increased to the extent that payments are not made by the Project No. 1 Companies under the Project No. 1 Exchange Agreements.

### **RECENT DEVELOPMENTS**

#### **Management Changes**

Mr. Robert L. Ferguson was appointed Managing Director of the Supply System on August 1, 1980. Since that time he has undertaken steps to reorganize the management of the Supply System's nuclear projects. Senior managers with extensive experience in directing nuclear industry construction have been recruited to lead the Supply System's construction programs. See "Management Actions Since August 1980" under the caption "The Supply System". In January 1981, the Supply System entered into an agreement with Bechtel Power Corporation ("Bechtel") to provide construction management services for Projects Nos. 1, 2 and 4. United Engineers and Constructors Inc. retains responsibility for engineering at Project Nos. 1 and 4 and certain construction management services at Project No. 1. Burns and Roe, Inc. retains responsibility for engineering at Project No. 2. In early 1981 Ebasco Services Incorporated ("Ebasco") assumed independent responsibility to perform engineering and construction management services at Projects Nos. 3 and 5. Concurrently with the Managing Director's reorganization of the Supply System, a special engineering task force to recommend improvements in engineering procedures and interfacing with construction management was instituted. For a discussion of the task force's recommendations and subsequent actions by the Supply System, see "Management Actions Since August 1980" under the caption "The Supply System".

## Schedules and Budget Estimates

In January 1981, the construction management firms, the architect-engineering firms and the Supply System staff were directed to completely reevaluate and prepare new and detailed construction schedules and cost estimates for each of the nuclear projects. The evaluation process was the most extensive budget review undertaken by the Supply System and included a review of all cost components from the lowest common denominator to develop a total project cost (a "zero-base" budgeting concept). The budgeting system included new controls to monitor costs, integrated project schedules, monthly project reviews and an incentive program for construction management.

The following table summarizes the status, the scheduled commercial operation dates and total estimated financing requirements which resulted from the reevaluations and which have been approved and adopted by the Supply System's Board of Directors as the 1982 project construction budgets:

**1982 Budget Summary**  
**Status, Schedule and Costs**  
(Dollars in Millions)

<u>Project</u>	<u>Construction Percent Complete(1)</u>	<u>Commercial Operation Date(2)</u>	<u>Total Estimated Cost at Comple- tion(3)(4)</u>	<u>Supply System Financing Require- ment(4)</u>	<u>Bonds Previously Issued</u>	<u>Bonds To Be Issued(4)(5)</u>
No. 1(6) .....	41%	June 1986	\$ 4,268	\$ 3,190	\$1,455	\$ 1,735
No. 2 .....	86	February 1984	3,216	2,506	1,485	1,021
No. 3 .....	32	December 1986	4,532	2,458	905	1,553
No. 4(7) .....	23	June 1987	11,771	11,179	2,250	8,929
No. 5(7) .....	14	December 1987				
<b>Totals</b>			<u>\$23,787</u>	<u>\$19,333</u>	<u>\$6,095</u>	<u>\$13,238</u>

(1) For a discussion of construction completion percentages see "Schedules and Budgets" under the caption "The Supply System".

(2) The scheduled commercial operation dates for Projects Nos. 1, 2, 3, 4 and 5 reflect delays of 12, 13, 6, 12 and 6 months, respectively, over those in the 1981 budget.

(3) Includes Supply System financing requirements for its projects, payments by the investor-owned utilities which are part owners of Projects Nos. 3 and 5 and the debt service on bonds issued for Projects Nos. 1, 2 and 3 and certain reserves which have been or will be paid by Bonneville prior to the projected commercial operation dates.

(4) Does not include any possible impacts which may result from a termination of either Project No. 4 or Project No. 5.

(5) Includes the 1981 Net Billed Bonds.

(6) Does not reflect the fuel acquisition from Projects Nos. 4 and 5 discussed under "Nuclear Fuel" under the caption "Project No. 1".

(7) Does not reflect any possible actions that may be taken by the participants in Projects Nos. 4 and 5. See "Status of Projects Nos. 4 and 5 and Possible Effect on Net Billed Projects" under the caption "Recent Developments".

The 1982 project construction budgets total estimated cost at completion for all projects is \$23.8 billion, an increase of \$7.9 billion over the 1981 budget total of \$15.9 billion. The following table is a comparison between the 1981 and 1982 budget summaries.

**Budget Comparisons**  
(Dollars in Millions)

<u>Project</u>	<u>Total Estimated Costs at Completion(1)(2)</u>			<u>Supply System Financing Requirements(2)(3)</u>		
	<u>1982 Budget(2)</u>	<u>1981 Budget</u>	<u>Increase</u>	<u>1982 Budget(2)</u>	<u>1981 Budget</u>	<u>Increase</u>
No. 1(4) .....	\$ 4,268	\$ 2,736	\$1,532	\$ 3,190	\$ 2,155	\$1,035
No. 2 .....	3,216	2,467	749	2,506	1,986	520
No. 3 .....	4,532	3,130	1,402	2,458	1,822	636
Nos. 4 and 5(5) ...	11,771	7,615	4,156	11,179	7,231	3,948
<b>Totals</b> .....	<u>\$23,787</u>	<u>\$15,948</u>	<u>\$7,839</u>	<u>\$19,333</u>	<u>\$13,194</u>	<u>\$6,139</u>

(1) Includes Supply System financing requirements for its projects, payments by the investor-owned utilities which are part owners of Projects Nos. 3 and 5 and the debt service on bonds issued for Projects Nos. 1, 2 and 3 and certain reserves which have been or will be paid by Bonneville prior to the projected commercial operation dates.

(2) Does not include any possible impacts which may result from a termination of either Project No. 4 or Project No. 5.

(3) Includes \$6,095 million of bonds issued to date.

(4) Does not reflect the fuel acquisition from Projects Nos. 4 and 5 discussed under "Nuclear Fuel" under the caption "Project No. 1".

(5) Does not reflect any possible actions that may be taken by the participants in Projects Nos. 4 and 5. See "Status of Projects Nos. 4 and 5 and Possible Effects on Net Billed Projects" under the caption "Recent Developments".

The increases in the estimated costs are the result of a combination of factors, primarily schedule delays, increased estimates in amounts of labor and materials, an increase in the assumed rate of inflation of the cost of labor and material and an increase in the assumed interest and financing costs. See "Schedules and Budgets" under the caption "The Supply System".

#### **Initiative Petition**

In July 1981, the Secretary of State of Washington certified that sufficient signatures were obtained to qualify Initiative Measure No. 394 for submission to the voters of the State of Washington at the state wide general election to be held on November 3, 1981.

If Initiative Measure No. 394 is enacted into law by a majority of the voters voting at the state wide general election it would require that no joint operating agency could issue or sell bonds after July 1, 1982 to finance the cost of construction of certain electric generating facilities, including the Net Billed Projects and Projects Nos. 4 and 5, unless it had first obtained authority therefor at a regular or special election by approval of a majority of the voters of the local government entities comprising the membership of the joint operating agency voting at such election. Prior to such election an independent consultant approved by the State Finance Committee must prepare a cost effectiveness study of such generating facility.

The Supply System is unable to predict whether or not Initiative Measure No. 394 will be enacted into law. If such initiative is enacted into law, the Supply System expects that its constitutionality would be challenged. However, even if such litigation were ultimately successful, such law could result in delays in the construction schedules of each of the Supply System's projects and increase the cost of such projects.

In the opinion of Bond Counsel and Special Counsel to the Supply System and General Counsel to Bonneville, if Initiative Measure No. 394 were enacted into law and an action were properly instituted and prosecuted by appropriate parties contesting its constitutionality as applied to the Supply System's Nuclear Projects Nos. 1, 2, 3, 4 and 5, the plaintiffs should prevail.

In the event such initiative is enacted into law and voter approval for the issuance of bonds with respect to any project were not obtained, the Supply System may be obligated to terminate such project if other sources or methods of financing completion of construction of such project were not available. A termination of such project would have adverse effects on projects not terminated. For a summary of certain provisions with respect to termination in the Net Billing Agreements, see "Termination" under the caption "The Net Billing Agreements".

In the opinion of Bond Counsel and Special Counsel to the Supply System and General Counsel to Bonneville, the obligations of Bonneville, the Participants and, as to Project No. 1, the Project No 1 Companies in respect of the payment of the annual costs of the Net Billed Projects, including debt service on the Net Billed Bonds, under the Net Billing Agreements and, with respect to Project No. 1, the Project No. 1 Exchange Agreements, and the obligation of the Supply System to pay such debt service under the Net Billed Resolutions would remain in full force and effect, subject to the exceptions set forth in the next to the last paragraph of the opinions with respect to such agreements contained in Exhibit F, if any of the Net Billed Projects were terminated as a result of the enactment into law of Initiative Measure No. 394 and the failure to obtain voter approval.

#### **Status of Projects Nos. 4 and 5 and Possible Effect on Net Billed Projects**

On June 18, 1981, the Board of Directors of the Supply System, upon the recommendation of the Managing Director made on May 29, 1981, authorized a construction slowdown on Projects Nos. 4 and 5, which immediately thereafter was commenced. The process of construction slowdown has substantially reduced the number of construction workers at Projects Nos. 4 and 5. The Supply System estimated that such construction slowdown would not result in a delay in the scheduled commercial operation dates or in an increase in costs of construction for Projects Nos. 4 and 5 if normal construction were resumed within approximately six months after initiation of the slowdown. However, for the reasons described hereafter, there is a likelihood that such slowdown will continue beyond that period. Further, the projects could be terminated during such period as a result of the circumstances hereafter described.

Prior to the construction slowdown, the 1981 Washington State Legislature adopted Washington Laws 1st Ex Sess 1981, ch. 4. This law requires the Joint Energy Research Center of the University of Washington and Washington State University, through its affiliate office of applied energy studies of Washington State University, to conduct a study of Projects Nos. 4 and 5. Among other matters, the study must determine the need for Projects Nos. 4 and 5 and the cost effectiveness of reliable available alternatives as compared to Projects Nos. 4 and 5. The study must be completed by March 15, 1982. For a more detailed description of the study see "State Legislative Developments" under the caption "Legislative Developments".

Subsequent to the Managing Director's recommendation for the construction slowdown on Projects Nos. 4 and 5, on June 11, 1981 Moody's Investors Service, Inc. revised downward the rating on Supply System bonds issued for Projects Nos. 4 and 5 from A1 to Baa1 and on June 19, 1981 Standard & Poor's Corporation revised downward the rating on such bonds from A+ to A. The ratings reflect only the respective views of the rating agencies and an explanation of the significance of the ratings may be obtained only from the rating agency furnishing the same. Moody's Investors Service, Inc. and Standard & Poor's Corporation have given the 1981 Net Billed Bonds ratings of Aaa and AAA, respectively. See the caption "Ratings".

On July 23, 1981, the Governors of the States of Washington and Oregon announced the appointment of an independent panel of business leaders to study, over a period of 30 to 60 days, the impact of Projects Nos. 4 and 5 on the region's economy, state and local governments, public and private utilities and electric ratepayers. The members of the panel are Edward E. Carlson, Chairman of the Board of UAL, Inc.; George Weyerhaeuser, President and Chief Executive Officer of Weyerhaeuser Co.; and John Elorriaga, Chairman of the Board and Chief Executive Officer of U.S. National Bank of Oregon and the U.S. Bancorp. The report is expected in the near future.

On July 27, 1981, Bonneville approved the purchase, with construction fund moneys of Project No. 1, of certain nuclear fuel materials and services relating to Projects Nos. 4 and 5 for approximately \$100 million. Of such funds, approximately \$36 million will be paid in October 1981 for Department of Energy enrichment services and the balance will be applied to the construction costs of Projects Nos. 4 and 5. The Supply System estimates that such funds will be sufficient, together with other available moneys, during the construction slowdown, to meet cash flow requirements through mid October 1981.

The Supply System does not at present have sufficient funds to pay for invoices being received and for site work being performed, and the Supply System must depend upon additional funds becoming available. As set forth below, the Supply System is proceeding with the preparation of a bond issue for Projects Nos. 4 and 5 for sale in October. There can be no assurance that such bonds can be sold. Currently there is no other source of funds available to the Supply System.

As a result of its financial situation, the Supply System notified its construction and equipment contractors on Projects Nos. 4 and 5 that if on or about September 1, 1981 there were no reasonable expectation that the Supply System would be able to obtain additional funds by mid October, the Managing Director would be obliged to request authority from the Board of Directors of the Supply System to issue stop work orders to all contractors for Projects Nos. 4 and 5 and to commence the required process working towards termination of such projects. As a result of the adoption by the Participants' Committee for Projects Nos. 4 and 5 (the "4-5 Participants' Committee") of the resolution of August 27, 1981 discussed below and the determination by the 4-5 Participants' Committee to proceed with the preparation for the sale of the Projects Nos. 4 and 5 bonds, the Managing Director has not requested authority from the Board of Directors of the Supply System to commence the termination process of Projects Nos. 4 and 5.

On August 27, 1981 the 4-5 Participants' Committee adopted a resolution providing generally as follows:

(1) The participants purchasing the capability of Projects Nos. 4 and 5 (the "4-5 Participants") should amend the Participants' Agreements to provide for payment to the Supply System of at least 50 percent of the interest during construction on Projects Nos. 4 and 5 bonds after March 1, 1983,

(2) The Supply System should covenant with the purchasers of Projects Nos. 4 and 5 bonds that if the Participants' Agreements are not amended as described in Paragraph (1) by March 1, 1982, and the Supply System is at any time thereafter unable to finance both projects, one project shall be terminated. The Supply System would determine that it is unable to finance both

projects if at any time it did not have on hand available funds (excluding amounts held in the reserve account in the bond fund), and/or firm commitments to provide funds for Projects Nos. 4 and 5, in an amount which is sufficient to pay (a) twelve months interest on all outstanding Projects Nos. 4 and 5 bonds (except to the extent that the 4-5 Participants shall be obligated to make payments with respect to such interest), and (b) all requirements of the construction budget for the Supply System's share of the costs of Projects Nos. 4 and 5 (excluding interest, financing costs and reserves) (i) during the period from March 1, 1982 to June 1, 1982, for the next three months and (ii) after June 1, 1982, for the next six months. Following termination of one project, the 4-5 Participants would make payments for interest and principal in the amounts described below. The Supply System would further covenant as follows:

(a) Project bonds to be issued in the amount necessary to terminate the project would be fully amortized over a five-year period with payments by 4-5 Participants beginning twelve months after termination.

(b) Project bonds to be issued to finance the continued project in an amount equal to that of all bonds outstanding as of August 19, 1981 and attributable to the terminated project would be fully amortized by 1992.

(c) The terms of the project bonds hereafter issued would contain provisions for acceleration of retirement in the event of termination of a single project so as to fully amortize the portion of such bonds attributable to the terminated project over a ten-year period with payments by 4-5 Participants beginning twelve months after termination.

(3) Prior to March 1, 1982 the Supply System will continue construction of Projects Nos. 4 and 5 on a slowdown basis until further directions from the 4-5 Participants' Committee, and thereafter, subject to the availability of financing, proceed with all dispatch with construction of both projects or one project if the other is terminated, and

(4) The covenants with future bondholders, as described in Paragraph (2), would provide that in the event that Bonneville acquires the capability of Projects Nos. 4 and 5 in a manner substantially similar to Projects Nos. 1, 2 and 3, (a) the 4-5 Participants would not be required to pay further interest during construction as contemplated by Paragraph (1) above, and (b) the Supply System would not be required to terminate one project as set forth in Paragraph (2) above.

Fourteen of the 88 4-5 Participants, representing 8.283 percent of the 4-5 Participants' shares, voted against adoption of the August 27, 1981 resolution. Comments made by certain members of the 4-5 Participants' Committee representing approximately 30 percent of the 4-5 Participants' shares at the meeting at which the August 27, 1981 resolution was adopted indicated a strong sentiment that Projects Nos. 4 and 5 be regionalized to broaden the risk and cost base and that regionalization would be necessary before they would agree to pay 50 percent of interest during construction and would be a major consideration of the 4-5 Participants in their determination to take future actions required to continue Projects Nos. 4 and 5. Regionalization would involve acquisition of the capability of Projects Nos. 4 and 5 by Bonneville or long-term participation by other utilities or the direct service industrial customers of Bonneville in such Projects. There are at present no commitments by Bonneville or such other utilities or direct service industrial customers with respect to the regionalization of Projects Nos. 4 and 5.

The Supply System estimates, based on the 1982 Projects Nos. 4 and 5 construction budgets, that if the 4-5 Participants pay 50 percent of the interest during construction on Projects Nos. 4 and 5 bonds after March 1, 1983, the total Supply System financing requirements for Projects Nos. 4 and 5 may be reduced by approximately \$2.3 billion. In the opinion of Bond Counsel and Special Counsel to the Supply System, the approval by each 4-5 Participant is required to amend its Participants' Agreement to provide for the making of payments to the Supply System of interest during construction of Projects Nos. 4 and 5 prior to the dates now contemplated by the Participants' Agreements.

The Supply System is proceeding to implement the plan set forth in the August 27, 1981 resolution through the sale and issuance of bonds for Projects Nos. 4 and 5 in October. No assurance can be given that the Supply System will be able to sell such bonds, and in the event such bonds are not sold or additional funds are not timely received by the Supply System, there is a likelihood that Projects Nos. 4 and 5 will be terminated.

If termination of Projects Nos. 4 and 5 occurs, the 4-5 Participants would be obligated under the Participants' Agreements relating to such projects to pay the annual costs, including the debt service on bonds issued with respect to such projects and other costs of termination, beginning one year after the

date of termination. Although there can be no reliable assessment at this time of the costs of termination of such projects, the Supply System's preliminary estimates indicate that the Supply System's Ownership Share of such costs could range from \$475,000,000 to \$760,000,000 and, until such payments are received from the 4-5 Participants, the Supply System may have insufficient funds to pay such costs. Debt service on the Projects Nos. 4 and 5 bonds is currently funded to March 1, 1983.

In the event of an insufficiency of funds available to pay creditors with respect to services, work or materials provided with respect to the construction of Projects Nos. 4 and 5, such creditors may, through legal process, seek to reach the Net Billed Projects or funds held under the Net Billed Resolutions, or the revenues pledged thereunder. In the opinion of Bond Counsel and Special Counsel to the Supply System, the Net Billed Projects, the respective revenues of the Net Billed Projects and the funds held under the Net Billed Resolutions are not subject to claims of such creditors and no liens thereon are available to such creditors, except as any such creditors may obtain rights through a valid exercise of the sovereign police powers of the State of Washington or of the constitutional powers of the United States of America, or by a voluntary bankruptcy of the Supply System. There may also be other claims which are not foreseeable and as to which no opinion can be expressed.

Projects Nos. 4 and 5 are being constructed as twin units to Projects Nos. 1 and 3, respectively, and consequently many of the construction and equipment contracts for Projects Nos. 4 and 5 also include construction work, services and equipment for Projects Nos. 1 and 3. Therefore a termination of Projects Nos. 4 and 5, and an insufficiency of funds to pay such contractors with respect to work, services or equipment for such projects, could excuse performance of all work under such contracts or otherwise disrupt construction of, and result in claims for additional compensation for work or equipment for, Projects Nos. 1 and 3. Although such disruptions and claims would result in increased costs and possible schedule delays with respect to Project Nos. 1 and 3, the Supply System cannot predict whether such disruptions and claims would occur or the magnitude of their impact on such costs and schedules.

A termination of Projects Nos. 4 and 5 would cause the cost of certain services and facilities which are to be shared with Projects Nos. 1 and 3, respectively, to be borne in whole or in part by Projects Nos. 1 and 3. The Supply System's preliminary estimates indicate that such costs could increase the direct construction costs to be incurred for Project No. 1 and the Supply System's Ownership Share of Project No. 3 in the order of \$450,000,000 and \$350,000,000, respectively. No assurance can be given that such costs will be within these estimates. In addition to these prospective costs of shared services and facilities, there may be claims that Projects Nos. 1 and 3 should reimburse Projects Nos. 4 and 5 for all or a portion of the costs of such services and facilities already paid by Projects Nos. 4 and 5. These costs in the approximate amount of \$181,000,000 and \$224,000,000 for Projects Nos. 4 and 5, respectively, could increase the costs of Projects Nos. 1 and 3 if such claims were allowed. The Supply System cannot predict the outcome if any such claims were made.

The Supply System and Bonneville are presently negotiating an agreement with respect to the allocation of costs for services and facilities common to the Net Billed Projects and Projects Nos. 4 and 5 during the construction slowdown of Projects Nos. 4 and 5. Assuming a one year slowdown in construction of Projects Nos. 4 and 5, it is estimated that such agreement could result in approximately \$120,000,000 of additional costs to the Net Billed Projects over what is presently borne by such Projects with respect to commonly shared costs.

Under the Net Billed Resolutions, a default can occur if a court of competent jurisdiction appoints a receiver, trustee or liquidator of the Supply System or such court assumes custody or control of the Supply System under any law for the relief or aid of debtors. As a result of creditors' claims or judgments relating to Projects Nos. 4 and 5, such creditors may attempt, through legal process, to have the court assume control of the Supply System or place it in receivership or to have a trustee or liquidator appointed therefor. While under certain circumstances municipal corporations could be placed in involuntary receivership in judicial proceedings within the State of Washington, it is the opinion of Bond Counsel and Special Counsel to the Supply System that it is unlikely that such relief would be available to such creditors under the existing laws of the State of Washington as long as the Supply System is attempting in good faith to meet its obligations and is complying with orders entered by the courts. The Net Billed Resolutions also provide that certain actions taken by the Supply System or voluntarily consented to by it relating to insolvency, bankruptcy or receiverships of the Supply System will constitute a default thereunder. See "Events of Default; Remedies" under the caption "Summary of Certain Provisions of the Net Billed Resolutions and Supplemental Resolutions".

In the opinion of Bond Counsel and Special Counsel to the Supply System and General Counsel to Bonneville, the obligations of Bonneville, the Participants and, as to the Project No. 1 Bonds, the



Project No. 1 Companies in respect of the payment of the annual costs of the Net Billed Projects, including debt service on the Net Billed Bonds, under the Net Billing Agreements and, with respect to Project No. 1, the Project No. 1 Exchange Agreements, and the obligation of the Supply System to pay such debt service under the Net Billed Resolutions would remain in full force and effect, subject to the exceptions set forth in the next to the last paragraph of the opinions with respect to such agreements contained in Exhibit F, notwithstanding the occurrence of any event of default under the Net Billed Resolutions or other occurrences resulting from a termination of Projects Nos. 4 and 5.

## **POWER SUPPLY IN THE PACIFIC NORTHWEST**

### **Historical Background**

Planning of power supply facilities in the Pacific Northwest (the states of Washington, Oregon, Idaho, and Montana west of the Continental Divide, plus small adjacent portions of California, Montana, Nevada, Utah and Wyoming) has been undertaken with a high degree of cooperation for many years. The Northwest Power Pool, a voluntary organization of public, investor-owned and Federal power suppliers, was established in 1942 to coordinate power operations in the Pacific Northwest and continues to assist in this function. The Pacific Northwest Utilities Conference Committee ("PNUCC"), consisting of essentially all power generating interests in the region, was formed in the late 1940's to extend the functions established in the Northwest Power Pool into other areas including the advanced planning of power resources on a coordinated basis. The Public Power Council, representing over 100 publicly owned utilities and cooperatives, was formed in the late 1960's to coordinate the activities of publicly owned utilities in the further development of the region's electric power supply.

The Bonneville Power Administration was established by the Bonneville Project Act of 1937. Under the Bonneville Project Act and the Federal Columbia River Transmission System Act of 1974, Bonneville constructs and operates transmission facilities and markets power from 30 federal hydroelectric generating resources and from generating resources acquired from non-federal sources in the Pacific Northwest. Bonneville's transmission facilities, together with its generating resources, comprise the Federal Columbia River Power System (the "Federal System"). Bonneville sells electric power at wholesale to 146 utility, industrial and government customers in the Pacific Northwest including 116 public and cooperative utility customers, and sells any available surplus electric power to wholesale power purchasers within and outside the region. Bonneville is required by statute to establish rates sufficient to recover the costs of acquiring and transmitting electric power.

Until the late 1960's nearly all the power supply in the Pacific Northwest was obtained from the hydroelectric resources of the region. By that time, most of the potential hydroelectric resources remaining to be developed were peaking resources with only limited base load energy generating capabilities. Since the electric energy loads in the region were continuing to increase, base load thermal generating resources were necessary to supply the region's increasing energy needs.

In 1968, a Ten-year Hydro Thermal Power Program was adopted which was to provide for the construction of hydro and thermal generating resources to meet the region's power requirements and to guide the region in its transition from a hydroelectric power supply base to a mixed base of hydro and thermal generating resources. This program provided for eight large thermal plants scheduled for commercial operation at various times through the early 1980's, including the Net Billed Projects. Under this program and its then existing statutory authority, Bonneville undertook to provide for additional power supply to its preference customers and industrial loads by acquiring the capability of certain publicly owned generating facilities by purchase under the "net billing" concept.

Early in the 1970's it became apparent that the Ten-year Hydro Thermal Power Program would not provide adequate generating resources beyond the early 1980's. Consequently, as part of a regional cooperative power supply effort Bonneville's public and cooperative utility customers undertook to provide their own additional generating resources, such as Projects Nos. 4 and 5, without the acquisition of the capability thereof by Bonneville.

On December 5, 1980, Federal legislation was enacted entitled the "Pacific Northwest Electric Power Planning and Conservation Act", Pub. L. 96-501 (the "Regional Power Act"). This legislation substantially changed the power supply program of the Pacific Northwest utilities, Bonneville and Bonneville's

direct service industrial customers. Under the Regional Power Act, Bonneville is authorized to acquire electric power resources, including capability, from non-federal entities, although Bonneville is not authorized to own or to construct generating facilities. Simultaneously, the Regional Power Act makes Bonneville responsible for meeting the firm power requirements of all requesting Pacific Northwest utilities to the extent these requirements exceed the utilities' own committed resources and it also directs Bonneville to continue to serve the loads of Bonneville's direct service industrial customers with an amount of power equivalent to that provided under current contracts. The authority granted Bonneville for conservation and for the acquisition of electric power resources is intended to enable Bonneville to carry out these new power supply obligations.

Bonneville must offer each requesting Pacific Northwest utility a net requirements power sales contract by September 5, 1981 and each utility will have one year from the date of such offer to accept. Under such contracts Bonneville will be required to meet each utility's firm power loads in excess of such utility's own committed resources. For a detailed discussion of the impacts of the Regional Power Act on Bonneville and Bonneville's customers see "The Regional Power Act" under the caption "Bonneville Power Administration".

#### **Regional Power Requirements and Resources**

In past years, a load and resource analysis for the utilities comprising the West Group of the Northwest Power Pool has been developed by the PNUCC. Because of the passage of the Regional Power Act, the PNUCC West Group Forecast was discontinued in 1981 and in its place PNUCC has published the Northwest Regional Forecast of Power Loads and Resources (the "Regional Forecast"). The Regional Forecast is a compilation of the forecasts submitted by, or for, each of the utilities in the region. The Northwest Regional Area energy load is approximately 10% larger than that of the West Group Area.

The 1981 Regional Forecast shows that a deficiency of estimated energy resources exists in all years and a deficiency of estimated peaking resources exists in ten of the eleven years included in the forecast. However, these deficiencies are smaller than the deficiencies shown in the 1980 West Group Area Forecast. The reduction of the deficiencies is due primarily to three factors: first, the inclusion, by utilities, of additional conservation savings and end-use renewable resource potential; second, a one-time reduction by Bonneville in the load forecasts estimated by some of its customers; and third, an increase in the rate of addition of conventional resources in the later years. Resource planning in the region is based on a multi-year critical period for hydroelectric resources, which is the historical water year period that, when augmented with stored water, is the most critical with respect to system load requirements. During portions of most years substantial secondary energy, resulting from more favorable water conditions, is expected to be available.

The PNUCC load and resource analysis has historically provided the basis for long-range regional resource planning by the utilities. The data in the following table shows an average annual increase in peak requirements of 3.4% per year and an increase in energy requirements of 3.2% per year over the period 1982 through 1992. Other groups have undertaken studies of the projected electric utility loads in the region. Some of these studies indicate lower future requirements for power than those shown in the table and some higher depending on the assumptions made in the study.

The Regional Power Act includes strong conservation elements. Although present load forecasts reflect some energy conservation efforts, a report prepared for the PNUCC by Hittman Associates Inc., a consulting firm, released in July 1981 states that growth in Pacific Northwest electric energy requirements will be substantially reduced as a result of conservation and customer-owned generation. The report indicates that the current Regional Forecast reflects about 2990 average megawatts of conservation savings in fiscal year 1990 and that an additional 1600 average megawatts of conservation savings are likely in 1990 as a result of conservation strategies which are cost effective at 50 mills per kilowatt-hour, in 1980 dollars, plus a 10% premium for conservation as provided for under the Regional Power Act.

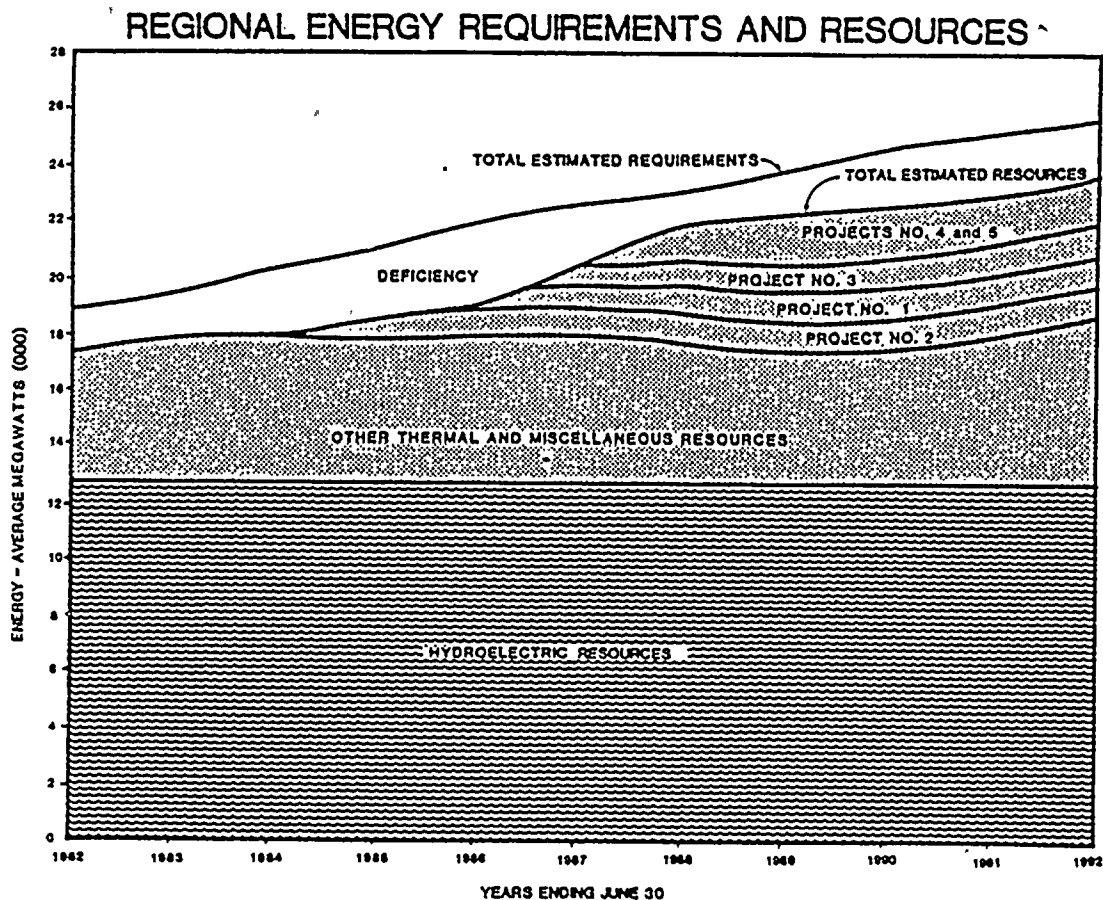
The following table summarizes the estimated electric power requirements of the region, the estimated resources available to meet those requirements and the estimated surpluses or deficiencies that will exist during the period of the forecast, as published in the 1981 Regional Forecast.

### REGIONAL LOADS AND RESOURCES

Year Ending June 30	ESTIMATED REQUIREMENTS(1)				ESTIMATED RESOURCES(2)				Surplus or Deficit(3)	Percent Surplus or Deficit(3)
	Public and Federal Agencies	Direct Service Industries	Investor Owned Utilities	Total Require- ments	Federal System	Public Agency Own Resources	Other Resources	Total Resources		
Peak Capability—Megawatts										
1982 .....	12,452	3,603	14,377	30,432	13,428	3,473	13,341	30,242	(190)	(0.6)
1983 .....	13,045	3,641	15,037	31,723	13,337	3,679	12,923	29,939	(1,784)	(5.6)
1984 .....	13,587	3,820	15,642	33,049	13,291	3,795	12,978	30,064	(2,985)	(9.0)
1985 .....	14,083	3,997	16,283	34,363	14,147	3,799	12,800	30,746	(3,617)	(10.5)
1986 .....	14,631	4,015	16,908	35,554	15,702	3,832	12,863	32,397	(3,157)	(8.9)
1987 .....	15,116	4,038	17,467	36,621	18,026	3,793	13,351	35,170	(1,451)	(4.0)
1988 .....	15,655	4,067	18,014	37,736	18,754	5,771	13,929	38,454	718	1.9
1989 .....	16,237	4,098	18,617	38,952	18,680	5,549	14,209	38,438	(514)	(1.3)
1990 .....	16,848	4,118	19,228	40,194	18,631	5,298	13,840	37,769	(2,425)	(6.0)
1991 .....	17,475	4,124	19,800	41,399	18,575	5,287	14,733	38,595	(2,804)	(6.8)
1992 .....	18,064	4,128	20,350	42,542	18,619	5,182	14,944	38,745	(3,797)	(8.9)
Energy Capability—Average Megawatts										
1982 .....	7,056	3,521	8,321	18,898	7,872	1,870	7,769	17,511	(1,387)	(7.3)
1983 .....	7,408	3,556	8,687	19,651	8,033	1,911	7,934	17,878	(1,773)	(9.0)
1984 .....	7,778	3,683	9,024	20,485	8,102	2,069	7,809	17,980	(2,505)	(12.2)
1985 .....	8,043	3,906	9,370	21,319	8,489	2,141	7,939	18,569	(2,750)	(12.9)
1986 .....	8,338	3,924	9,690	21,952	8,568	2,184	8,193	18,945	(3,007)	(13.7)
1987 .....	8,605	3,945	9,993	22,543	9,481	2,259	8,473	20,213	(2,330)	(10.3)
1988 .....	8,885	3,974	10,293	23,152	9,543	3,351	8,979	21,873	(1,279)	(5.5)
1989 .....	9,197	4,006	10,609	23,812	9,498	3,654	9,197	22,349	(1,463)	(6.1)
1990 .....	9,513	4,025	10,935	24,478	9,575	3,844	9,172	22,591	(1,887)	(7.7)
1991 .....	9,851	4,031	11,249	25,131	9,595	3,900	9,554	23,049	(2,082)	(8.3)
1992 .....	10,194	4,035	11,546	25,775	9,595	3,906	10,097	23,598	(2,177)	(8.4)

- (1) Estimated requirements are by type of wholesale power user in the region. For a discussion of Bonneville's potential obligations to serve regional requirements under the Regional Power Act see "The Regional Power Act" under the caption "Bonneville Power Administration".
- (2) After deducting reserves under PNUCC planning guidelines. Peak reserve requirements are based on 12% of the total area load for the first year, increasing at a rate of 1% per year up to 20%, and remaining at 20% thereafter. Reserves also include allowance for load growth reserves equal to one-half of the area load growth for utility-type loads during that year. Assumes critical water conditions. Substantial secondary energy is expected to be available under most stream flow conditions. All resources forecasted under these guidelines are licensed for construction except Puget Sound Power & Light Company's Skagit Nuclear Unit No. 1, and The Washington Water Power Company's Creston Coal Units Nos. 1, 2 and 3.
- (3) After supplying all area interruptible loads (including Bonneville's industrial interruptible loads) which range from 1,002 to 1,249 megawatts on peak and 1,057 to 1,301 average megawatts of energy, not including associated line losses. Parentheses denote deficit values.

The following graph depicts the energy loads and resources shown in the above table. In order to show the region's resource mix and the extent of the hydroelectric base, the resources have been divided into hydroelectric resources and thermal and miscellaneous resources, with the Supply System's projects each shown separately.



The schedule of thermal generating plants planned or under construction, as utilized in the previous table, is shown below.

<u>Principal Sponsor</u>	<u>Project</u>	<u>Location</u>	<u>Type</u>	<u>Rated Capacity (MW)</u>	<u>Probable Energy Date*</u>
<b>PROJECTS UNDER CONSTRUCTION</b>					
Idaho Power Company	Valmy No. 1	Winnemucca, NV	Coal	250	Oct. 1981
The Montana Power Company	Colstrip No. 3	Colstrip, MT	Coal	700	Jan. 1984
Washington Public Power Supply System	Project No. 2	Hanford, WA	Nuclear	1,100	Feb. 1984
Idaho Power Company	Valmy No. 2	Winnemucca, NV	Coal	250	Oct. 1984
The Montana Power Company	Colstrip No. 4	Colstrip, MT	Coal	700	July 1985
Washington Public Power Supply System	Project No. 1	Hanford, WA	Nuclear	1,250	June 1986
Washington Public Power Supply System	Project No. 3	Satsop, WA	Nuclear	1,240	Dec. 1986
Washington Public Power Supply System	Project No. 4	Hanford, WA	Nuclear	1,250	June 1987
Washington Public Power Supply System	Project No. 5	Satsop, WA	Nuclear	1,240	Dec. 1987
<b>PROJECTS PLANNED BUT NOT LICENSED</b>					
The Washington Water Power Company	Creston No. 1	Creston, WA	Coal	500	July 1987
The Washington Water Power Company	Creston No. 2	Creston, WA	Coal	500	Jan. 1989
Puget Sound Power & Light Company	Skagit No. 1	Hanford, WA	Nuclear	1,288	Jan. 1991
The Washington Water Power Company	Creston No. 3	Creston, WA	Coal	500	Jan. 1992

\* The probable energy dates are the later of the scheduled operation dates established by the plant sponsor or the dates determined by application of Milestones. Milestone dates are determined from a standardized schedule reflecting anticipated average planning and construction times.

#### Regional Comparison of Energy Costs

The Pacific Northwest has consistently had low rates for electric service in comparison with most other regions of the country. A comparison of residential rates for representative utilities, both public and investor-owned, in several regions has been made to show this relationship. The rates shown in the following table are averages based on a United States Department of Energy ("DOE") report. The use of other schedules applicable to particular customers or the choice of different representative utilities will yield different results. Average residential usage of electricity in the Pacific Northwest of approximately 16,000 kilowatt-hours annually is nearly twice the national average of approximately 9,000 kilowatt-hours annually, due primarily to the more extensive use of electric space heating. In order to show the general effect of different levels of usage, average rates at usages of 6,000 kilowatt-hours per year and 12,000 kilowatt-hours per year have been calculated for each region as shown.

<u>Region</u>	<u>Average Annual Residential Bills at:</u>			
	<u>6,000 kWh/yr.</u>		<u>12,000 kWh/yr.</u>	
	<u>Cost</u>	<u>Mills/kWh</u>	<u>Cost</u>	<u>Mills/kWh</u>
Pacific Northwest .....	\$132	22	\$233	19
Pacific Southwest .....	\$327	55	\$667	56
Northeast/New England .....	\$460	77	\$795	66
Southeast .....	\$325	54	\$607	51
Midwest .....	\$323	54	\$504	42
South .....	\$289	48	\$521	43

\* Source: "Energy Data Report: Typical Electric Bills—January 1, 1980"; U.S. Department of Energy, December 1980.

## BONNEVILLE POWER ADMINISTRATION

The Bonneville Power Administration was established by the Bonneville Project Act of August 20, 1937. Under the Bonneville Project Act, and the Federal Columbia River Transmission System Act enacted in 1974 (the "Transmission Act"), Bonneville constructs and operates transmission facilities and markets power from 30 Federal hydroelectric projects in the Pacific Northwest with an installed peak generating capability of 20,121,720 kilowatts and a firm energy capability of 7,583,000 average kilowatts. These projects, authorized new projects and potential additions to existing projects will have the potential of an installed peak generating capability of approximately 31,748,000 kilowatts.

Bonneville's transmission facilities include approximately 13,000 circuit miles of 115 kV to 500 kV ac and 800 kV dc transmission lines. These transmission facilities, together with the hydroelectric projects mentioned above and the resources acquired from non-Federal sources, comprise the Federal System. More than 80 percent of the 500kV and 230 kV transmission system capacity in the Pacific Northwest is owned by Bonneville. In addition to Federal power, Bonneville transmits over the Federal System the major portion of the power from 12 non-Federal projects to various investor-owned and public utilities in the Pacific Northwest.

Bonneville sells electric power at wholesale to 146 utility, industrial and government customers in the Pacific Northwest, a service area of over 300,000 square miles with a population of about 8,000,000. Of its 146 customers, Bonneville serves either all or the major share of the electric load of most of its 116 public and cooperative utility customers and 15 industrial customers. In the year ended June 30, 1980, the Federal System produced approximately 50% of the region's energy requirements. In addition, Bonneville sells surplus power under contract to 15 customers outside the Pacific Northwest.

New legislation substantially changing Bonneville's authority was enacted on December 5, 1980. The Regional Power Act requires Bonneville to offer to sell power to each requesting Pacific Northwest utility to meet its firm power loads in the region in excess of the utility's own resources committed to serve such loads and to offer to sell power under new long-term contracts to Bonneville's existing direct service industrial customers. To enable Bonneville to meet its increased service obligations, the Regional Power Act directs Bonneville to acquire sufficient resources which are cost-effective, first from conservation, then from renewable resources, then from high fuel efficiency resources and then from conventional resources. For a more complete discussion of the act see "The Regional Power Act" below.

Under the Bonneville Project Act, the Transmission Act and the Regional Power Act, Bonneville acquires the conservation and generating resources needed to serve its contract obligations; markets at wholesale the electric energy from Federal hydroelectric projects and the net billed projects and such additional resources as it may acquire; constructs, operates, and maintains transmission lines and substations; interconnects the Federal hydroelectric projects and non-Federally owned power systems and projects; and is required by statute to establish rates to recover its costs of acquisition (including all payments under the Net Billing Agreements), conservation and transmission of electric power including the amortization of the Federal investment in the Federal Columbia River Power System and other costs and expenses incurred.

### Acquisition of Project Capability and Power Supply

Although the Federal System has a potential peak generating capability substantially greater than the existing installed capability, the firm energy capability of the hydro system is not expected to increase substantially. As part of the Hydro Thermal Power Program, described under the caption "Power Supply in the Pacific Northwest", Bonneville has purchased, through net billing agreements and exchange agreements, the capability of the Net Billed Projects and the City of Eugene, Oregon's 30% ownership share of the Trojan Project (the "net billed projects"). Under the provisions of the Regional Power Act, the Federal hydro-electric resources will be melded with the energy from net billed projects to form, in part, a resource pool called the Federal base system resources. These resources comprise a portion of the rate base for power sales to preference customers, including the Participants, and others

(as described in "Federal System Rates" below) and receive other special treatment under the Regional Power Act. The net billed projects are expected to represent 26% of the estimated energy capability of the Federal System in the year ending June 30, 1989, the year the last net billed project to come on line is expected to reach its full forecasted generating capability. To the extent that Bonneville acquires additional resources to meet its obligations under the Regional Power Act, the net billed projects will represent a smaller portion of the total resources available to Bonneville.

Bonneville has acquired the capability of the Supply System's Hanford Project in exchange for firm power from the Federal System. In addition, the United States entered into a treaty with Canada in 1964 for a term of sixty years under which Bonneville obtained certain rights to 15,500,000 acre-feet of hydro storage on the Columbia River and its tributaries in Canada, which has increased the capacity of Federal hydroelectric projects. For the 12 month period ended June 30, 1981, the portion of this increase available to Bonneville has been computed to be one million kilowatts of peak generating capability and three billion kilowatt hours of energy generating capability.

#### **Federal System Revenue Requirements**

Bonneville is the marketing and financial reporting entity for the Federal System, an integrated power system which in addition to Bonneville's facilities consists of the Pacific Northwest generating facilities of the Corps of Engineers ("Corps") and, except for the Green Springs Project in southern Oregon, the Bureau of Reclamation (the "Bureau"). Bonneville accounts for and records all Federal System revenues. Bonneville sets wholesale power and transmission rates to recover the costs associated with the acquisition, conservation and transmission of electric power, including the recovery of the Federal investment in Federal System transmission and generating facilities. The required level of revenues the rates must produce is determined by a repayment study prepared by Bonneville. The Bonneville Project Act, the Transmission Act, the Regional Power Act and Bonneville's policy for the preparation of the repayment study require that Bonneville's rate structure be designed so that revenues be sufficient to recover the costs of: (1) the purchase and exchange of power, including the cost of the net billed projects and resources acquired under the Regional Power Act, (2) Federal System operation and maintenance, (3) interest and amortization of bonds sold to the Treasury, (4) interest and amortization on Federal power facilities financed with appropriated funds, (5) certain irrigation costs assigned to be repaid from power revenues and (6) the other costs and expenses incurred by Bonneville under the Regional Power Act and other provisions of law. Rates must be designed to amortize the investment in Federal hydro projects within 50 years after they become revenue producing; the investment in Bonneville's transmission facilities financed with appropriated funds within their average service life, which is currently 35 years; and the investment in replacement equipment for Federal hydro projects within the service life of the equipment.

In addition to preparing the repayment study to determine the amount of revenues that will be required, Bonneville also prepares commercial financial statements for the Federal System which include depreciation. These financial statements, however, are not used in establishing revenue requirements. The audited financial statements and notes for the fiscal years ended September 30, 1979 and 1980 are shown in Exhibit H.

The total investment in Federal hydroelectric projects and the Bonneville transmission system was in excess of \$9.0 billion as of September 30, 1980. Approximately 83% of this investment is to be repaid from Federal System revenues. The investment in multipurpose Corps and Bureau projects is allocated among the purposes served by the projects, which include flood control, navigation, irrigation, municipal and industrial water supply, water quality, recreation, and the enhancement and propagation of fish and wildlife, in addition to the generation of power.

#### **Federal System Application of Revenues**

Prior to 1974 all revenues collected by Bonneville were deposited into the Federal Treasury and funds for all Bonneville expenditures were appropriated by Congress. Under the provisions of the

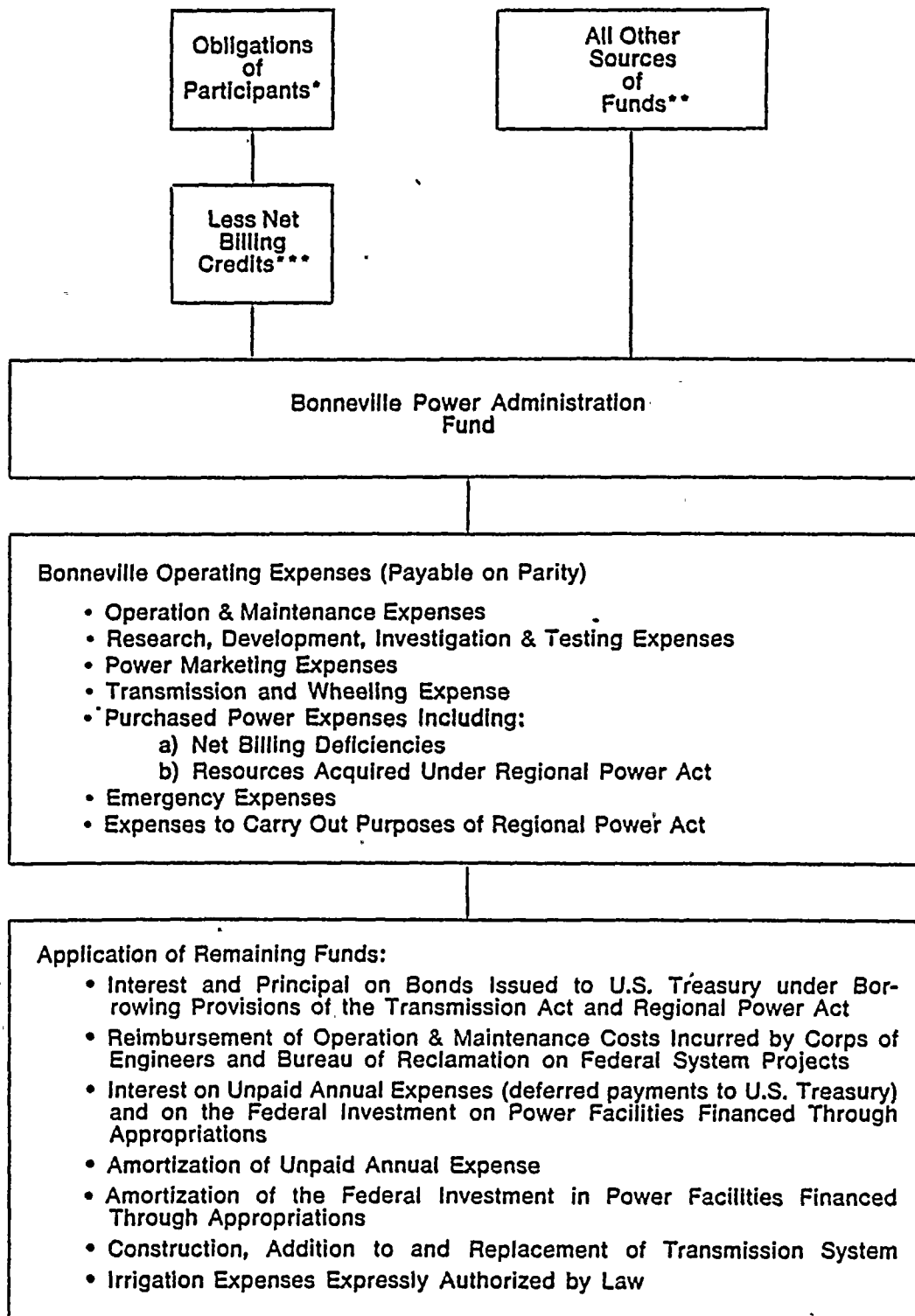
Transmission Act adopted in 1974 all Bonneville's revenues from the sale and transmission of electric power and energy are deposited in the Bonneville Power Administration Fund ("Fund") established in the Treasury. Such revenues are used to pay all of the Federal System's costs, including its net billing deficiencies and the costs of resources acquired under the Regional Power Act. Since 1974 Congress has not directly appropriated any funds to Bonneville.

Payments of principal and interest on bonds issued to the Treasury for the purposes specified in the Transmission Act and Regional Power Act, together with amortization and interest on the Federal investment in the Federal System, are expressly subordinated to Bonneville's net billing obligations, including any necessary net billing deficiency payments. Net billing deficiency payments are payable on a parity with Bonneville's other operating expenses. Other subordinated obligations include irrigation costs payable from power revenues and Bonneville's reimbursement to the Treasury of operation and maintenance costs incurred by the Corps of Engineers and Bureau of Reclamation on Federal System Projects. Although Bonneville establishes rates which are designed to produce revenues sufficient to pay all its annual costs, payments required to be made to the Treasury from net proceeds can be deferred if net proceeds are insufficient for these purposes. (See the following Chart and Table.)



# Bonneville Power Administration

## Flow of Funds



\* and others subject to net billing

\*\* The obligations of any of Bonneville's customers to Bonneville may become subject to net billing credits if such customers accept re-assignment of participants' shares. See "Net Billing Payment Procedure" under the caption "Security for the Net Billed Bonds".

\*\*\* includes credits for the Net Billed Projects

Federal System Application of Revenues  
(Dollars in Thousands)

	Historical						Projected				
	1976(1)	Transition Quarter(2)	1977(3)	1978	1979	1980	1981(4)	1982	1983	1984	1985
Total Power Sales (Gwh) . . .	77,409	20,564	61,755	76,511	72,024	72,549	79,866	107,029	116,044	122,114	130,838
Revenues:											
Total Operating Revenues(5)	\$296,998	\$75,508	\$223,592	\$333,964	\$296,559	\$512,466	\$694,600	\$1,579,454	\$2,223,342	\$2,771,274	\$3,392,756
Less: Net Billing Credits(6)	34,649	7,706	66,807	96,704	110,584	165,732	219,273	326,600	586,200	815,900	931,300
Net Received . . . . .	\$262,349	\$67,802	\$156,785	\$237,260	\$185,975	\$346,734	\$475,327	\$1,252,854	\$1,637,142	\$1,955,374	\$2,461,456
Application of Revenues in Order of Priority:											
1. Bonneville Operation & Maintenance . . . . .	\$ 50,440	\$14,948	\$ 59,476	\$ 72,077	\$ 81,847	\$108,028	\$138,924	\$ 177,653	\$ 225,638	\$ 288,924	\$ 355,762
Purchase and Exchange Power Payments Not Part of Net Billing Contracts (7) . . . . .	121	166	2,178	850	1,969	2,668	12,500	632,056	820,608	1,009,974	1,254,773
Net Billing Deficiency Payments(8)(9) . . . . .	1,563	1,494	15,158	22,413	18,185	10,399	7,927	0	0	0	0
Subtotal . . . . .	52,124	16,608	76,812	95,340	102,001	121,095	159,351	809,709	1,046,246	1,298,898	1,610,535
2. Amount available for payment to Treasury and for Bonneville Construction Program(10) . . . . .	210,225	51,194	79,973	141,920	83,974	225,639	315,976	443,145	590,896	656,476	850,921
Total Application of Revenues . . . . .	\$262,349	\$67,802	\$156,785	\$237,260	\$185,975	\$346,734	\$475,327	\$1,252,854	\$1,637,142	\$1,955,374	\$2,461,456

- (1) Fiscal Year ended June 30, 1976.
- (2) The Transition Quarter commenced July 1, 1976, and terminated September 30, 1976.
- (3) Fiscal Year 1977 started on October 1, 1976 and ended September 30, 1977. All subsequent fiscal years start on October 1, and end on the following September 30.
- (4) 1981 figures include actual figures through June 30 and projected figures through September 30.
- (5) Receipts from Treasury borrowings are excluded. Bonneville's preliminary projections of its total revenue requirements for fiscal years 1983, 1984, and 1985 indicate a need for revenue level increases of approximately 20%, 10%, and 5%, respectively, over projected revenue levels under current rates. Also included in projected revenue levels are additional revenues from increased power sales.
- (6) Net billing credits equal that portion of participants' obligations to Bonneville for power and other services which is credited on participants' monthly Bonneville bills to pay for the participants' net billings obligations to the City of Eugene, Oregon and to the Supply System in the manner described under the caption "Security for the Net Billed Bonds". After July 1, 1983, these purchases are limited by the availability of Federal System power and the hydro and thermal energy allocations contained in participants' current power sales contracts, but do not take into account expiration of contracts with direct-service industrial customers and Federal agency customers. The net billing credits specifically include the following plants which are subject to net billing contracts: the Net Billed Projects and Trojan. Historical net billing credits also include minor amounts of administratively determined net billing credits, for other than net billed thermal projects.
- (7) Includes the following purchased power payments which are not subject to net billing contracts: Boardman, Centralia, investor-owned utility exchange costs, and other power purchases.
- (8) A net billing deficiency is the amount by which Bonneville's obligation to pay to the participants the annual costs of the net billed projects exceeds the participants' obligations to pay Bonneville for power and other services. Net billing deficiencies will be paid in the manner described under the caption "Security for the Net Billed Bonds".
- (9) Bonneville has agreements with 90 of 104 participants allowing it to make cash payments whenever individual participant's obligations to Bonneville subject to net billing are insufficient to cover their net billing obligation. Bonneville makes such cash payments rather than reassign the shares of participants to other participants or customers which are not participants. While Bonneville has made net billing deficiency payments in the past, projected net billing deficiency payments are calculated based upon the assumption that reassignments are made. The City of Eugene, Oregon has requested a \$6 million cash payment to be made in October 1981. Since Bonneville may arrange for the assignment of deficiencies to other Bonneville customers, this potential cash payment is not reported here as a projected required net billing deficiency payment.
- (10) Amount represents the balance of revenues available for payment to the Treasury for bond interest and amortization, Corps and Bureau operation and maintenance costs, annual interest expense of the Federal System, unpaid annual expense, and amortization of the Federal facilities, and for payment of Bonneville's construction program. Actual cash payments to the Treasury will differ from these amounts due to adjustments for working capital, receipts balance from prior years, miscellaneous receipts, reimburseable programs and actual borrowing transactions.

### **Bonneville's Borrowing Authority**

Bonneville is authorized by law to borrow money by selling its bonds, notes and other evidences of indebtedness to the Treasury. The Transmission Act authorized Bonneville to sell up to \$1.25 billion in bonds to the Treasury, at interest rates comparable to those prevailing in the market for similar utility debt instruments for construction of transmission facilities. The Regional Power Act amends the interest criteria to set interest rates comparable to those prevailing in the market for similar bonds issued by government corporations.

The Regional Power Act extended the application of Bonneville's Transmission Act borrowing authority to include the implementation of the Regional Power Act (including financial assistance for conservation measures, renewable resources, and fish and wildlife, but not including the authority to acquire electric power from a generating facility having a planned capability greater than 50 average megawatts). The costs of all borrowing as well as all of Bonneville's and the Federal System's operating costs, including acquired resources, are required by the Regional Power Act to be paid by the region's electric ratepayers.

The Regional Power Act also established an additional \$1.25 billion in new borrowing authority, to finance conservation and renewable resource loans and grants. Borrowing under this additional authority is to be available as provided in advance in annual appropriation acts. Bonneville is not otherwise authorized to issue evidence of indebtedness in its own name.

As of June 1, 1981 Bonneville had borrowed from the Treasury \$235,000,000 under a short-term note and \$290,000,000 under long-term bonds. These amounts were borrowed prior to enactment of the Regional Power Act.

### **Bonneville Contracts**

Under the provisions of the Regional Power Act, Bonneville must offer each requesting preference customer, investor-owned utility and existing direct service industrial customer within the Pacific Northwest an initial long-term power sales contract by September 5, 1981. Bonneville also is authorized to sell electric power to Federal agencies in the Pacific Northwest. (See "Power Sales Contracts" under the subcaption "The Regional Power Act", below.)

Each Participant is a preference customer of Bonneville and has, with other public bodies and cooperatives, a statutory preference and priority to power from the Federal System. Each Participant is a party to at least one power sales contract requiring payment to Bonneville for the purchase of power. Such contracts, which expire between 1983 and 1994, are usually for a term of 20 years, the maximum permitted by law, and generally provide for the sale and delivery of firm power to the Participant in the amount of its requirements over and above the generating resources, if any, that the Participant has available to serve its own load. Bonneville's obligation to meet a preference customer's requirements is effective for the term of the contract, unless Bonneville gives the preference customer at least seven years' prior notice of insufficiency of supply. In 1976 Bonneville gave its preference customers notice that an insufficiency in power supply would occur after July 1, 1983. The existing power sales contracts provide that after the date of insufficiency Bonneville will be obligated to make available to each preference customer an allocation of firm energy for the balance of the term of the contract. Bonneville has not delivered firm power to Regional investor-owned utilities since 1973 because the Federal System resources were insufficient to serve both preference and non-preference regional power loads.

Bonneville delivers power to 15 industrial customers, most of which use large amounts of electric power to produce metals or chemicals, pursuant to 20-year power sales contracts. These contracts expire between 1981 and 1991.

In addition to sales in the Pacific Northwest, Bonneville delivers surplus power to entities outside the region. A large portion of this surplus power is sold to entities in California.

From time to time, Bonneville receives applications for purchase of power from public bodies and cooperatives other than its existing preference customers. These entities may also have a statutory preference and priority to power from the Federal System.

#### **The Regional Power Act**

On December 5, 1980, the Regional Power Act was enacted. This legislation substantially changed the power supply program of the Pacific Northwest utilities, Bonneville and Bonneville's direct service industrial customers. Under the new law, Bonneville is authorized to acquire electric power resources from non-federal entities, although Bonneville is not authorized to own or to construct generating facilities. Simultaneously, the new law makes Bonneville responsible for meeting the firm power requirements of all requesting Pacific Northwest utilities to the extent these requirements exceed the utilities' own committed resources and it makes Bonneville responsible for continuing to meet the contractual loads of Bonneville's direct service industrial customers. The new authority granted Bonneville for conservation and for the acquisition of electric power resources is intended to enable Bonneville to carry out these new power sales obligations.

The Regional Power Act does not dilute or diminish Bonneville's ability to meet its existing obligations under the Net Billing Agreements or the Project No. 1 Exchange Agreements, which remain as pre-existing Bonneville obligations. The new law, however, is expected to improve Bonneville's ability to perform its net billing obligations by (i) increasing Bonneville's net billing capability, and (ii) increasing the total amount of revenue that Bonneville will receive annually from its power sales customers.

A summary description of the pertinent provisions of the act is set forth below.

**Power Sales Contracts:** The Regional Power Act requires three major types of Bonneville power sales contracts to be offered by September 5, 1981. The act states that Bonneville is deemed to have sufficient resources for purposes of entering into these initial contracts. Each utility will have one year from the date of such offer to accept. Bonneville anticipates that the majority of utilities offered power sales contracts will sign the contracts promptly. Twelve publicly-owned utilities have chosen to litigate certain terms of the contracts offered to Bonneville's direct service industrial customers, alleging violations of the Administrative Procedure Act, and the preference provisions of the Bonneville Project Act and the Regional Power Act. Public interest groups have expressed concern that the contracts are not conditioned on a utility's undertaking a conservation program and have alleged violations of the National Environmental Policy Act. Such litigation and the other litigation which may be filed will not affect the obligations of Bonneville under the Net Billing Agreements and the Project No. 1 Exchange Agreements and the impact of such litigation on Bonneville's revenues would be insignificant.

First, Bonneville is required to offer each requesting Pacific Northwest utility, including each requesting Participant, a long-term contract under which Bonneville would be obligated to meet such utility's firm power load in the region to the extent that such load exceeds (i) the utility's firm resources used in the year prior to December 5, 1980, to serve its loads in the region and (ii) such other resources as the customer determines will be used to serve such loads.

Preference customer and Federal agency contracts shall include provisions that enable Bonneville to restrict its contractual obligation to meet loads if it determines, after a reasonable period of experience under the new legislation, that it cannot be assured on a planning basis of acquiring sufficient resources to meet all such requirements during a specified period of insufficiency. Suitable notice of the insufficiency to customers is also required. These contract provisions shall require that any such restriction shall not be applicable until the year in which the total of all preference customers' and Federal agency customers' firm loads to be served by Bonneville exceeds the firm capability of the Federal base system resources. These resources primarily include the Federal System hydroelectric projects and the net

billed projects. Also, preference customer and Federal agency entitlement to firm power may not be restricted below (i) an amount less than the firm capability of the Federal base system resources and (ii) the amount of generating or conservation resources acquired by Bonneville from, or for the benefit of, such customers. Initial contracts offered preference customers shall provide that their entitlements to firm power during a period of insufficiency will not be less than the amount of firm power they received from Bonneville in the year immediately preceding the period of insufficiency. Preference customers' contracts must contain a formula for determining on an annual, uniform basis each customer's entitlement to firm power from Bonneville. Such entitlement may not be reduced because a customer has committed its own resources to serve its own firm load.

Contracts with other Pacific Northwest utilities must include provisions allowing Bonneville to restrict the amount of power it is obligated to provide upon five years notice, as is currently required by the Bonneville Project Act. However, these nonpreference utilities' contractual entitlements to firm power may not be restricted below the amount of power or conservation acquired by Bonneville from, or for the benefit of, such customers.

Second, Bonneville is required to exchange power with each Pacific Northwest electric utility which offers to exchange power with Bonneville in the amount, and for the use, of its residential and farm loads. Such exchange is limited to an amount not in excess of 60 percent of such utility's regional residential and farm loads beginning July 1, 1981, increasing in equal annual increments to 100 percent of such loads beginning July 1, 1985, and thereafter. Such contracts may not be effective before October 1, 1981.

Third, Bonneville is required to offer to each of its existing direct service industrial customers a long-term contract for sale of an amount of power substantially equivalent to that under its existing long-term contract. These sales shall continue to provide Bonneville a portion of the reserves for firm power loads in the Pacific Northwest through Bonneville's ability to interrupt such service for certain purposes. Such contracts shall be effective not later than October 1, 1981.

In addition, the Regional Power Act ensures that customers will not be restricted below the amount of power that they have provided to Bonneville pursuant to resource acquisition contracts, that customer entitlements are additive in the event of insufficiency, and that any customer's excess entitlement during a given year of insufficiency shall be made available to other customers of the same class first (public bodies and cooperatives, Federal agencies, direct service industries, and investor-owned utilities). Furthermore, restrictions on the entitlements of any class of customers are to be equitably distributed throughout the Pacific Northwest to avoid geographic discrimination.

For a discussion of the impact of the Regional Power Act on the Bonneville rates for power sold under such contracts, see "Federal System Rates" below.

*The Council and the Plan:* The Regional Power Act authorizes the establishment of the Pacific Northwest Electric Power and Conservation Planning Council (the "Council"), to be composed of two representatives from each of the States of Idaho, Montana, Oregon and Washington, appointed pursuant to state law. The Council has been established and held its first meeting on April 28, 1981. The Council is to prepare and adopt a Regional Electric Power and Conservation Plan (the "Regional Plan") within two years after it is formed and is to prepare and adopt a program to protect, mitigate and enhance fish and wildlife located on the Columbia River and its tributaries.

The Regional Plan must set forth a general plan for implementing conservation measures and developing the resources required by Bonneville to meet its obligations, and must also incorporate a fish and wildlife program. The Regional Plan shall give priority to resources which the Council determines to be cost-effective, with priority among cost-effective resources given: first, to conservation; second, to renewable resources; third, to generating resources utilizing waste heat or of high fuel conversion efficiency; and fourth, to all others. Also, due consideration is required to be given to environ-

mental quality; resource compatibility with the existing regional power system; protection, mitigation and enhancement of fish and wildlife; and other criteria as may be set forth in the Regional Plan. These same priorities and considerations guide Bonneville's resource acquisition determinations.

*Conservation and Resource Acquisition:* To meet its obligations under the above-described power sales contracts, the Regional Power Act requires Bonneville to implement conservation and to purchase power from resources developed by other entities. In acquiring resources under the act, Bonneville will not own or construct any generating resources. Bonneville's acquisitions will be by contract to pay for the planned or actual capability, or power output from a generating resource, conservation resource or group of resources, or, in some cases, a specific amount of power from a utility's system.

Bonneville's future obligations under contracts to acquire new resources shall be secured solely by its revenues received from the sale of power and other services and shall not be construed to be general obligations of, or secured by the full faith and credit of, the United States.

The Regional Power Act requires that Bonneville acquire sufficient firm resources under long-term arrangements to meet its contractual obligations to serve loads without consideration of any restrictions which Bonneville may be able to place upon its contractual obligations discussed above under "Power Sales Contracts". Bonneville also may continue to use its authority under the Transmission Act to make short-term power purchases to meet its contractual obligations to the extent that it is unable to acquire sufficient resources under the Regional Power Act. "Resources" are defined as (i) electric power, including the actual or planned electric power capability of generating facilities, or (ii) actual or planned load reduction resulting from direct application of a renewable energy resource by a consumer or from a conservation measure. For a discussion of the load and resource deficits which Bonneville would be required to meet if the rights under the act of the Pacific Northwest utilities, Federal agencies and direct service industrial customers are exercised, see "Regional Power Requirements and Resources" under the caption "Power Supply in the Pacific Northwest".

If a Bonneville customer prefers to commit a conservation or generating resource to its own loads within the region instead of selling it to Bonneville, the Regional Power Act provides that Bonneville must pay billing credits to that customer for qualified resources constructed, completed or acquired after the effective date of the act to the extent such resources actually reduce Bonneville's obligations to serve loads in the Pacific Northwest. The amount of such billing credits for a resource other than a conservation measure will equal the net costs for such resource actually incurred by such customer, provided that the credit is limited such that the rate impact to Bonneville's other customers is no greater than the rate impact would have been had Bonneville acquired an equivalent amount of resources or conservation. For conservation measures, the credit will equal the savings resulting from such measure, provided that the rate impact to Bonneville's other customers is equal to what the rate impact would have been had Bonneville acquired an equivalent amount of resources or conservation. The intent of the billing credit provision is to avoid financial disincentives, which may otherwise result from Bonneville's low rates, to customers who choose to develop their own resources which reduce additional demand on Bonneville.

The procedures and determinations which must be completed before Bonneville acquires a conservation or generating resource vary depending upon whether or not a resource is a "major" resource. A major resource is one which is expected to produce or save more than 50 average megawatts and to be acquired for more than five years.

Special procedures are required for Bonneville to acquire a major resource, implement a major conservation measure or grant billing credits for a major resource. Such procedures require public notices and hearings by Bonneville. Thereafter, Bonneville is required to make findings of consistency of such resource or other action with the Regional Plan, or if no plan is in effect, with the priorities and considerations contained in the act. The Council may take action by majority vote to determine whether or not the proposal is consistent within 60 days of receipt of such proposal. Bonneville is also required

to publish notice of its decision, to submit to appropriate committees of Congress the administrative record of the decision and to note the proposal in its budget submitted to Congress for review or other action. Bonneville may acquire nonmajor resources which are not consistent with the plan but which Bonneville determines are consistent with the priorities and consideration contained in the act.

If the Council determines that the proposed major resource acquisition is inconsistent with the Regional Plan or, if no Plan is in effect, with the priorities and considerations contained in the act, Bonneville may not implement its proposal until (i) it has determined that notwithstanding such inconsistency the proposed resource or conservation measure is required to meet Bonneville's obligations under the act and (ii) the funds for such acquisition have been specifically authorized by an Act of Congress, which may be accomplished by Congressional approval of a line item in Bonneville's budget submittal.

To the extent that Participants develop and sell to Bonneville the resources that they would have otherwise committed to serve their loads, the costs of such resources which the Participants would have incurred directly will be recovered by Bonneville through its rates. This will increase Bonneville revenues from Participants subject to net billing to pay for the costs of the Net Billed Projects, although to the extent that a participant receives billing credits from Bonneville under the Regional Power Act, the Bonneville revenues subject to net billing from an individual Participant taking billing credits could be reduced.

A detailed assessment of the economic impact of the Regional Power Act on Bonneville and its customers, including the Participants, cannot be completed until the power sales contracts authorized by the act are negotiated and until certain procedures required by the act have been developed.

#### **Federal System Rates**

Federal System rates are developed by Bonneville and submitted to the Federal Energy Regulatory Commission ("FERC") for confirmation and approval. The Regional Power Act gives FERC express interim rate approval authority in addition to its final approval authority. The 1981 rates received interim approval by the Department of Energy in accordance with the provision of the act allowing the Secretary of Energy to establish interim rates effective until July 1, 1982. The Regional Power Act directs that rates shall only become effective, except in the case of interim rules and procedures as provided in the act, upon a finding by FERC that the rates (i) are sufficient to assure repayment of the Federal investment in the Federal System over a reasonable number of years after first meeting Bonneville's other costs, (ii) are based on Bonneville's total system costs, and (iii) insofar as transmission rates are concerned, equitably allocate the costs of the Federal transmission system between Federal and non-Federal power being transmitted over such system.

*Rate Filings:* Bonneville has received interim approval of its 1976 transmission rate increase. That rate increase, effective June 10, 1977, produced an increase in annual transmission and miscellaneous revenues of about 22% in fiscal year 1978. By order of December 1, 1980, FERC remanded, without prejudice, Bonneville's 1976 transmission rate filing for further development of the record to demonstrate that the filing meets applicable statutory standards. Bonneville is preparing its response to the FERC order and will forward the information to FERC as soon as it is assembled. FERC's remand order has no bearing on Bonneville's authority to collect revenues under the filed rate schedules pending final approval of the rates. As of March 31, 1981, transmission revenues totaling approximately \$24,300,000 were subject to refund with interest in the event that FERC does not grant final approval of the transmission rate increase.

On June 24, 1981, Bonneville received interim approval for its 1981 transmission rate increase which went into effect on July 1, 1981. The anticipated revenue from the rates for firm transmission service is, on the average, 43 percent higher than the level of revenue from the 1976 firm transmission rates.

On December 3, 1979, Bonneville received interim approval for a power rate increase effective December 20, 1979, which, in conjunction with Bonneville's 1981 transmission rate increase, was intended to raise the level of Bonneville's annual revenues by approximately 88 percent. The wholesale power rates were the subject of litigation discussed in "Bonneville Litigation—1979 Power Rate Increase" below. On November 21, 1980, FERC issued an order remanding Bonneville's 1979 wholesale power rate filing without prejudice. The order required that Bonneville further supplement the official record in order to demonstrate that the rates and charges meet the applicable statutory standards. Bonneville compiled the additional documentation requested by FERC and forwarded that information to FERC on July 10, 1981. FERC's remand order has no bearing on Bonneville's authority to collect revenues under the filed rate schedules during the interim period. Should FERC ultimately approve rates which are lower than those being collected on an interim basis, Bonneville may be required to refund excess revenues plus accrued interest. Revenues collected under the rates, which are subject to refund with interest if disapproved by FERC, totaled approximately \$327,094,000 on March 31, 1981.

*Rates Under Regional Power Act:* Enactment of the Regional Power Act substantially changes the manner in which Bonneville treats the costs which its wholesale firm power rates are designed to recover. Bonneville must still set rates to be sufficient to recover its total costs of doing business, including the costs of the Net Billed Projects and any new resource acquisitions. Prior to the Regional Power Act, however, these total system costs were not differentiated into groups, and rates to all customers were designed to recover total costs. The Regional Power Act changes this by establishing separate rates that are based on categories of resources and their associated costs.

The rate for preference customers and Federal agencies, and for the power exchanged with any exchanging utilities to meet their residential and farm loads, is to be based on the costs of the Federal base system resources, including the net billed projects. When the capability of Federal base system resources are exceeded, the rate will include first the costs of the resources acquired by the exchange with utilities at their average system cost, and then the cost of such additional resources acquired by Bonneville as are needed to supply such loads. This rate will be Bonneville's lowest firm power rate because it includes the low-cost Federal hydroelectric resources. After July 1, 1985, the rates to preference customers and Federal agencies for their general requirements will be tested against a rate ceiling which is designed to ensure that their rates do not exceed what they would have been had Bonneville not engaged in power sales or purchase transactions authorized by the Regional Power Act. Should such rates exceed the ceiling, the excess costs are to be recovered from Bonneville's other power sales.

Prior to July 1, 1985, the rates for sales to direct service industrial customers will recover the cost of resources required to serve these loads plus the otherwise unrecovered net costs associated with Bonneville's exchange with utilities for service to their residential and farm loads. These unrecovered exchange costs will represent the difference between (1) the costs to Bonneville of exchange power, and (2) the revenues received by Bonneville for power exchanged with utilities for service to their residential and farm consumers, to the extent that these costs are not recovered through Bonneville's rates to its other customers.

After July 1, 1985, rates to direct service industrial customers will be set at a level that is equitable in relation to the retail rates charged to industrial consumers by preference customers in the Pacific Northwest. These rates will be adjusted to take into account various factors including the value of power system reserves made available to Bonneville through its contractual rights to restrict service to its industrial customers. In no case may the rates to direct service industrial customers be less than the rates in effect on June 30, 1985.

A third rate category will be established for all other firm power sales such as: (i) the rate to investor-owned utilities to serve their total system load growth and deficits existing at the time of enactment of the Regional Power Act, (ii) the rate to preference customers to meet any new large single load on their systems, and (iii) the rate for any miscellaneous firm power sales. This rate category will be based upon the costs of resources which Bonneville determines are applicable to such sales.



The Regional Power Act also provides for, among other things: (i) discretionary discounts to customers, such as small rural cooperatives, with low system densities, (ii) uniform rates for peaking capacity, (iii) an equitable allocation to all power rates of costs and benefits which are not otherwise allocated such as those from the conservation, fish and wildlife, and other provisions of the Regional Power Act, (iv) detailed procedures for Bonneville ratemaking, and for both interim and final confirmation and approval of such rates by FERC, (v) the adjustment of rates to a customer which fails to implement any model conservation standards adopted by the Regional Council and endorsed by Bonneville, and the disposition of the revenues from such adjustment, (vi) special procedures for establishing rates for the sale of nonfirm power outside the Pacific Northwest but within the United States, (vii) the negotiation or establishment of rates for power sold to entities outside the United States which shall be equitable with rates charged by those entities to the Pacific Northwest and (viii) authorization to make impact aid payments to appropriate local governments within the region which are impacted substantially by major transmission facilities completed after enactment of the Regional Power Act.

Bonneville's proposed power sales contracts will give it the right to increase its power rates to the extent necessary no sooner than nine months from the latter of (1) the date that appropriate Notice of Intent is published in the Federal Register, or (2) the previous rate adjustment date.

*1981 Power Rate Filing:* Rates submitted to FERC in June 1981 were developed to conform to the new rate directives contained in the Regional Power Act and are designed to include the costs of the exchange with utilities for the benefit of their residential and farm consumers, the cost of new conservation and generating resource acquisitions necessary to meet the power sales obligations which Bonneville may be expected to assume under the Regional Power Act, and other costs to Bonneville. Bonneville has made an estimate of the costs associated with the implementation of the Regional Power Act and included that estimate in the development of its 1981 wholesale power rates. Bonneville estimates that these costs, as included in its 1981 wholesale power rates, total approximately \$184 million, excluding the cost associated with the exchange of power with utilities for their residential and farm loads. The net exchange costs will be paid by Bonneville's industrial customers to the extent these costs are not recovered through Bonneville's rates to its other customers.

On June 24, 1981, Bonneville received interim approval for its 1981 power rates which became effective on July 1, 1981. The anticipated revenue from the new rates for the sale of firm power to preference customers is expected to be approximately 59 percent higher than under the prior rates. The increase is attributable to the combined effects of higher costs of the Federal System due to the addition of new facilities and inflation, increased costs of Projects Nos. 1 and 2, a reduction in the revenues estimated to be attainable from the power rates placed into effect in December 1979, and costs associated with the Regional Power Act.

General Counsel to Bonneville anticipates litigation on these rates at some unknown time in the future. Bonneville bases its anticipation upon briefs filed and arguments presented by the parties in Bonneville's hearings related to its 1981 power rates and upon petitions to intervene filed by such parties with FERC regarding such rates. The outcome of any such litigation will not affect the obligations of Bonneville under the Net Billing Agreements and the Project No. 1 Exchange Agreements.

In fiscal year 1980 the average cost per kWh paid to Bonneville by its preference utility customers for firm power including firm capacity was 6.44 mills. Estimated fiscal year 1981 costs paid to Bonneville by its preference customers is 7.55 mills per kWh. This estimate is based on projected firm energy loads. By 1985 the average cost paid to Bonneville by its preference customers is expected to be 23.5 mills per kWh. These existing and estimated costs are substantially less than comparable existing and expected wholesale power costs in other areas of the nation and the average retail rates of these customers are expected to remain well below average rates paid in other areas of the nation. Bonneville has calculated that the average cost per kWh in 1979 paid by all retail customers of its preference utilities was 11.82 mills per kWh, with residential customers paying 13.45 mills per kWh. For a discussion of the average residential cost of power in the Pacific Northwest as compared to other regions of the United States see "Regional Comparison of Energy Costs" under the caption "Power Supply in the Pacific Northwest".

### Estimated Bonneville Revenues from Preference Customers

The following table represents an estimate of the revenues to be derived by Bonneville from preference customers and subject to net billing from the present through 1985. This estimate assumes that all preference customers will sign new net requirements contracts with Bonneville.

#### Estimated Bonneville Revenues from Preference Customers(1)

(Dollars in Millions)

	Fiscal Years Ending September 30				
	1981(2)	1982(2)	1983(3)	1984(4)	1985(4)
Revenues from Preference Customers .....	288	476	710	946	1,093
Less: Net Billing Obligations(5) .....	227	327	586	816	931
Revenues available to Bonneville or (Net Billing Deficiency)(6) .....	61	149	124	130	162
Average Charge (mills per kWh) .....	7.5	11.4	16.5	21.5	23.5

- (1) The preliminary revenue estimates for fiscal years 1983, 1984, and 1985 include costs based upon the Supply System's 1982 project construction budgets (see "Federal System Rates" above). Revenues for all years reflect only firm power sales to preference customers. Additional revenues from non-firm energy sales, transmission services, and other miscellaneous revenues from preference customers are also subject to net billing but are not included in this table.
- (2) Includes revenue to pay the debt service associated with Projects Nos. 1 and 2.
- (3) Includes revenue to pay the debt service associated with Projects Nos. 1, 2, and 3.
- (4) Includes revenue to pay the debt service associated with Projects Nos. 1 and 3, and the total annual costs of Project No. 2. Revenues include the sale of power generated at Project No. 2.
- (5) Net billing obligations equal that portion of participants' obligations to Bonneville for power and other services which is credited on participants' monthly Bonneville bills to pay for the participants' net billings obligations to the City of Eugene, Oregon, and to the Supply System in the manner described under the caption "Security for the Net Billed Bonds". Net billing obligations are calculated for ratemaking purposes by assuming that the projected capital costs of the net billed projects will be amortized ratably over the life of the bonds.
- (6) A net billing deficiency is the amount by which Bonneville's obligation to pay to the participants the annual costs of the net billed projects exceeds the participants' obligations to pay Bonneville for power and other services. Net billing deficiencies, if any, will be paid in the manner described under the caption "Security for the Net Billed Bonds".

Rates to preference customers are based, for the most part, upon the costs of the Federal base system-resource pool. This pool includes the costs of the Net Billed Projects. Bonneville revenues from preference customers are expected to increase in the fiscal years 1983 through 1985 as a result of additional costs of the Net Billed Projects, additional costs of Federal investments, inflation, and increased Regional Power Act costs. Because the additional cost impacts of the Net Billed Projects on this pool are expected to increase more rapidly in the near term than other costs, the rates to preference customers will consequently increase more rapidly than those based upon other resource pools.

Bonneville currently estimates that its revenues from preference customers will exceed Bonneville's net billing obligations through September 30, 1985, the last fiscal year for which revenues have been estimated. To the extent that net billing obligations may exceed such revenues in later years, Bonneville will make such net billing deficiency payments either (i) through assignments of portions of such participants' shares to other Bonneville customers, thereby using their net billing capacity or (ii) by Bonneville, in cash, from the Bonneville Power Administration Fund. In accordance with the Transmission Act, any payments from the Fund for annual costs of such projects are treated on a parity with other Bonneville operating expenses and take priority over Bonneville's obligation to pay the Treasury for amortization and interest on the investment in the Federal System and related operation and maintenance expenses of the Corps and the Service.

Because the Regional Power Act requires Bonneville to sign new requirements contracts with requesting preference customers, including the Participants, Bonneville expects that its revenues from Participants will be greater than if Bonneville, in the absence of the Regional Power Act, had made an administrative allocation of limited Federal resources beginning in July 1983. To the extent that Participants

develop and sell resources to Bonneville which they would have otherwise committed to serve their loads, the costs of such resources will be recovered by Bonneville through its rates. This will increase Bonneville revenues from Participants subject to net billing. To the extent that a participant receives billing credits from Bonneville under the Regional Power Act, the Bonneville revenues subject to net billing from an individual participant taking billing credits could be reduced.

#### Federal System Historical Revenues and Expenses

The following statement of Federal System revenues and expenses is based on the accrued cost accounting method of financial reporting and shows audited Federal System revenues and expenses for the Transition Quarter, and fiscal years 1976 through 1980, and unaudited revenues and expenses for the first six months of fiscal year 1981. Bonneville prepares financial statements for the Federal System on this basis to assess its financial condition in a manner similar to a commercial enterprise. The Federal System financial statements and notes thereto for fiscal years 1980 and 1979 are attached as Exhibit H. Note 1 of Exhibit H describes the basis of preparation of Federal System financial statements and the significant accounting policies used in their preparation.

The following statement of historical revenues and expenses has been examined by Coopers & Lybrand, independent certified public accountants, for the fiscal years ended September 30, 1980 and 1979, and should be read in conjunction with their report and the other financial statements and related notes for these years included herein as Exhibit H. Coopers & Lybrand has also examined the statements for 1977, 1978, and the Transition Quarter and issued similar reports thereon, which reports are not reproduced in this Official Statement. The statement for fiscal year 1976 was examined by the General Accounting Office and reported upon by the Comptroller General.

#### Federal System Historical Revenues and Expenses (Dollars in Thousands)

	Six Months Ended March 31, 1981 (Unaudited)	Fiscal Year Ended September 30,				Transition Quarter Ended September 30, 1976	Fiscal Year Ended June 30, 1976
		1980	1979	1978	1977		
<b>OPERATING REVENUES(1)(2)</b>							
Sales of electric power:							
Publicly owned utilities	\$157,598	\$258,087	\$146,796	\$136,373	\$125,292	\$25,429	\$126,772
Privately owned utilities	58,194	75,567	48,131	68,475	24,299	19,672	57,395
Federal agencies .....	5,001	8,045	4,840	8,764	3,530	2,263	7,975
Aluminum industry ...	74,191	116,647	53,168	74,676	37,401	19,791	70,927
Other industry .....	6,991	12,374	4,584	7,379	4,083	1,759	7,976
Wheeling and other operating revenues(3) .	25,963	41,746	39,040	38,297	28,987	6,594	25,953
Total operating revenues .....	327,938	512,466	296,559	333,964	223,592	75,508	296,998
<b>OPERATING EXPENSES</b>							
Operations .....	51,019	104,444	76,547	68,184	55,772	13,439	48,775
Maintenance .....	25,703	49,610	46,601	41,914	39,019	9,171	30,516
Purchase and exchange power(4)(5)(6) .....	120,223	138,533	25,195	51,130	23,719	7,176	7,692
Write-off of Trojan Nu- clear Project net billing advances(7) .....		44,210					
Depreciation .....	27,537	51,380	50,164	47,580	42,495	10,156	38,785
Total operating expenses .....	224,482	388,177	198,507	208,808	161,005	39,942	125,768
Net operating revenues .....	103,456	124,289	98,052	125,156	62,587	35,566	171,230
<b>INTEREST EXPENSE</b>							
Interest on Federal in- vestment .....	121,016	225,699	197,972	169,079	146,866	36,305	139,665
Allowance for funds used during construction ...	(18,218)	(41,920)	(29,971)	(26,859)	(28,373)	(6,712)	(35,561)
Net interest expense(8) ...	102,798	183,779	168,001	142,220	118,493	29,593	104,104
<b>NET REVENUES (EXPENSE) ....</b>	<b>\$ 658</b>	<b>\$ (59,490)</b>	<b>\$ (69,949)</b>	<b>\$ (17,064)</b>	<b>\$ (55,906)</b>	<b>\$ 5,973</b>	<b>\$ 67,126</b>

(Footnotes on following page)

- (1) Electric power revenues for the six months ended March 31, 1981; and the year ended September 30, 1980, reflect increased power rates effective December 20, 1979. Revenues resulting from this increase in power rates, which are subject to refund with interest if disapproved by FERC, totaled approximately \$195,775,000 at September 30, 1980 and \$327,094,000 at March 31, 1981 (see "Federal System Rates").
- (2) Revenues are significantly affected by weather conditions in the Columbia River basin. In fiscal year 1979 reduced sales of electric power were due to low streamflows which resulted in restrictions of service to direct service industrial customers and reduced secondary energy available for sales to privately-owned utilities. The regionwide drought during most of the fiscal-year 1977 reduced sales of electrical power in that year.
- (3) Wheeling and other operating revenues reflect a transmission rate increase of approximately .22% effective July 1, 1977, and an increase in other revenues from the use of Bonneville transmission facilities (see "Federal System Rates").
- (4) Purchase and exchange power expense for the six months ended March 31, 1981 reflects Bonneville payments, billing credits and amortization of previously deferred payments and billing credits totaling \$45,801,000 and \$43,598,000 for Projects Nos. 1 and 2, respectively.
- (5) Since January 1, 1980, Bonneville payments and billing credits totaling \$68,702,000 and \$106,579,000 required under net billing agreements for Projects Nos. 1 and 2, respectively, have been charged directly to purchase and exchange power expense. Formerly, such amounts were deferred (\$55,537,000 was deferred in 1977, \$57,936,000 in 1978, \$88,275,000 in 1979 and \$10,759,000 in the first three months of fiscal year 1980) for future amortization to expense over the project estimated useful life commencing with the date of commercial operation. This change from deferring such amounts to including them as annual expenses was made because the new power rates effective December 20, 1979, provide for current recovery of thermal plant net billing advances. Additionally, since the new rates provide for recovery of the deferred amounts, amortization thereof over a 35 year period was commenced in December 1979. Amortization of \$4,554,000 and \$3,036,000 is included in purchase and exchange power expense for fiscal year 1980 and for the six months ended March 31, 1981, respectively.
- (6) Changes in purchase and exchange power expense for fiscal year 1979 and prior are due primarily to fluctuations in the cost of Hanford Project power and the cost of acquiring the City of Eugene's share of the Trojan Project (see "Acquisition of Project Capability and Power Supply").
- (7) The terms of the Trojan Nuclear Project net billing agreements, under which the City of Eugene ("the City") assigned its 30 percent share of the project capability to Bonneville and other participants, contained a provision allowing the City to withdraw the project capability for use in its own system beginning in 1984. Had the City exercised its withdrawal rights a settlement for Bonneville's prepaid Trojan costs would have been negotiated at the time of withdrawal, and accordingly such prepaid costs were included as net billing advances on Bonneville's balance sheet. On July 1, 1980, the City's right to withdraw expired, and the balance of Bonneville's prepaid Trojan costs was charged to 1980 expense.
- (8) Net interest expense for 1980 and for the six months ended March 31, 1981, increased principally because of additional borrowings on September 30, 1979 and 1980 from the Treasury under the Transmission Act and additional interest on new appropriations for generating projects.

#### Regional Loads and Resources

The Regional Power Act requires that Bonneville offer to sell power to each utility to meet the utility's firm power loads in the Pacific Northwest which exceed that utility's resources committed to such loads. The act also requires that the Council adopt a regional electric power and conservation plan which shall include a twenty year projection of loads and resources. Therefore, the loads and resources assessment of the Federal System must now consider the regional potential as its potential planning

base. The table entitled "Regional Loads and Forecasts" under the caption "Power Supply in the Pacific Northwest" includes loads and resources Bonneville must plan to serve under existing contracts and the resources currently available to serve such loads, as well as the loads and resources which are forecast for the region.

Bonneville annually submits to the PNUCC its estimated loads and resources. These loads and resources are then combined with the loads and resources of other utilities to develop long-range planning studies. In order to carry out its obligations under the Regional Power Act, Bonneville is currently developing an independent forecast of regional loads and resources.

The 1981 PNUCC forecast includes new utility load forecasts which represent a lower rate of regional load growth than that published in the 1980 Blue Book as well as an adjustment to Federal System loads. Bonneville expects to use the 1981 forecast as an interim planning document until its own forecast more completely reflecting developments under the Regional Power Act can be developed in early 1982.

The following table sets forth the rate of energy load growth experienced by Bonneville's preference customers during the years ended June 30, 1971 through 1981.

<u>Year</u> (July 1 to June 30)	<u>Rate*</u> (%)
1971 .....	4.8
1972 .....	2.8
1973 .....	4.9
1974 .....	1.9
1975 .....	5.5
1976 .....	9.4
1977 .....	4.3
1978 .....	3.4
1979 .....	9.0
1980 .....	1.9
1981 .....	2.2

\* Percentage increase over previous year.

Energy load growth rates can be affected significantly by (1) voluntary conservation such as that which occurred in response to drought conditions experienced in 1974, 1977 and 1978, (2) poor economic conditions affecting industry such as those of 1972, 1974, and recently, and (3) unusually low or high average seasonal temperatures such as the abnormally low winter temperatures of 1979 which spurred growth or the warm winter temperatures which in 1980 and 1981 contributed to lower than expected use of electricity for space heating. Recent low rates of energy load growth are a result of above normal winter temperatures and prolonged unemployment in the lumber and wood products industry which began in the spring of 1980.

The 1981 PNUCC forecast projected an average compound rate of load growth for Bonneville's preference customers of 3.8% for the years ending June 30, 1982 through 1992. This compares to a historical rate for such customers of 4.5% for the period 1971 through 1981. As the historic growth rates have declined, forecasted growth rates have followed. (The one-time reduction by Bonneville to forecasted Federal System loads is attributable to the system as a whole and is not to be disaggregated by a class of customer. It therefore is not considered in the forecast growth rate for preference customers.) In general, high rates of inflation and the region's growing dependence on high cost thermal generation have produced increases in the cost of electricity to consumers and have tended to suppress the growth in energy consumption relative to earlier periods. Heightened awareness of the need and means to conserve electric energy has also produced voluntary reductions by consumers in electric energy use and has led to increasing utility efforts to implement electric energy conservation programs which seek to offset the need for more expensive thermal generation. Some individual utility fore-

casts have also considered the likely impacts of voluntary conservation and increasing energy costs on projected electric energy usage. Nevertheless, it is estimated that preference customers' firm energy requirements will double between 1981 and 2001.

#### **Bonneville Litigation**

*Hydro Thermal Power Program Phase 2:* Bonneville's participation in Phase 2 of the Hydro Thermal Power Program has been the subject of two lawsuits. Both originated in the United States District Court for the District of Oregon and both were appealed to the Ninth Circuit Court of Appeals. In both instances the Ninth Circuit Court of Appeals affirmed the judgment of the lower court requiring Bonneville to prepare and file Environmental Impact Statements relating to its participation in Phase 2 of the Hydro Thermal Power Program. In the first case Bonneville has filed two Environmental Impact Statements and is taking steps to have the outstanding judgment declared satisfied. In the second case, the matter was dismissed on the grounds that the case was moot as a result of the passage by Congress of the Regional Power Act (see "The Regional Power Act" under the caption "Bonneville Power Administration"). In the opinion of General Counsel to Bonneville and Bond Counsel and Special Counsel to the Supply System, the remaining judgment does not adversely affect the validity of, or Bonneville's obligations under, the Net Billing Agreements, the Project No. 1 Exchange Agreements or the Project Agreements.

*1979 Power Rate Increase:* On January 22, 1980, Pacific Power & Light Company filed suit in the United States District Court for Oregon against DOE and Bonneville to have the Assistant Secretary for Resource Applications' interim rate order of December 3, 1979, declared unlawful and for other relief. Portland General Electric Company and the Oregon Public Utility Commissioner intervened as plaintiffs in the lawsuit. The Public Power Council intervened as defendant. On September 30, 1980, the Court issued its opinion (amended October 14, 1980) ruling in favor of the Federal defendants in all respects. Plaintiffs in the Pacific case filed timely appeals of the Court's decision, but later moved for voluntary dismissal. The appeals were dismissed on February 13, 1981.

On June 6, 1980, the Montana Power Company ("Montana") and the Idaho Power Company filed suit in the United States District Court for the District of Montana seeking an injunction against collection of the interim rates approved by the Assistant Secretary for Resource Applications in her order of December 3, 1979, and for other relief. Upon the Federal defendants' motion, the case was transferred to the District of Oregon. By opinion and order of May 18, 1981, the court ruled in favor of Federal defendants in all respects and ordered the case dismissed. An appeal was filed on August 21, 1981.

*Potential Litigation.* For a discussion of potential litigation involving Bonneville's 1981 power rate filing, see "Federal System Rates" above. For a discussion of potential litigation which may challenge the validity of the Net Billing Agreements see "Threatened Litigation" under the caption "Litigation".

#### **THE SUPPLY SYSTEM**

The Supply System, a municipal corporation and a joint operating agency of the State of Washington, was organized in January 1957 pursuant to the Act. Its membership is made up of 19 operating public utility districts and the cities of Ellensburg, Richland, Seattle and Tacoma, all located in the State of Washington. The Supply System has the authority, among other things, to acquire, construct and operate plants, works and facilities for the generation and transmission of electric power and energy and to acquire uranium bearing lands, as well as to make surveys, plants, investigations or studies relating thereto. The Supply System has the power of eminent domain, but it is specifically precluded from the condemnation of any plants, works or facilities owned and operated by any city, public utility district or investor-owned electric utility.

The Supply System has its principal office in Richland, Washington. The management and control of the Supply System is vested in a Board of Directors (the "Board") composed of representatives from each of its members. The Executive Committee, consisting of seven members of the Board, administers the business of the Supply System between regular quarterly meetings of the Board. The Executive Committee meets regularly twice a month. For discussion of recent legislation with respect

to management and control of the Supply System, see "State Legislative Developments" under the caption "Legislative Developments".

The Supply System's Packwood Lake Hydroelectric Project, Hanford Project, Project No. 1, Project No. 2 and its Ownership Share of Project No. 3 have each been and are being financed as separate utility systems. Projects Nos. 4 and 5 are being financed together as one utility system. The obligations issued with respect to each such system are payable solely from the revenues of that system.

#### Management of the Supply System

The management of the Supply System is under the direction of the Managing Director, who serves at the pleasure of the Board. The following are members of the Supply System's management staff and their backgrounds.

ROBERT L. FERGUSON, *Managing Director*. Prior to joining the Supply System, Mr. Ferguson served as the Deputy Assistant Secretary for the U.S. Department of Energy's Nuclear Reactor Programs in Washington, D.C. In 1971, he became Assistant Manager for Programs for the Richland office of the former Atomic Energy Commission (the "AEC") and served as Director of the Fast Flux Test Facility (the "FFTF") at Hanford from 1973 to 1978 where he was responsible for planning and directing advanced reactor technology and construction for the experimental reactor. From 1961 to 1970, Mr. Ferguson served as Reactor Safety Engineer for experimental and power reactors with the Chicago Operations office of the AEC and was later promoted to Assistant Manager for Projects and Deputy Assistant Manager for the Chicago AEC office. Mr. Ferguson holds a Bachelor of Science degree in physics from Gonzaga University in Washington.

ALEXANDER SQUIRE, *Deputy Managing Director*. In this position Mr. Squire assists the Managing Director in the overall Supply System construction program. Mr. Squire has thirty-five years of experience in senior engineering and management positions. Prior to joining the Supply System in July, 1980, he served as President of Westinghouse Hanford where he was responsible for the Hanford Engineering Development Laboratory and the FFTF. He is a charter member of the American Nuclear Society and was elected to the National Academy of Engineering in 1979. Mr. Squire holds a Bachelor of Science degree in Electro-chemical Engineering from the Massachusetts Institute of Technology.

DONALD W. MAZUR, *Projects Nos. 1 and 4 Program Director*. In this position Mr. Mazur is responsible for all project activities regarding Projects Nos. 1 and 4. Mr. Mazur has 18 years of general and nuclear related construction experience. Prior to joining the Supply System in November 1980, he served as Project Manager with the Field Project Office of the Department of Energy's Strategic Petroleum Reserve program in Louisiana. Prior to assuming this post, he served as Deputy Director of the FFTF, where, he assisted in its overall construction, engineering and startup. Mr. Mazur holds a Bachelor of Science degree in Mechanical Engineering from the Lawrence Institute of Technology in Michigan.

DR. ROBERT MATLOCK, *Project No. 2 Program Director*. In this position Dr. Matlock is primarily responsible for the construction and completion of Project No. 2. Prior to joining the Supply System in August 1980, Dr. Matlock's experience includes twenty years in advanced engineering projects, both in design and management of nuclear, fossil and solar energy research and development programs. He also served in a senior capacity in the experimental nuclear reactor construction, startup and operations at the Department of Energy's Idaho Nuclear Engineering Laboratory in Idaho Falls. Dr. Matlock holds a Bachelor of Science degree in Mechanical Engineering from the University of Washington and a Doctorate in Nuclear Physics from the University of Colorado.

ROTH S. LEDDICK, *Projects Nos. 3 and 5 Program Director*. In this position Mr. Leddick is responsible for all project activities regarding Projects Nos. 3 and 5. Prior to joining the Supply System in March 1981, Mr. Leddick served most recently as Director, Special Nuclear Program for the Northern States Power Company and also as Project Manager for their Prairie Island, Minnesota Nuclear Power Stations. As Project Manager, he was responsible for engineering, licensing and construction of new

power plants as well as modification projects for existing nuclear power stations. As Project Manager at Prairie Island, he supervised the successful fuel loading, startup and commercial operations of two Prairie Island Nuclear Power Plants. Mr. Leddick holds a bachelor's degree from the U.S. Naval Academy, a second bachelor's degree and a master's degree, both in Mechanical Engineering, from the U.S. Naval Postgraduate School, has completed the U.S. Navy's Naval Nuclear Power Training Program and has the equivalent of a Masters of Business Administration degree from the Industrial College of the Armed Forces in Washington, D.C.

As of July 1, 1981, the Supply System employed 2,142 persons, including 1,272 persons in executive, finance and administrative functions, 491 persons in projects operation programs and 379 in the technical area. The technical staff, with electrical, mechanical, civil and nuclear engineering and other technical disciplines, has over 7,300 man-years of technical experience including over 4,500 man-years of nuclear experience.

#### **Management Actions Since August 1980**

Mr. Robert L. Ferguson was appointed Managing Director of the Supply System on August 1, 1980. Since that time he has undertaken significant steps to establish a strong management team in order to attain the objectives of the Supply System of supplying reliable and low cost electric power for the consumers of the Pacific Northwest.

The Managing Director has assembled a new management team of highly qualified professionals from the nuclear and construction industries. The management of construction and startup at the Supply System's nuclear projects has been decentralized and program directors for each of the sites have been hired who are directly responsible to the Managing Director for the performance of the projects against the 1982 project construction budgets and schedules. In addition, a duplication of responsibilities was eliminated when the Supply System removed its staff from active construction management and changed its primary role to management coordination and overview.

The Managing Director also established an independent nuclear safety evaluation group for each of the Supply System's nuclear projects. A Corporate Nuclear Safety Review Board was also formed to routinely review major safety items and to advise the Managing Director on safety matters.

In order to increase construction progress the Managing Director appointed a special engineering task force to make a comprehensive evaluation of construction management at the Supply System. The major recommendations of the task force have been substantially implemented by the Supply System, including the end of joint management, clarification of the separate responsibilities of the owner, the architect-engineer and construction manager, review of overspecification of technical requirements, delegation of more authority for timely action, realignment of selected contracts and improvements in coordinated schedules.

A number of the steps taken by the Managing Director were also in response to the findings included in the report issued by the Senate Committee on Energy and Utilities of the Washington State Legislature. For further discussion of this report see "Washington Senate Inquiry" under the caption "Legislative Developments".

#### **Projects in Operation**

The Supply System owns and operates the Packwood Lake Hydroelectric Project with a nameplate rating of 27,500 kilowatts. The Supply System has sold \$13,700,000 Packwood Lake Hydroelectric Project Revenue Bonds, of which \$11,809,000 remain outstanding as of July 1, 1981.

The Supply System owns and operates an 860,000 kilowatt electric generating plant and associated facilities (the "Hanford Project") located on the Hanford Reservation of DOE, one of the successor agencies to the AEC. The Hanford Project was constructed pursuant to agreements between the Supply System, Bonneville, the AEC and 76 Pacific Northwest utility participants. Under these agreements Bonneville acquired the capability of the Hanford Project in exchange for power from



the Federal System. By-product steam is provided for the Hanford Project from the New Production Reactor owned and operated by DOE for national defense purposes. In 1963, the Supply System issued \$122,000,000 Hanford Project Electric Revenue Bonds (the "Hanford Project Bonds"), of which \$46,045,000 remain outstanding as of July 1, 1981. (See "Hanford Project and its Relationship to Project No. 1" under the caption "Project No. 1".)

#### Projects Under Construction

The Supply System has under construction five nuclear electric generating plants. Projects Nos. 1, 2 and 4 are located near Richland, Washington, on the Hanford Reservation of DOE. Projects Nos. 3 and 5 are located near Satsop, in Grays Harbor County, Washington. See the captions "Project No. 1", "Project No. 2" and "Project No. 3".

Project No. 4 will be a duplicate of Project No. 1, and is scheduled for commercial operation in June 1987. Project No. 5 will be a duplicate of Project No. 3, and is scheduled for commercial operation in December 1987. Project No. 5 is jointly owned, with the Supply System owning a 90% share and the Pacific Power & Light Company owning a 10% share. Construction on Project No. 4 was approximately 23% complete, and on Project No. 5 was approximately 14% complete as of July 1, 1981. The Supply System has issued \$2,250,000,000 principal amount of revenue bonds to pay a portion of the costs of acquiring and constructing these projects.

On June 18, 1981, the Supply System instituted a slowdown of construction of Projects Nos. 4 and 5. The Supply System and the participants in Projects Nos. 4 and 5 are currently proceeding with the preparation of a bond issue for Projects Nos. 4 and 5 for sale in October. See "Status of Projects Nos. 4 and 5 and Possible Effect on Net Billed Projects" under the caption "Recent Developments". The bond issues for these projects are secured by agreements with 88 public agencies and electric cooperatives. Under these agreements the Supply System's share of the capability of these projects has been sold to these parties. Bonneville is not purchasing any power from Projects Nos. 4 and 5 and is not a party to these agreements.

#### Schedules and Budgets

*Schedule Revisions:* In the course of preparing the 1982 project construction budgets, the Supply System adopted revised schedules for each of its nuclear projects as follows:

<u>Nuclear Project</u>	<u>1981 Budget Commercial Operation Date</u>	<u>Schedule Extension (Months)</u>	<u>1982 Budget Commercial Operation Date</u>
No. 1 .....	June 1985	12	June 1986
No. 2 .....	January 1983	13	February 1984
No. 3 .....	June 1986	6	December 1986
No. 4 .....	June 1986	12	June 1987
No. 5 .....	June 1987	6	December 1987

The schedules were extended as a result of: (a) labor stoppages at the Hanford site during the period between June and November 1980 which are estimated to have caused delays of eight months at Projects Nos. 1, 2 and 4; (b) quality assurance problems at Project No. 2 which affected construction progress; (c) a crane accident and labor stoppage which are estimated to have caused delays of three months at Projects Nos. 3 and 5; and (d) increased commodity quantities, manhours and construction durations resulting from a comprehensive evaluation of quantities of materials to be installed and reevaluation of achievable production rates.

*Project and Construction Completion Percentages:* Traditionally, the Supply System has used construction completion percentages to measure and report project construction progress. In order to more accurately monitor and control construction of its projects, the Supply System will report two completion percentages, the traditionally reported construction completion percentages and total project completion percentages. Total project completion percentages incorporate the following five elements:

(1) program management; (2) architect-engineer engineering; (3) prepurchased equipment; (4) construction; and (5) operations and startup. The reporting of the two completion percentages is expected to be adopted and implemented in the near future.

**Project Construction Budgets:** The Supply System project construction budgets are updated annually by the Supply System and include the estimate of the cost to completion for each of its projects. The construction budgets consist of five major elements: (1) direct construction, including architect-engineer and construction manager services costs, (2) owner's administrative costs, (3) nuclear fuel, including reload fuel paid for prior to commercial operation, (4) interest, financing and reserves and (5) project contingencies.

Major improvements have been incorporated into the 1982 budget process including delineation of budgeting responsibilities of the construction managers for construction costs, architect-engineers for engineering costs and the Supply System for fuel and administrative costs and strict accountability therefor and implementation of a "zero-base" budgeting concept.

The following table summarizes the increases in the 1982 project construction budgets from the 1981 project construction budgets:

Budget Comparisons (Dollars in Millions)						
Project	Total Estimated Costs at Completion(1)(2)			Supply System Financing Requirements(2)(3)		
	1982 Budget(2)	1981 Budget	Increase	1982 Budget(2)	1981 Budget	Increase
No. 1(4) .....	\$ 4,268	\$ 2,736	\$1,532	\$ 3,190	\$ 2,155	\$1,035
No. 2 .....	3,216	2,467	749	2,506	1,986	520
No. 3 .....	4,532	3,130	1,402	2,458	1,822	636
Nos. 4 and 5(5)	11,771	7,615	4,156	11,179	7,231	3,948
Totals .....	<u>\$23,787</u>	<u>\$15,948</u>	<u>\$7,839</u>	<u>\$19,333</u>	<u>\$13,194</u>	<u>\$6,139</u>

(1) Includes Supply System financing requirements for its projects, payments by the investor-owned utilities which are part owners of Projects Nos. 3 and 5 and the debt service on bonds issued for Projects Nos. 1, 2 and 3 and certain reserves which have been or will be paid by Bonneville prior to the projected commercial operation dates.

(2) Does not include any possible impacts which may result from a termination of either Project No. 4 or Project No. 5.

(3) Includes \$6,095 million of bonds issued to date.

(4) Does not reflect the fuel acquisition from Projects Nos. 4 and 5 discussed under "Nuclear Fuel" under the caption "Project No. 1".

(5) Does not reflect any possible actions that may be taken by the participants in Projects Nos. 4 and 5. See "Status of Projects Nos. 4 and 5 and Possible Effect on Net Billed Projects" under the caption "Recent Developments".

The following table reflects the percentage and amounts (in millions of dollars) of the total increase in financing requirements of each Supply System project by category in the 1982 project construction budgets from the 1981 project construction budgets:

	Project No. 1		Project No. 2		Project No. 3		Projects Nos. 4 & 5	
	Dollar Increase	Percentage of Increase	Dollar Increase	Percentage of Increase	Dollar Increase	Percentage of Increase	Dollar Increase	Percentage of Increase
<b>Direct Construction Costs</b>								
Additional Amounts of Craft Labor and Materials .....	\$ 580	56%	\$260	50%	\$337	53%	\$711	18%
Higher Non-Manual Manhours .....	269	26	182	35	204	32	474	12
Higher Assumed Inflation of Longer Duration .....	114	11	26	5	38	6	197	5
<b>Net Interest During Construction(1)</b>								
Higher Assumed Interest Costs Capitalized for Longer Periods .....	(83)	(8)	(47)	(9)	(64)	(10)	1,395	48
<b>Reserves and Financing Costs ..</b>	<u>155</u>	<u>15</u>	<u>99</u>	<u>19</u>	<u>121</u>	<u>19</u>	<u>671</u>	<u>17</u>
<b>Totals .....</b>	<u>\$1,035</u>	<u>100%</u>	<u>\$520</u>	<u>100%</u>	<u>\$636</u>	<u>100%</u>	<u>\$3,948</u>	<u>100%</u>

(1) For the Net Billed Projects, Net Interest During Construction decreased as a result of an increase in estimated investment income deposited to the Net Billed Projects' Construction Funds. All interest expense, to the extent not capitalized, for the Net Billed Projects will be paid by Bonneville prior to the projected commercial operation dates.

The following table summarizes the estimated project annual costs for each of the Net Billed Projects based on the costs and schedules in the 1982 project construction budgets:

Summary of Net Billed Projects' Estimated Annual Costs

	Fiscal Year Ending June 30			
	1987	1988	1989	1990
<b>Project No. 1</b>				
Total Project Annual Cost (\$000) .....	\$433,791	\$467,604	\$482,349	\$499,061
Annual Energy Generation (GWH) .....	6,615	7,163	7,665	7,665
Annual Cost (mills/KWH) .....	65.6	65.3	62.9	65.1
<b>Project No. 2</b>				
Total Project Annual Cost (\$000) .....	\$379,955	\$397,189	\$414,887	\$435,901
Annual Energy Generation (GWH) .....	6,745	6,745	6,745	6,745
Annual Cost (mills/KWH) .....	56.3	58.9	61.5	64.6
<b>Project No. 3 (Supply System's Ownership Share)</b>				
Total Project Annual Cost (\$000) .....	\$182,608	\$351,907	\$366,794	\$386,817
Annual Energy Generation (GWH) .....	2,650	4,783	5,163	5,323
Annual Cost (mills/KWH) .....	68.9	73.6	71.0	72.7

*Factors Affecting Project Construction Budgets and Schedules:* The Supply System has experienced, in varying degrees, certain problems which are common among electric utilities including (a) increasing costs of fuel, wages, materials, equipment and licensing requirements, (b) substantially increased capital outlays and longer construction period for the larger and more complex new generating units, (c) compliance with changing environmental, safety and licensing requirements, (d) litigation and proposed legislation designed to delay or prevent construction of nuclear electric generating and other facilities, (e) work stoppages resulting from contractor labor problems, (f) increased financing requirements resulting from the foregoing and (g) uncertainties associated with the development of a national energy policy.

The basic factors utilized by the Supply System in estimating construction costs are subject to change. To the extent that these factors, such as productivity levels, manhour requirements and escalation rates, are found on the basis of actual experience to be less favorable than current assumptions, or other factors adversely affect construction, the schedules of the projects may be extended and the costs of the projects may increase proportionately.

The NRC has approved reports that consolidate corrective actions derived from its own and other studies of the Three Mile Island accident. Certain requirements remain to be defined either by additional study or future NRC rulemaking. Other agencies of government are conducting, and may be expected to conduct in the future, reviews relating to nuclear electric generation as a result of this accident. The Supply System has incorporated all known and some anticipated requirements into the designs and budgets of its nuclear projects. However, the Supply System cannot predict future findings, recommendations and other results of these or any future studies and hearings, whether any recommended legislation will be adopted, or whether governmental regulations affecting nuclear generation will be significantly modified. While the Supply System cannot predict the effect of any of the foregoing on it or its projects, facilities under construction may be subjected to changes in regulatory requirements and to closer regulatory scrutiny, which in turn may increase exposure to licensing related impacts on schedules, design and operating requirements.

## Construction Management

*Construction Management Services:* The Supply System has entered into an agreement with Bechtel to provide construction management services for Projects Nos. 1 and 4, other than the containment vessel. A copy of Bechtel's report with respect to Project No. 1 is attached as Exhibit C. Until January 1981, engineering and construction management were performed jointly by Supply System and United Engineers & Constructors Inc. ("UE&C"). Joint management was ended during the period January through May 1981. The transfer of responsibility for primary construction management services from UE&C to Bechtel was completed on May 1, 1981. UE&C continues to be responsible for engineering services and construction management services for the containment vessel for Projects Nos. 1 and 4. The Supply System is in an overview management role.

Bechtel has also been assigned responsibility for construction management at Project No. 2. At the same time Burns and Roe, Inc. has been assigned independent responsibility and authority for management of engineering to support plant construction. A copy of Burns and Roe, Inc.'s report is attached as Exhibit D.

Until October 1980 engineering and construction management at Projects Nos. 3 and 5 were being performed through a merged site organization of Supply System and Ebasco personnel. A copy of Ebasco's report is attached as Exhibit E. This merged site organization has been dissolved and in early 1981 Ebasco reassumed its role as an independent site organization to perform the engineering and construction management services for those projects.

*Contract Realignment:* Construction contracts were initially awarded on the basis of a fixed unit of work performed, such as quantity of materials installed. This unit price included all materials used; all craft, non-manual and Quality Assurance-Quality Control (QA/QC) labor employed; as well as contractor's overhead and profit. In addition, the contractors were awarded a fixed amount to cover such costs as mobilization and demobilization.

The Supply System is constructing the projects on a "fast-track basis", whereby construction begins on each phase of system design as that design phase is complete, rather than upon design completion of the entire system. Changes in schedule, primarily due to the fact that the design and engineering was not proceeding rapidly enough to maintain the anticipated lead over construction, prevented contractors from commencing or completing work according to the schedule assumed when the fixed unit prices were developed, and contractors began to experience financial difficulties.

In 1978, construction contracts were initially realigned. Under the realigned contract format the contractor received fixed amounts for each hour of craft labor utilized, plus a fixed percent to cover the balance of the items that had previously been included in the fixed unit prices, such as profit and overhead. In addition, if the contractor was able to complete a quantity of work using less manhours than a targeted amount, the contractor received an incentive fee of 3-15%. This contract format, however, did not lead to the expected levels of craft manhour productivity, and the Supply System also experienced a reluctance on the part of the contractors to retain the needed non-manual and QA/QC personnel.

In late 1980 the Supply System began the realignment of a number of major construction contracts covering construction activity at the projects. These realignments were undertaken to update and recognize the current scope of the contracts, to enhance the contractors' ability to respond to changes in schedule and scope in an efficient and cost-effective manner, to eliminate contract incentives which could discourage productivity and lead to cost overruns, and to increase the Supply System's ability to monitor and control costs.

Under the realigned contract format, the contractor receives fixed amounts for each hour of labor utilized for both craft and non-manual and QA/QC personnel, with non-manual and QA/QC rates subject to adjustment. The Supply System has the ability to control the amount of both the craft and non-manual labor employed. The balance of the items are structured as fixed fees per contract, paid as follows: elements such as equipment, site overhead, home office direct charges, additional site overhead for changes and extended schedules, and profits are broken into schedules to allow partial payments; and home office overhead and profit are paid at a flat monthly payment through contract duration, with the amount of home office overhead renegotiable. In addition, incentive features are included in the contract for early completion of work which allows the contractor to receive additional profits. To date, twelve major contract realignments have been completed.

*Labor Relations:* New five-year labor agreements with the unions representing the carpenters and millwrights, operating engineers, and painters for the projects at Hanford have recently been completed. Wages are fixed for the first three years after which wage reopener negotiations are subject to binding arbitration. The agreements also contain no-strike no-lockout clauses which are expected to increase labor stability.

Other labor agreements at the Hanford site and the Satsop site, most of which contain no-strike no-lockout clauses, expire between September 1982 and May 1985. The Supply System is optimistic that no-strike no-lockout provisions will be contained in future labor agreements.

*Site Labor Agreements:* A site labor stabilization agreement for Projects Nos. 3 and 5 has recently been negotiated between all of the unions representing site craftsmen and all site contractors. The agreement contains uniform procedures for the resolution of grievances and jurisdictional disputes and also contains a no-picketing, no-strike, no-lockout clause. The agreement took effect on March 2, 1981, and continues to the end of construction. This agreement is expected to increase labor stability and productivity and reduce lost craft time at the Projects Nos. 3 and 5 site.

The Supply System assigned labor relations responsibility to Bechtel as an integral part of its construction management responsibilities of Projects Nos. 1, 2 and 4. On March 26, 1981, Bechtel formally requested approval from Mr. Robert A. Georgine, President, Building and Construction Trades Department of the AFL-CIO to undertake negotiation of a project agreement for the above mentioned projects.

## PROJECT NO. 1

The following is a general description of Project No. 1. For additional information, reference is made to the reports of the Consulting Engineer and Bechtel, appended hereto as Exhibits B and C, respectively.

### Location

Project No. 1 is located on the Hanford Reservation of DOE approximately 12 miles north of the City of Richland, Washington, and about 3 miles west of the Columbia River. The site has been leased from DOE for a term of 30 years commencing July 1, 1975, and ending June 30, 2005, with an option granted to the Supply System to extend the lease for an additional 10 years. The Supply System has leased from the Washington State Department of Natural Resources the part of the bed of the Columbia River where the cooling water intake and discharge structures will be located. The Supply System is also constructing Project No. 4 on the same site. Project No. 4 is being designed and constructed as a twin to Project No. 1 and will share some common facilities with it.

### Description

Project No. 1 will consist of a pressurized water nuclear steam supply system, turbine-generator, associated auxiliary equipment and facilities having a net generating capacity of 1,250,000 kilowatts together with the necessary transformation, switching and transmission facilities to interconnect Project No. 1 with the facilities of the Federal System.

The basic structures comprising the overall power plant are the reactor containment building, general services building, turbine-generator building, cooling towers and circulating water pump house, and river makeup water plant.

The turbine condensers will be cooled by a mechanical draft evaporative cooling tower system. The river makeup water plant will be shared by Nuclear Project No. 4 and Project No. 1. Makeup water for the condenser cooling system will be obtained from the Columbia River. Emergency power will be supplied to Project No. 1 from diesel generators sized to sustain all essential plant loads without the need for outside power sources.

The Supply System has entered into an agreement with Bechtel to provide primary construction management services for Projects Nos. 1 and 4. These construction management services have replaced those of UE&C who formerly provided both construction management and engineering services. The transfer of responsibility for primary construction management services from UE&C to Bechtel was completed on May 1, 1981. UE&C will continue to provide engineering services and certain construction management services for Projects Nos. 1 and 4.

#### Permits and Licenses

The State of Washington has entered into a site certification agreement with the Supply System approving the site and has issued a National Pollutant Discharge Elimination System permit. On December 23, 1975 the Supply System received a construction permit from the NRC under which construction is proceeding. This permit expires January 1, 1982. A request for extension to June 1986 has been filed with the NRC, and, based on prior practice of the NRC, it is expected that the extension will be granted. Under NRC regulations construction may continue during the pendency of the request. The Supply System has received a permit from the U. S. Army Corps of Engineers to construct cooling water intake and discharge structures in the Columbia River. These structures have been completed. There are no other major permits required for construction of Project No. 1. In due course, an application for an operating license will be filed with the NRC.

During 1980 additional evidence was discovered relating to the time of geologic fault activity on the Hanford Reservation. The identified fault location nearest to the sites of Projects Nos. 1, 2 and 4 is at a distance of approximately seven miles. Ongoing geologic studies, initiated in late 1979 as part of the Final Safety Analysis Report ("FSAR") preparation process for Project No. 2, have been expanded to evaluate these findings. Preliminary results of the current studies do not indicate that the seismic designs for the three projects are inadequate.

#### Contracts and Schedule

As of July 1, 1981, procurement of services and equipment for Project No. 1 was approximately 97% complete. The Supply System had entered into 178 equipment and construction contracts as of that date, including contracts for the nuclear steam supply system with the Babcock and Wilcox Company and for the turbine-generator and accessories with the Westinghouse Electric Corporation. The total amount of all these contracts was \$905,342,865 as of that date.

Major civil work is approximately 80% complete on the reactor containment building, the general services building and the turbine-generator building. All major nuclear steam supply system equipment has been installed in the reactor containment building. Piping work, mechanical work and electrical work are in the early stages of installation. Construction of the cooling towers is complete. Construction of Project No. 1 was approximately 41% complete as of July 1, 1981. The initial fuel loading is currently scheduled for August 1985 and commercial operation is scheduled to begin in June 1986.

## Nuclear Fuel

The nuclear fuel cycle consists of four basic activities prior to insertion of the fuel assemblies in a nuclear reactor. These activities include acquisition of the uranium concentrates, conversion of the uranium concentrates to uranium hexafluoride, enrichment of the uranium hexafluoride and fabrication of the enriched uranium into fuel assemblies.

The Supply System has a contract for uranium hexafluoride with the Kerr McGee Corporation ("Kerr McGee") and a contract for uranium concentrates with Western Nuclear, Inc. which are sufficient for the initial core. The latter contract, in conjunction with a contract with Rio Algom Ltd. of Canada, will provide sufficient uranium for approximately four years of operation. Deliveries under the Kerr McGee contract have been completed and uranium sufficient for the initial core fuel loading has been converted and enriched. The Western Nuclear, Inc. contract provides for the delivery of 5,500,000 pounds of uranium concentrates over the period 1979 to 1984 and approximately 2,675,000 pounds have been delivered as of June 30, 1981. For the time period beyond that covered by these contracts the Supply System has entered into a contract with Gardinier, Inc. and Gardinier Big River, Inc., providing for the sale to the Supply System of uranium concentrates expected to be produced as a by-product of phosphate-based fertilizer production. Under this contract, deliveries of uranium concentrates started in October 1979. Production of such concentrates is subject to continued operation of the fertilizer production facilities. Should the production program continue to go forward as currently contemplated, this contract is projected to supply the Supply System with more than 6 million pounds of uranium concentrates over the period 1980 to 1994. Approximately 30% of these uranium concentrates has been allocated to Project No. 1. As of June 30, 1981, 376,000 pounds have been delivered. These contracts are estimated to meet the full requirements for operation of Project No. 1 through 1994 under present scheduling assumptions and a portion of the requirements thereafter through 1997.

Recently, Project No. 1 acquired from Project No. 4 and Project No. 5, approximately 2.5 million pounds of uranium concentrates and a substantial quantity of enrichment services. These uranium concentrates are sufficient for operation of the plant through the year 2000. The enrichment services can substitute for services that would have been ordered for delivery in the years 1989 to 1991.

The Supply System has a contract with DOE for furnishing enrichment services from 1980 until 2010. Conversion services, adequate for operation of Project No. 1 through 1990, have been contracted for with Kerr McGee. Fabrication services for the initial core have been contracted for with the Babcock and Wilcox Company. The Supply System anticipates no difficulty in obtaining fabrication services to produce the reload nuclear fuel assemblies.

At the present time, no operating facilities for the reprocessing of spent fuel are available, and no facilities are expected to be available in the near future. The President of the United States has recently released a draft policy statement calling for, among other things, the lifting of the ban on reprocessing spent nuclear fuel and the development of solutions to the problems of radioactive waste disposal. The effects of these policies cannot be predicted at this time. The design of Project No. 1 as proposed to the NRC for approval includes on site spent fuel storage capacity for Project No. 1 sufficient to accommodate all spent fuel discharges until about the year 2000. It is expected that by then an appropriate program will have been implemented to accept spent fuel for placement in a suitable repository.

## Estimated Financing Requirements

The total Supply System financing requirements for Project No. 1, based on the 1982 Project No. 1 construction budget, are estimated to be \$3,190,000,000, of which \$1,455,000,000 has been financed to date, and are shown in the following table.

The Supply System's current cash flow projections indicate that monies currently available together with investment income thereon and the proceeds from the Project No. 1 1981 Bonds will be sufficient to meet cash flow requirements of Project No. 1 until April 1982. In addition to the Project No. 1 1981 Bonds, additional Project No. 1 Bonds necessary to complete the financing of Project No. 1 are planned to be issued as the need arises.

# Estimated Project No. 1 Financing Required

(Dollars in Thousands)

Equipment and Material Contracts(1)	\$ 336,188
Construction Contracts(1)	1,472,511
Construction Management(2)	192,636
Architect-Engineer(3)	199,185
Total Plant Construction Cost	\$2,200,520
Owner's Cost(4)	315,790
Contingency(5)	204,918
Nuclear Fuel(6)	247,290
Total Construction and Fuel Cost	\$2,968,518
Working Capital(7)	22,000
Reserve Account in the Bond Fund(8)	144,618
Bond Discount and Financing Costs(9)	88,119
Net Capitalized Interest During Construction(10)	(33,255)
Total Financing Required(11)	<u>\$3,190,000</u>

- (1) Estimated by Bechtel.
- (2) Estimated by Bechtel except for certain civil work on the containment superstructure which is under the management of UE&C.
- (3) Estimated by UE&C.
- (4) Estimated by the Supply System. Includes \$6,286,000 for DOE Settlement Costs (see "Hanford Project and its Relationship to Project No. 1" below).
- (5) Estimated by the Supply System. Includes an appropriate allowance for potential cost and schedule impacts which have a high probability of occurrence but are not presently considered as part of the defined scope of Project No. 1.
- (6) Estimated by the Supply System. Includes sales tax on the initial core at 5.0% and \$157,800,000 for reload fuel. Does not reflect the fuel acquisition from Projects Nos. 4 and 5 discussed under "Nuclear Fuel" above.
- (7) Estimated by the Supply System. \$3,000,000 is required by the Project No. 1 Resolution.
- (8) An amount equal to the largest semi-annual interest payment on the Project No. 1 Bonds, as required by the Project No. 1 Resolution. Based on actual interest rates for outstanding Project No. 1 Bonds and assumed interest rates of 11.5% for additional Project No. 1 Bonds issued in fiscal year 1982 and 10.0% for additional Project No. 1 Bonds issued thereafter.
- (9) Includes actual discounts and financing costs for the outstanding Project No. 1 Bonds and estimates of 4.5% of the principal amount of additional Project No. 1 Bonds issued in fiscal year 1982 and 3.0% of the principal amount of additional Project No. 1 Bonds thereafter.
- (10) Does not include interest after September 1, 1980 which is subject to payment pursuant to the Project No. 1 Net Billing Agreements and the Project No. 1 Exchange Agreements. Computed as follows based on the same interest rates as in Footnote (8).

Gross Interest During Construction	\$232,810,000
Estimated Investment Income*	(266,065,000)
Net Interest During Construction	<u>\$ (33,255,000)</u>

\* Includes actual income through May 1981 and estimated future interest earnings on amounts in the Construction Fund at assumed rates of 12.0% for fiscal year 1982 and 10.5% thereafter.

- (11) Does not include any possible impacts which may result from a termination of either Project No. 4 or Project No. 5. See "Status of Projects Nos. 4 and 5 and Possible Effects on Net Billed Projects" under the caption "Recent Developments".



## Power Production

Based upon the estimated net generating capability of 1,250,000 kilowatts, Project No. 1 is expected to produce approximately 7.665 billion kilowatt-hours annually after initial operation tests and adjustments are made in the early years. Although there is not yet sufficient historical operating information available on large nuclear plants to establish an expected plant factor for Project No. 1, annual costs are based on an assumed 60% plant factor in the first year of commercial operation, 65% in the second year and 70% thereafter. During certain periods, surplus water will be available to generate additional power at existing hydroelectric projects, thereby permitting a reduction in the total amount of energy produced at thermal electric projects in the region. The extent of this reduction and its effect, if any, on the operation of Project No. 1 will depend upon conditions at the time of the availability of such hydroelectric energy and its relative cost compared to the cost of energy from Project No. 1.

## Estimated Project No. 1 Annual Costs and Payments

The Project No. 1 Net Billing Agreements and the Project No. 1 Exchange Agreements provide for the payment of all the Supply System's annual cost associated with the ownership and operation of Project No. 1 including payment of costs relating to the Hanford Project as more fully described in "Hanford Project and its Relationship to Project No. 1" below. Estimated annual costs of Project No. 1 and estimated annual payments by the Project No. 1 Companies and the Project No. 1 Participants are given in the following table.

### Estimated Project No. 1 Annual Costs and Payments

(Dollars in Thousands)

	Fiscal Year Ending June 30,						
	1987	1988	1989	1990	1991	1992	1997
<b>PROJECT ANNUAL COST</b>							
Payment to Hanford Project(1) .....	\$ 3,112	\$ 3,126	\$ 2,994	\$ 4,349	\$ 1,752	\$ —	\$ —
Other Project Costs:							
Interest and Amortization(2) .....	307,130	307,130	307,130	307,130	307,130	307,130	307,130
Payment to Reserve and Contingency Fund(3) .....	30,713	30,713	30,713	30,713	30,713	32,384	47,582
Subtotal .....	\$337,843	\$337,843	\$337,843	\$337,843	\$337,843	\$339,514	\$354,712
Operation and Maintenance(4) ....	72,359	77,511	82,615	88,008	93,806	100,033	138,562
Decommissioning(4) .....	5,668	5,668	5,668	5,668	5,668	5,668	5,668
Fuel(5) .....	60,184	68,430	76,233	83,959	95,573	109,159	219,649
Taxes(6) .....	6,411	6,910	7,128	7,375	7,629	7,958	10,456
Subtotal .....	\$144,622	\$158,519	\$171,644	\$185,010	\$202,676	\$222,818	\$374,335
Surplus from Prior Year's Payment to Reserve and Contingency Fund(7) .....	(28,540)	(8,673)	(6,910)	(5,006)	(2,949)	(728)	0
Investment Income(8) .....	(23,246)	(23,211)	(23,222)	(23,135)	(23,094)	(23,118)	(21,544)
Total Other Project Costs ....	\$430,679	\$464,478	\$479,355	\$494,712	\$514,476	\$538,486	\$707,503
Total Project Annual Cost .....	\$433,791	\$467,604	\$482,349	\$499,061	\$516,228	\$538,486	\$707,503
Annual Energy Generation (GWH)(9) .	6,615	7,163	7,665	7,665	7,665	7,665	7,665
Annual Cost (mills/KWH)(10)(11) ...	65.6	65.3	62.9	65.1	67.3	70.3	92.3
<b>ANNUAL PAYMENTS TO THE SUPPLY SYSTEM:</b>							
Companies(12) .....	\$ 81,059	\$ 86,733	\$ 92,804	\$ 99,301	\$167,619	\$174,846	\$ —
Participants .....	352,732	380,371	389,545	399,760	348,609	363,640	707,503
Total Annual Payments .....	\$433,791	\$467,604	\$482,349	\$499,061	\$516,228	\$538,486	\$707,503

- (1) Based on the debt service on the outstanding Hanford Project Bonds and required Reserve and Contingency Fund payments less investment income and surplus Reserve and Contingency Fund payments. Payments to the Hanford Project are estimated to cease in fiscal year 1991.

(Footnotes continued on following page)

- (2) Based on assumed level debt service on the Project No. 1 Bonds to 2017 at actual interest rates on outstanding Project No. 1 Bonds and interest rates ranging from 11.5% to 10.0% on the Project No. 1 1981 Bonds and on additional Project No. 1 Bonds. (See letter of R. W. Beck and Associates attached hereto as page B-1 to Exhibit B for information as to effect of higher actual interest costs of the 1981 Net Billed Bonds.)
- (3) The greater of 10% of annual debt service as required by the Project No. 1 Resolution or estimated renewals and replacements.
- (4) Estimated by the Supply System.
- (5) Estimated by the Supply System based on the expected cost of fuel.
- (6) Calculated at 1.5% of the wholesale value of the energy produced by Project No. 1.
- (7) Computed as follows (dollars in thousands):

	1987	1988	1989	1990	1991	1992	1997
Payments to Reserve and Contingency Fund, Prior Year	\$30,241	\$30,713	\$30,713	\$30,713	\$30,713	\$30,713	\$44,058
Renewals and Replacements, Prior Year*	(1,701)	(22,040)	(23,803)	(25,707)	(27,764)	(29,985)	(44,058)
Net Surplus**	\$28,540	\$ 8,673	\$ 6,910	\$ 5,006	\$ 2,949	\$ 728	\$ 0

\* Estimated by the Supply System. Some costs in the early years may be funded from Project No. 1 Bond proceeds.

\*\* The Net Surplus may be used for purposes other than reduction in power costs in accordance with the Project No. 1 Resolution.

- (8) Based on assumed investment rates on the balance of funds in the Reserve Account in the Bond Fund of 9.0% and the Reserve and Contingency Fund of 8.25%.
- (9) Based on an assumed 60% plant factor in the first year of operation, 65% in the second year and 70% thereafter.
- (10) Total Project Annual Cost divided by the Annual Energy Generation.
- (11) The cost of providing certain reserves and of providing interest and principal on the Project No. 1 Bonds between September 1, 1980 and the scheduled commercial operation date of June 1986 not paid by the Companies to the Supply System under the Project No. 1 Exchange Agreements is assumed to be paid as incurred from Bonneville revenues pursuant to the Project No. 1 Net Billing Agreements. In addition, Bonneville's total revenues will be reduced by an amount equal to payments by the Companies to the Supply System under the Project No. 1 Exchange Agreements. For the purpose of demonstrating the total annual cost per kilowatt-hour of the Project No. 1 if the above costs were capitalized, the cost to Bonneville of \$777,273,000 including the effect of reduced revenues, has been annualized over 35 years at an assumed interest rate of 10.85% per annum, which is an approximate average of Bonneville's current long term interest rates for borrowings from the Federal Treasury, as follows (dollars in thousands):

	1987	1988	1989	1990	1991	1992	1997
ADDITIONAL COSTS TO BONNEVILLE:							
Annualized Prepaid Project Cost	\$ 86,690	\$ 86,690	\$ 86,690	\$ 86,690	\$ 86,690	\$ 86,690	\$ 86,690
Total Annual Cost	\$520,481	\$554,294	\$569,039	\$585,751	\$602,918	\$625,176	\$794,193
Annual Cost (mills/KWH)	78.4	77.4	74.2	76.4	78.7	81.6	103.6

- (12) Companies' payments for the period July 1986 through June 1990 are estimated based on Bonneville's estimate of its wholesale power rate to its preference customers through fiscal year 1985 and escalated thereafter at an average rate of 7% per year. Companies' payments for that period may differ from those shown as they are subject to the rate schedules finally adopted by Bonneville and may be increased by up to approximately \$2,000,000 per year pursuant to a letter agreement dated May 8, 1974. Companies' payment for the period July 1990 through June 1996 are estimated based on the provisions of the Project No. 1 Exchange Agreements. Companies' payments for that period may be increased by up to approximately \$700,000 per year pursuant to a letter agreement dated May 8, 1974.

## **Hanford Project and its Relationship to Project No. 1**

The following is an explanation of the reason for including the costs of the Hanford Project in the costs of Project No. 1. The Hanford Project has been delivering power to the Federal System since 1966. In 1971 the AEC notified the Supply System that it was ceasing operation of its New Production Reactor ("NPR") at that time. The contractual arrangements related to the Hanford Project provided for conversion and licensing of the NPR by the Supply System for power only operation. However, this would have required an extensive shutdown period and caused a severe power shortage in the region. As a result a task force of Pacific Northwest utilities and industries was formed which negotiated with the AEC for operation of the NPR for three additional years.

The additional three year operation was viewed as an interim step while the feasibility of power only operation was studied by Bonneville and the Supply System against other alternatives. Bonneville in early 1972 notified the Supply System that it had determined that power only operation of the NPR was not economical. Bonneville and the Supply System then developed a proposal for Project No. 1 which encompassed a nuclear steam supply system and an additional turbine-generator to be constructed adjacent to and operated in conjunction with the existing turbine-generators of the Hanford Project. This proposal was the basis for the Project No. 1 Net Billing, Exchange and Project Agreements as executed in 1973. These Agreements provided that the costs of the Hanford Project after July 1, 1980, including debt service on the Hanford Project Bonds, should be included as costs of Project No. 1 and should be the first charge on the revenues of Project No. 1. Once these agreements were executed and the Supply System's construction schedule was confirmed, arrangements were concluded with the AEC for operation of the NPR until fall 1977 when the continued operation of the Hanford Project was expected to conflict with construction of Project No. 1.

In 1974 it became evident that two important changes had occurred with regard to planning for Project No. 1. First, the forecast lead time for new thermal generating projects had to be lengthened over those forecast in 1972, thereby creating estimated energy deficits in the region in the late 1970s and early 1980s. Second, the economies of combining Project No. 1 and the Hanford Project were substantially less than originally anticipated due to the major revisions necessary to the Hanford Project to meet licensing requirements. Bonneville, in consultation with the region's utilities, determined that (1) the Hanford Project was a valuable resource to the region which should be available after 1977 to meet shortages which might occur due to delay in construction of other regional generating projects and (2) Project No. 1 could be constructed as a separate unit not using the Hanford Project turbine-generators at an overall cost to Bonneville and its customers equal to or lower than Project No. 1's cost of operation in conjunction with the Hanford Project. Therefore, the Project No. 1 Net Billing, Exchange and Project Agreements were amended to provide for the separation of Project No. 1 from the Hanford Project. As so amended, such Agreements continue to provide that the Hanford Project costs, to the extent not otherwise provided for, will be treated as Project No. 1 costs having a first claim on the revenues of Project No. 1.

As a result of these transactions the Supply System entered into agreements with DOE for operation of the Hanford Project in conjunction with the NPR until June 30, 1983 and for the payment of \$6,286,000 in settlement of DOE's costs of deactivating the NPR. The Project No. 1 Net Billing Agreements provide that the Supply System and Bonneville shall not enter into agreements for continued operation of the Hanford Project after October 31, 1977, if such continued operation would increase the payments of the Project No. 1 Participants under the Project No. 1 Net Billing Agreements. The Supply System, Bonneville, the utility participants in the Hanford Project and certain of Bonneville's industrial customers have executed agreements which provide for the payment of the increased Hanford Project costs related to extending operation through June 30, 1983, from amounts other than amounts paid under the Project No. 1 Net Billing Agreements.

## PROJECT NO. 2

The following is a general description of Project No. 2. For additional information, reference is made to the reports of the Consulting Engineer and Burns and Roe, Inc. ("Burns and Roe"), appended hereto as Exhibits B and D, respectively.

### Location

Project No. 2 is located on the Hanford Reservation of DOE approximately 12 miles north of the City of Richland, Washington and about 3 miles west of the Columbia River. The site has been leased from DOE for a term of 50 years commencing July 1, 1972, with options to extend the lease for two consecutive ten year periods. The Supply System has leased from the Washington State Department of Natural Resources the part of the bed of the Columbia River where the cooling water intake and discharge structures are located.

### Description

Project No. 2 will consist of a single-unit, boiling water reactor ("BWR") electric generating station of proven design having a net generating capability of approximately 1,100,000 kilowatts together with the necessary transformation, switching and related 500 kV facilities to interconnect Project No. 2 with the Federal System.

The basic structures comprising the overall power plant are the reactor, radioactive waste, turbine-generator, diesel generator and service buildings (together comprising the main plant), six mechanical draft cooling towers, the circulating water pumphouse, and the river makeup water plant. Makeup water to replace the evaporative losses of the circulating water cooling system will be obtained from the Columbia River by means of three makeup water pumps.

The turbine condensers will be cooled by a mechanical draft evaporative cooling tower system. Makeup water for the condenser cooling system will be obtained from the Columbia River. Emergency power will be supplied to Project No. 2 from diesel generators sized to sustain all essential plant loads without the need for outside power sources.

Project No. 2 also includes an administrative service building located away from the site in Richland, Washington, which has been completed and provides administrative space for Project No. 2 and other Supply System activities.

The Supply System has entered into an agreement with Bechtel to provide primary construction management services for Project No. 2. At the same time Burns and Roe continues to have independent responsibility and authority for management of engineering to support plant construction. To further strengthen the Supply System's ability to manage and control the work process on this project, it has realigned contractor responsibilities; the Bechtel Power Corporation has been given the responsibility to manage the construction activity on the project; Burns and Roe has been assigned undivided responsibility for engineering of the project. This clarifies individual organizational responsibilities and authorities and more clearly defines organizational interfaces to the benefit of project completion. For a discussion of these contractor responsibility changes see "Management Actions Since August 1980" under the caption "The Supply System".

### Permits and Licenses

The State of Washington has entered into a site certification agreement with the Supply System approving the site and has issued a National Pollutant Discharge Elimination System permit. The AEC, a predecessor agency to the NRC, granted a construction permit in March 1973. This permit expires December 1, 1981. A request for extension to February 1, 1984 will be filed with the NRC, and, based on prior practice of the NRC, it is expected that the extension will be granted. Under NRC regulations construction may continue during the pendency of the request. There are no major permits required for construction of Project No. 2 which have not been obtained.

The Final Safety Analysis Report was sent to the NRC in March 1978 and the application for an operating license was accepted for review by the NRC in June 1978. Presently, primary emphasis

in the licensing area consists of answering NRC review questions, preparing amendments to the FSAR, participating with other BWR owners in review and discussion with the NRC of generic BWR safety issues and submitting revised analyses and subsequent assessments of the containment vessel and associated systems and structures. The sixteenth amendment to the FSAR was issued in June 1981. The operating license will be required before fuel loading, presently scheduled for September 1983.

During 1980 additional evidence was discovered relating to the time of geologic fault activity on the Hanford Reservation. The identified fault location nearest to the sites of Projects Nos. 1, 2, and 4 is at a distance of approximately seven miles. Ongoing geologic studies, initiated in late 1979 as part of the FSAR preparation process for Project No. 2, have been expanded to evaluate these findings. Preliminary results of the current studies do not indicate that the seismic designs for the three projects are inadequate. A revision to the FSAR regarding geology and seismic issues is scheduled to be submitted to the NRC in September 1981.

The containment vessel was designed and constructed in accordance with basic design criteria furnished by the General Electric Company ("GE"). GE subsequently obtained testing and design information which necessitated changes in basic design criteria. Project No. 2 design was changed and physical changes are being completed on certain structures and systems to insure that they will be able to withstand the new loads resulting from revised criteria. All known design changes have been issued by Burns and Roe to the contractors and no additional changes to design are anticipated. This containment vessel retrofit program continues as a risk to the Project No. 2 schedule with regard to the licensing basis for the loads. Programs have been implemented by the BWR owners, GE and Burns and Roe to resolve questions concerning these loads. NRC approval for fuel load depends on acceptance of these programs, since the NRC must approve the final design of all safety related aspects of Project No. 2.

The NRC has raised questions in regard to the design of all light water reactors concerning possible Anticipated Transient Without Scram ("ATWS"). At the present time systems for mitigation of ATWS are not a licensing requirement for Project No. 2. In order to impose such a requirement the NRC will have to go through a rule-making process, which would not be expected to be final until late 1981. It is anticipated that many changes resulting from this process will be installed in Project No. 2 after fuel load during a subsequent plant outage but some changes may be required prior to fuel load. Provisions have been designed and constructed into Project No. 2 for adding certain systems and components that are considered most likely to be required.

The fire protection system for Project No. 2 is designed to be in accordance with NRC guidelines for nuclear plants of similar vintage. In July 1980, the NRC issued a proposed rulemaking which is applicable to operating plants and plants under construction and would impose new and expanded requirements. The rule became effective in February 1981 but only applied to operating plants. In May 1981 the NRC formally imposed the requirements of the new rule on Project No. 2. Burns and Roe is currently conducting a study and performing the engineering necessary to comply with the new rule. Although present plant design substantially complies with most of the proposed guidelines, additional fire barriers and other minor changes are likely to be required. The full impacts of the proposed requirements will be determined when the engineering evaluation is completed.

#### Additional NRC Actions

Starting in November of 1979, the Supply System began to encounter a number of difficulties related to quality of installed equipment, and this eventually led to work stoppages on all safety-related equipment at its Nuclear Project No. 2. In addition, the project was assessed civil penalties totalling \$59,500. In the intervening period, Supply System efforts on these quality-related issues have resulted in an essentially complete release of the imposed work stoppages, and removal of related constraints to completion of this project. The NRC formally concurred in this work release on May 31, 1981. In addition, the NRC has agreed to continue their efforts to prepare the Nuclear Project No. 2 Safety Evaluation Report on the current schedule for a March 1982 report completion. The Supply System has pledged its support for that NRC effort.

The NRC has completed their review of the inspection and repair plans relating to the abovementioned difficulties and fully released the Supply System to proceed with the necessary repairs. The major portion of the repair, including repair of the girth weld on the sacrificial shield wall, has been successfully completed.

The NRC also required the Supply System to submit a plan and schedule for completion of review of completed safety-related work accomplished by those contractors not having an NRC-reviewed quality assurance program to determine whether the quality assurance program was adequate to assure such work was properly performed. The plan is also required to include provisions for evaluating the quality assurance programs at each Supply System nuclear project based on lessons learned from the review. The NRC has reviewed the Supply System's plan and released the Supply System to resume work on all Quality Class I and II systems, except for certain minor items for which release has not yet been requested.

#### Contracts and Schedule

As of July 1, 1981 the Supply System had entered into 164 equipment and construction contracts, including contracts for the nuclear steam supply system with the General Electric Company and for the turbine-generator and accessories with the Westinghouse Electric Corporation. The total amount of these contracts was \$1,013,631,000 as of that date.

Construction of Project No. 2 started in August 1972. Major structural and civil work on Project No. 2 is complete. The bulk of mechanical, electrical and instrumentation work is installed and the emphasis is being placed on the completion of systems to support the plant test and startup program. Construction of the cooling towers is complete. Construction of Project No. 2 was approximately 86% complete as of July 1, 1981. The initial fuel loading is currently scheduled for September 1983 and commercial operation is scheduled to begin in February 1984.

#### Nuclear Fuel

The nuclear fuel cycle consists of four basic activities prior to insertion of the fuel assemblies in a nuclear reactor. These activities include acquisition of the uranium concentrates, conversion of the uranium concentrates to uranium hexafluoride, enrichment of the uranium hexafluoride and fabrication of the enriched uranium into fuel assemblies.

The uranium for the initial fuel core has been delivered, converted and enriched, and now awaits fabrication. The Supply System has contracted with the General Electric Company for fabrication services for the initial fuel core. Fabrication of the nuclear fuel assemblies is expected to begin in November 1981.

For reload fuel the Supply System has a contract with Exxon Nuclear Company, Incorporated ("Exxon") for uranium concentrates and for fuel fabrication services estimated to be sufficient for fourteen years of operation based on annual refueling. Recent disputes between the Supply System and Exxon over the enforceability of the contract have resulted in the Supply System commencing litigation to ensure Exxon's performance of the contract. For a discussion of the litigation see "Fuel Litigation" under the caption "Litigation". Any increase in the costs of this contract would not have a significant impact on the financing requirements for Project No. 2, but could have an impact on the cost of power. The Supply System has a contract with Kerr McGee Corporation for conversion services adequate for the operation of Project No. 2 through 1987, and with DOE for enrichment services for a period of 30 years which commenced on October 1, 1977.

At the present time, no operating facilities for the reprocessing of spent fuel are available, and no facilities are expected to be available in the near future. The President of the United States has recently released a draft policy statement calling for, among other things, the lifting of the ban on reprocessing spent nuclear fuel and the development of solutions to the problems of radioactive waste disposal. The effects of these policies cannot be predicted at this time. The design of Project No. 2 as proposed to the NRC for approval includes on site spent fuel storage capacity for Project No. 2 sufficient to accommodate all spent fuel discharges until about 1995. It is expected that by then an appropriate program will have been implemented to accept spent fuel for placement in a suitable repository.

### Estimated Financing Requirements

The total Supply System financing requirements for Project No. 2, based on the 1982 Project No. 2 construction budget, are presently estimated to be \$2,506,000,000, of which \$1,485,000,000 has been financed to date, and are shown in the following table.

The Supply System's current cash flow projections indicate that monies currently available together with investment income thereon and the proceeds from the Project No. 2 1981 Bonds will be sufficient to meet the cash flow requirements of Project No. 2 until April 1982. In addition to the Project No. 2 1981 Bonds, additional Project No. 2 Bonds necessary to complete the financing of Project No. 2 are planned to be issued as the need arises.

#### Estimated Project No. 2 Financing Required (Dollars in Thousands)

Equipment and Material Contracts(1) .....	\$ 199,641
Construction Contracts(1) .....	1,213,170
Construction Management(1) .....	134,322
Architect-Engineer(1) .....	257,578
Total Plant Construction Cost .....	<u>\$1,804,711</u>
Owner's Cost(2) .....	405,806
Contingency(3) .....	119,000
Nuclear Fuel(4) .....	92,505
Total Construction and Fuel Cost .....	<u>\$2,422,022</u>
Working Capital(5) .....	16,000
Reserve Account in the Bond Fund(6) .....	68,782
Bond Discount and Financing Cost(7) .....	55,502
Net Capitalized Interest During Construction(8) .....	<u>(56,306)</u>
Total Financing Required .....	<u><u>\$2,506,000</u></u>

(1) Estimated by Burns and Roe and Bechtel.

(2) Estimated by the Supply System.

(3) Estimated by the Supply System. Includes an appropriate allowance for potential cost impacts which have a high probability of occurrence but are not presently considered as part of the defined scope of Project No. 2. Includes \$38,337,000 of bond discount and financing costs which were not included in the 1982 Project No. 2 construction budget estimate. The Supply System has a program to effect cost reductions in the construction costs of Project No. 2. Pending further review of the results of that program the \$38,337,000 of bond discount and financing costs are assumed to be funded from Contingencies. In the event that the cost reduction program is not successful the total estimated cost of Project No. 2 may be increased.

(4) Estimated by the Supply System. Includes sales tax on the initial core at 5.0% and \$34,546,000 for reload fuel.

(5) Estimated by the Supply System. \$3,000,000 is required by the Project No. 2 Resolution.

(6) An amount equal to the largest semi-annual interest payment on the Project No. 2 Bonds, as required by the Project No. 2 Resolution. Based on actual interest rates for outstanding Project No. 2 Bonds and assumed interest rates of 11.5% for additional Project No. 2 Bonds issued in fiscal year 1982 and 10.0% for additional Project No. 2 Bonds issued thereafter.

(7) Includes actual discount and financing costs for the outstanding Project No. 2 Bonds and estimates of 4.5% of the principal amount of additional Project No. 2 Bonds issued in fiscal year 1982 and 3.0% of the principal amount of additional Project No. 2 Bonds thereafter. Does not include \$38,337,000 of bond discount and financing costs which have been included in Contingency above. See Footnote (3).

(8) Does not include interest after September 1, 1977 which is subject to payment pursuant to the Project No. 2 Net Billing Agreements. Computed as follows based on the same interest rates as in Footnote (6).

Gross Interest During Construction .....	\$120,517,000
Estimated Investment Income* .....	(176,823,000)
Net Interest During Construction .....	<u><u>\$(\$56,306,000)</u></u>

\*Includes actual income through May 1981 and estimated future interest earnings on amounts in the Construction Fund at assumed rates of 12.0% for fiscal year 1982 and 10.5% thereafter.

## Power Production

Based upon the estimated net generating capability of 1,100,000 kilowatts, Project No. 2 is expected to produce approximately 6.745 billion kilowatt-hours annually after initial operational tests and adjustments are made in the early years. Although there is not yet sufficient historical operating information available on large nuclear plants to establish an expected plant factor for Project No. 2, annual costs for Project No. 2 are based on an assumed 60% plant factor in the first year, 65% in the second year and 70% thereafter. During certain periods, surplus water will be available to generate power at regional hydroelectric projects, thereby permitting a reduction in the total amount of energy produced at thermal electric projects in the region. The extent of this reduction and its effect, if any, on the operation of Project No. 2 will depend upon conditions at the time of the availability of such hydroelectric energy and its relative cost compared to the cost of energy from Project No. 2.

## Estimated Project No. 2 Annual Costs

Based upon the financing and operating assumptions previously discussed and certain other estimated costs, the following table shows the estimated annual and unit costs of power from Project No. 2:

### Estimated Project No. 2 Annual Costs

(Dollars in Thousands)

	Fiscal Year Ending June 30,						
	1984	1985	1986	1987	1988	1989	1990
Interest and Amortization(1) .....	\$ 93,618	\$231,110	\$231,110	\$231,110	\$231,110	\$231,110	\$231,110
Payment to Reserve and Contingency Fund(2) .....	9,362	23,111	23,111	23,111	23,803	25,707	27,764
Subtotal .....	\$102,980	\$254,221	\$254,221	\$254,221	\$254,913	\$256,817	\$258,874
Operation and Maintenance(3) .....	21,898	60,380	66,687	70,829	76,536	82,112	88,451
Decommissioning(3) .....	2,025	4,860	4,860	4,860	4,860	4,860	4,860
Fuel(4) .....	20,578	52,064	52,959	63,109	72,056	80,999	93,363
Taxes(5) .....	1,959	5,105	5,378	5,615	5,870	6,131	6,442
Subtotal .....	\$ 46,460	\$122,409	\$129,884	\$144,413	\$159,322	\$174,102	\$193,116
Surplus from Prior Year's Payment to Reserve and Contingency Fund(6) .....	(8,898)	(15,178)	(4,215)	(2,704)	(1,071)	—	—
Investment Income(7) .....	(7,961)	(16,019)	(15,998)	(15,975)	(15,979)	(16,032)	(16,089)
Total Project Annual Cost .....	\$132,581	\$345,433	\$363,892	\$379,955	\$397,185	\$414,887	\$435,901
Annual Energy Generation(GWH)(8) ..	2,376	5,980	6,461	6,745	6,745	6,745	6,745
Annual Cost (mills/KWH)(9)(10) ...	55.8	57.8	56.3	56.3	58.9	61.5	64.6

(1) Based on assumed level debt service on the Project No. 2 Bonds to 2012 at actual interest rates on outstanding Project No. 2 Bonds and interest rates ranging from 11.5% to 10.0% on Project No. 2 1981 Bonds and on additional Project No. 2 Bonds. (See letter of R. W. Beck and Associates attached hereto as page B-1 to Exhibit B for information as to effect of higher actual interest costs of the 1981 Net Billed Bonds.)

(2) The greater of 10% of annual debt service as required by the Project No. 2 Resolution or estimated renewals and replacements.

(3) Estimated by the Supply System.

(4) Estimated by the Supply System based on the expected cost of fuel.

(5) Calculated at 1.5% of the wholesale value of energy produced by the Project No. 2.

(6) Computed as follows (dollars in thousands):

	1984	1985	1986	1987	1988	1989	1990
Payment to Reserve and Contingency Fund, Prior Year .....	\$21,354 *	\$22,468	\$23,111	\$23,111	\$23,111	\$23,803	\$25,707
Renewals and Replacements, Prior Year** ..	(12,456)***	(7,290)	(18,896)	(20,407)	(22,040)	(23,803)	(25,707)
Net Surplus****	\$ 8,898	\$15,178	\$ 4,215	\$ 2,704	\$ 1,071	\$ 0	\$ 0

\* Total payment by Bonneville in fiscal year 1983.

\*\* Estimated by the Supply System. Some costs in the early years may be funded from Project No. 2 Bond proceeds.

\*\*\* Credit for Reserve and Contingency Fund payments from July 1, 1983 to February 1, 1984.

\*\*\*\* Net Surplus may be used for purposes other than reduction in power cost in accordance with the Project No. 2 Resolution.

(Footnotes on following page.)



(7) Based on assumed investment rates on the balance of funds in the Reserve Account in the Bond Fund of 9.0% and the Reserve and Contingency Fund of 8.25%.

(8) Based on an assumed 60% plant factor in the first year of operation, 65% in the second year and 70% thereafter.

(9) Total Project Annual Cost divided by the Annual Energy Generation.

(10) The cost of providing for interest and principal on the Project No. 2 Bonds and certain reserve funds between September 1, 1977 and the date of commercial operation is assumed to be paid as incurred from Bonneville revenues pursuant to the Project No. 2 Net Billing Agreements. For the purpose of demonstrating the total annual cost per kilowatt-hour of Project No. 2 if the above costs were capitalized, the cost to Bonneville of \$710,000,000 has been annualized over 35 years at an assumed interest rate of 10.85% per annum which is an approximate average of Bonneville's current long term interest rates for borrowing from the Federal Treasury, as follows (dollars in thousands):

	1984	1985	1986	1987	1988	1989	1990
Additional Costs to Bonneville:							
Annualized Prepaid Project Cost ..	\$ 32,995	\$ 79,187	\$ 79,187	\$ 79,187	\$ 79,187	\$ 79,187	\$ 79,187
Total Annual Cost .....	\$165,576	\$424,640	\$443,079	\$459,142	\$476,372	\$494,074	\$515,088
Annual Cost (mills/KWH) ...	69.7	71.0	68.6	68.1	70.6	73.3	76.4

### PROJECT NO. 3

The following is a general description of Project No. 3; for additional information, reference is made to the reports of the Consulting Engineer and Ebasco, appended hereto as Exhibits B and E, respectively.

The Supply System has entered into an agreement with four investor-owned utilities which provides that Project No. 3 will be owned 70% by the Supply System and 30% by such utilities. For a summary of certain provisions of the Project No. 3 Ownership Agreement see the caption "The Project No. 3 Ownership Agreement".

#### Location

Project No. 3 is located in southeastern Grays Harbor County, Washington, along the south bank of the Chehalis River approximately 1 mile southeast of its confluence with the Satsop River. The site is approximately sixteen miles east of the City of Aberdeen, Washington and approximately 66 miles southwest of Seattle. The Supply System is also constructing its Project No. 5 on the same site. Project No. 5 is being designed and constructed as a twin to Project No. 3 and will share some common facilities with Project No. 3.

The site consists of approximately 2,300 acres, of which approximately 800 acres are devoted to the core area upon which Project No. 3 and Project No. 5 are to be located. The land in the core area has been acquired. Surrounding the core area there is to be approximately 1,500 acres of land subject to an exclusion zone easement. Easement agreements have been obtained for approximately 85% of this area and easement agreements for the balance are being sought. In addition the Supply System has acquired the necessary land for railway and road access to Project No. 3 and for a barge slip and water intake facilities. A lease of a portion of the bed of the Chehalis River for the water discharge facilities has been acquired.

#### Description

Project No. 3 will consist of a pressurized water nuclear steam supply system, turbine-generator, associated auxiliary equipment and facilities having a net generating capability of 1,240,000 kilowatts together with the necessary transformation, switching and transmission facilities to interconnect Project No. 3 with the facilities of the Federal System.

The basic structures comprising the overall power plant are the reactor containment and shield structure, the reactor auxiliary building, the fuel handling building and the control room area, all supported on a common foundation mat and referred to collectively as the Combination Structure; the turbine-generator building and a 500 foot high natural draft hyperbolic cooling tower. A groundwater intake system will provide the makeup water to replenish the evaporative losses in the cooling tower. Emergency power will be supplied to Project No. 3 from diesel generators, sized to sustain all essential plant loads without the need for outside power sources.

#### Permits and Licenses

The State of Washington has entered into a site certification agreement with the Supply System approving the site and has issued a National Pollutant Discharge Elimination System permit. On April 11, 1978 the NRC issued a construction permit for Project No. 3 under which construction is proceeding. This permit expires on January 1, 1985. There are no other major permits required for construction of Project No. 3. In due course, an application for an operating license will be filed with the NRC.

#### Contracts and Schedule

As of July 1, 1981 engineering activities were 82% complete, prepurchased equipment and material procurement activities were 97% complete.

Preliminary site work commenced in April 1977 and major Project No. 3 site excavation activities are complete. The installation of the Combination Structure foundation mat and the reactor building concrete shield wall has been completed. The turbine building concrete and structural steel work are complete. The cooling tower has been essentially completed. Work on the reactor building concrete and the Combination Structure walls and slab concrete has been started and the steel containment vessel erection has been completed, with the exception of the domed top of the vessel. The piping, electrical and HVAC installation in the reactor auxiliary, fuel handling and turbine building began during 1980. The major pressure vessels of the nuclear steam supply system were placed in the reactor building during August 1981. Construction of Project No. 3 was approximately 32% complete as of July 1, 1981. The initial fuel loading is presently scheduled for June 1986 and commercial operation is scheduled to begin in December 1986.

#### Nuclear Fuel

The nuclear fuel cycle consists of four basic elements prior to insertion of the fuel assemblies in a nuclear reactor. These elements include acquisition of the uranium concentrates, conversion of the uranium concentrates to uranium hexafluoride, enrichment of the uranium hexafluoride and fabrication of the enriched uranium into fuel assemblies.

For the initial fuel core, the Supply System has contracts with Allied Chemical Corporation for uranium hexafluoride (eliminating the need for acquisition of uranium concentrates), with DOE for enrichment services, and with Combustion Engineering, Inc. for fabrication services. The uranium hexafluoride has been delivered and will be enriched during September 1981.

The Supply System has contracted with DOE for enrichment services for a period of 30 years and with the Kerr McGee Corporation for all conversion services required for operation of Project No. 3 through 1988. The Supply System anticipates no difficulty in obtaining conversion services thereafter.

For reload fuel the Supply System has a contract with Exxon for uranium concentrates and for fuel fabrication services, estimated to be sufficient for fourteen years of operation based on annual refueling. Recent disputes between the Supply System and Exxon over the enforceability of the contract have resulted in the Supply System commencing litigation to ensure Exxon's performance of the contract. For a discussion of the litigation see "Fuel Litigation" under the caption "Litigation". Any increase in the costs of this contract would not have a significant impact on the financing requirements for Project No. 3, but could have an impact on the cost of power.

At the present time, no operating facilities for the reprocessing of spent fuel are available, and no facilities are expected to be available in the near future. The President of the United States has recently released a draft policy statement calling for, among other things, the lifting of the ban on reprocessing spent nuclear fuel and the development of solutions to the problems of radioactive waste disposal. The effects of those policies cannot be predicted at this time. The design of Project No. 3 as proposed to the NRC for approval includes on site spent fuel storage capacity for Project No. 3 sufficient to accommodate all spent fuel discharges until sometime after 1996, while maintaining full core discharge capability. It is expected that by then an appropriate program will have been implemented to accept spent fuel for placement in a suitable repository.

#### Estimated Financing Requirements

The total Supply System financing requirements for the Supply System's Ownership Share of Project No. 3, based on the 1982 Project No. 3 construction budget, are presently estimated to be \$2,458,000,000, of which \$905,000,000 has been financed to date, and are shown in the following table.

The Supply System's current cash flow projections indicate that moneys currently available together with investment income thereon and the proceeds from the Project No. 3 1981 Bonds will be sufficient to meet cash flow requirements of Project No. 3 until April 1982. In addition to the Project No. 3 1981 Bonds, additional Project No. 3 Bonds necessary to complete financing of the Supply System's Ownership Share of Project No. 3 are planned to be issued as the need arises.

#### Estimated Project No. 3 Financing Required

(Dollars in Thousands)

Equipment and Material Contracts(1) .....	\$ 323,818
Construction Contracts(1) .....	1,083,442
Construction Management(1) .....	106,658
Architect-Engineer(1) .....	98,276
Total Plant Construction Cost .....	<u>\$1,612,194</u>
Owners Cost(2) .....	257,850
Contingency(3) .....	255,500
Nuclear Fuel(4) .....	89,067
Total Construction and Fuel Cost .....	<u>\$2,214,611</u>
Working Capital(5) .....	20,000
Reserve Account in Bond Fund(6) .....	114,891
Bond Discount and Financing Costs(7) .....	69,772
Net Capitalized Interest During Construction(8) .....	38,726
Total Financing Required(9) .....	<u><u>\$2,458,000</u></u>

(1) Estimated by Ebasco.

(2) Estimated by the Supply System.

(3) Estimated by the Supply System. Includes an appropriate allowance for potential cost and schedule impacts which have a high probability of occurrence but are not presently considered as part of the defined scope of Project No. 3.

(Footnotes continued on following page.)

- (4) Estimated by the Supply System. Includes sales tax on the initial core at 5.2% and \$36,446,000 for reload fuel.
- (5) Estimated by the Supply System. \$3,000,000 is required by the Project No. 3 Resolution.
- (6) An amount equal to the largest semi-annual interest payment on the Project No. 3 Bonds, as required by the Project No. 3 Resolution. Based on actual interest rates for outstanding Project No. 3 Bonds and assumed interest rates of 11.5% for additional Project No. 3 Bonds issued in fiscal year 1982 and 10.0% for additional Project No. 3 Bonds issued thereafter.
- (7) Includes actual discount and financing costs for the outstanding Project No. 3 Bonds and estimates of 4.5% of the principal amount of additional Project No. 3 Bonds issued in fiscal year 1982 and 3.0% of the principal amount of additional Project No. 3 Bonds thereafter.
- (8) Does not include interest on the Project No. 3 Bonds which is subject to payment pursuant to the Project No. 3 Net Billing Agreements from September 1, 1982 to date of commercial operation. Computed as follows based on the same interest rates as in Footnote (6).

Gross Interest During Construction .....	\$ 315,079,000
Estimated Investment Income* .....	(276,353,000)
Net Interest During Construction .....	<u>\$ 38,726,000</u>

\* Includes actual income through May 1981 and estimated future interest earnings on amounts in the Construction Fund at assumed rates of 12.0% for fiscal year 1982 and 10.5% thereafter.

- (9) Does not include any possible impacts which may result from a termination of either Project No. 4 or Project No. 5.

The committee established pursuant to the terms of the Project No. 3 Ownership Agreement has recently approved a 1982 cash flow requirements budget by a vote of committee members having combined Ownership Share voting rights of more than 80%. For a discussion of requirements for the approval of budgets see "Committee" under the caption "The Project No. 3 Ownership Agreement".

#### Power Production

Based upon the estimated net generating capability of 1,240,000 kilowatts, Project No. 3 is expected to produce approximately 7.604 billion kilowatt-hours annually after initial operational tests and adjustments are made in the early years. Although there is not yet sufficient historical operating information available on large nuclear plants to establish an expected plant factor for Project No. 3, annual costs for Project No. 3 are based on an assumed 60% plant factor in the first year, 65% in the second year and 70% thereafter. The Supply System's Ownership Share would be approximately 5.323 billion kilowatt-hours annually. During certain periods, surplus water will be available to generate power at regional hydroelectric projects, thereby permitting a reduction in the total amount of energy produced at thermal electric projects in the region. The extent of this reduction and its effect, if any, on the operation of Project No. 3 will depend upon conditions at the time of the availability of such hydroelectric energy and its relative cost compared to the cost of energy from Project No. 3.

### Estimated Project No. 3 Annual Costs

Based upon the financing and operating assumptions previously discussed and certain other estimated costs, the following table shows the estimated annual and unit cost of power from Project No. 3:

### Estimated Project No. 3 Annual Costs

(Dollars in Thousands)

	Fiscal Year Ending June 30,					
	1987	1988	1989	1990	1991	1992
Interest and Amortization(1) .....	\$138,732	\$243,364	\$243,364	\$243,364	\$243,364	\$243,364
Payment to Reserve and Contingency Fund(2) .....	13,873	24,336	24,336	24,336	24,336	24,336
Subtotal .....	\$152,605	\$267,700	\$267,700	\$267,700	\$267,700	\$267,700
Operation and Maintenance(3) .....	21,324	53,439	51,727	55,055	58,663	62,569
Decommissioning(3) .....	2,315	3,968	3,968	3,968	3,968	3,968
Fuel(4) .....	30,646	57,709	67,097	82,399	97,299	107,553
Taxes(5) .....	530	957	1,033	1,065	1,065	1,065
Subtotal .....	\$ 54,815	\$116,073	\$123,825	\$142,487	\$160,995	\$175,155
Surplus from Prior Years Payment to Reserve and Contingency Fund(6) .....	(13,463)	(14,783)	(7,674)	(6,341)	(4,901)	(3,346)
Investment Income(7) .....	(11,349)	(17,083)	(17,057)	(17,029)	(17,000)	(16,969)
Total Project Annual Cost .....	\$182,608	\$351,907	\$366,794	\$386,817	\$406,794	\$422,540
Annual Energy Generation (GWH)(8) .....	2,650	4,783	5,163	5,323	5,323	5,323
Annual Cost (mills/KWH)(9)(10) .	68.9	73.6	71.0	72.7	76.4	79.4

- (1) Based on assumed level debt service on the Project No. 3 Bonds to 2018 at actual interest rates on outstanding Project No. 3 Bonds and interest rates ranging from 11.5% to 10.0% on the Project No. 3 1981 Bonds and on additional Project No. 3 Bonds. (See letter of R. W. Beck and Associates attached hereto as page B-1 to Exhibit B for information as to effect of higher actual interest costs of the 1981 Net Billed Bonds.)
- (2) The greater of 10% of annual debt service as required by the Project No. 3 Resolution or estimated renewals and replacements.
- (3) Estimated by the Supply System.
- (4) Estimated by the Supply System based on the expected cost of fuel.
- (5) Calculated at 0.2 mills per kilowatt-hour of the energy produced by Project No. 3.
- (6) Computed as follows (dollars in thousands):

	1987	1988	1989	1990	1991	1992
Payments to Reserve and Contingency Fund, Prior Year .....	\$23,079*	\$23,783	\$24,336	\$24,336	\$24,336	\$24,336
Renewals and Replacements, Prior Year** .....	(9,616)***	(9,000)	(16,662)	(17,995)	(19,435)	(20,990)
Net Surplus**** .....	\$13,463	\$14,783	\$ 7,674	\$ 6,341	\$ 4,901	\$ 3,346

\* Total payment by Bonneville in fiscal year 1986.

\*\* Estimated by the Supply System. Some costs in the early years may be funded from Project No. 3 Bond proceeds.

\*\*\* Credit for Reserve and Contingency Fund payments from July 1, 1986 to December 1, 1986.

\*\*\*\* The Net Surplus may be used for purposes other than reduction in power costs in accordance with the Project No. 3 Resolution.

- (7) Based on investment rates on the balance of funds in the Reserve Account in the Bond Fund of 9.0% and the Reserve and Contingency Fund of 8.25%.
- (8) Based on an assumed 60% plant factor in the first year of operation, 65% in the second year and 70% thereafter.
- (9) Total Project Annual Cost divided by the Annual Energy Generation.
- (10) The cost of providing certain reserves and of providing interest and principal on the Project No. 3 Bonds between September 1, 1982 and the scheduled commercial operation date of December 1986 is assumed to be paid as incurred from Bonneville revenues pursuant to the Project No. 3 Net Billing Agreements. For the purpose of demonstrating the total annual cost per kilowatt-hour of Project No. 3 if the above costs were capitalized, the cost to Bonneville of \$756,971,000 has been annualized over 35 years at an assumed interest rate of 10.85% per annum, which is an approximate average of Bonneville's current long term interest rates for borrowing from the Federal Treasury, as follows (dollars in thousands):

	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Additional Costs to Bonneville:						
Annualized Prepaid Project Cost	<u>\$ 49,249</u>	<u>\$ 84,426</u>	<u>\$ 84,426</u>	<u>\$ 84,426</u>	<u>\$ 84,426</u>	<u>\$ 84,426</u>
Total Annual Cost .....	\$231,857	\$436,333	\$451,220	\$471,243	\$491,220	\$506,966
Annual Cost (mills/KWH).	87.5	91.2	87.3	88.5	92.3	95.2

## NUCLEAR INSURANCE

From the time nuclear fuel is brought on a project site for each of its nuclear electric generating projects, except the Hanford Project, the Supply System is required to protect itself from public liability claims arising from a nuclear incident through a three layer combination of insurance, self-insurance and government indemnity. The first layer is nuclear liability insurance, the current maximum amount available being \$160 million. The next layer is a mandatory industry-wide program of self-insurance, under which nuclear unit owners could be assessed, for each operational reactor owned, not to exceed \$5 million per each nuclear incident, and not to exceed \$10 million per year in the event of more than one incident. The third layer is a federal government indemnity that makes up the difference between the total of the available liability insurance and the self-insurance, and \$560 million, which is currently the maximum liability per occurrence under the Price-Anderson Act. If the number of reactors increases, the government indemnity will gradually be phased out. In the Price-Anderson Act, Congress expressed the intent that this \$560 million limitation will be increased if assessments available under the self-insurance program exceed that amount. Any assessments allocable to the Net Billed Projects, once it becomes subject to the self-insurance system, would be billable under the Net Billing Agreements. The Supply System's maximum exposure with respect to all its nuclear projects would be \$46,000,000 per year under this legislation, \$27,000,000 of which would be allocable to the Net Billed Projects.

Property insurance for the Supply System's projects will be secured from the nuclear insurance pools or from other available sources including self-insurance arrangements. Currently a maximum limit of \$375,000,000 per site is available through the nuclear insurance pools. Except for the earthquake peril the Supply System is carrying \$300,000,000 on each of Projects 1, 2 and 4. Earthquake coverage is \$300,000,000 for Project No. 2 and \$300,000,000 for Projects Nos. 1 and 4 combined. Coverage, including earthquake coverage, is \$300,000,000 for Projects Nos. 3 and 5 combined. It has been the general policy and practice of the insurance pools, following siting criteria established by the NRC, that adjacent nuclear units are covered under a single policy limit. The Supply System anticipates that the nuclear property insurance coverage for Projects Nos. 3 and 5 will as at present be under a single policy limit. It is also possible that at some future date Projects Nos. 1, 2 and 4 may be treated as a single site and be under a single policy limit.

## LEGISLATIVE DEVELOPMENTS

### Washington Senate Inquiry

In January, 1981, the Senate Committee on Energy and Utilities of the Washington State Legislature issued a report on its inquiry, held during the period of May 1980 to November 1980, into the causes of cost overruns and schedule delays relating to construction of the Supply System's nuclear projects. The Committee concluded that the Supply System had failed to develop realistic, disciplined budget and schedule processes and any effective mechanisms to use budget and schedules in the management of the projects. The Committee also concluded that, while some cost increases were attributable to factors beyond the control of the Supply System, mismanagement by the Supply System of the projects was the most significant cause of cost overruns and schedule delays on the projects. However, the Committee also stated that a number of the deficiencies it found had already been, or were in the process of being remedied by the new managing director.

### State Legislative Developments

As a result of the Senate Committee on Energy and Utilities inquiry, the Washington State Legislature enacted several bills affecting the Supply System.

Washington Laws 1st Ex Sess 1981, ch. 3 requires the Supply System's Executive Committee to be reconstituted as an eleven member Executive Board by October 26, 1981. The Board of Directors will select seven members of the Board from its membership and four additional members, who must be representative of policy makers in business, finance or science or be recognized experts in construction or management of nuclear electric generating facilities. Until its nuclear projects are completed, the

powers and duties of the Supply System will be vested in the new Executive Board except for certain specified functions, including acquisition or sale of facilities, bond sales, budget approvals, appointment of the treasurer and executive board and the compensation of the outside directors.

Washington Laws 1st Ex Sess 1981, ch. 1 authorizes the Supply System to sell revenue obligations by negotiation as well as by competitive bidding and permits the Board to delegate to the managing director or the treasurer the authority to sell obligations maturing within one year from the date of issuance.

Washington Laws 1st Ex Sess 1981, ch. 4 requires the joint energy research center of the University of Washington and Washington State University to conduct a study of Projects Nos. 4 and 5 and appropriates \$1,500,000 for this purpose. The study shall be conducted under the supervision of a nine member steering committee. Six members of the steering committee shall be selected by the Chairman of the Senate and House Energy and Utilities Committees and must be experts in one or more fields related to energy, electric utilities, public works construction, business or municipal finance. The Supply System, the publicly owned participants and Pacific Power & Light Company may each appoint one member. Among other matters, the study must determine the need for Projects Nos. 4 and 5, the ultimate cost and schedule of Projects Nos. 4 and 5, the cost of power from Projects Nos. 4 and 5, the outside market for the power from Projects Nos. 4 and 5, and the cost effectiveness of reliable available alternatives to Projects Nos. 4 and 5 as compared with Projects Nos. 4 and 5. The study must also evaluate whether Projects Nos. 4 and 5 can be financed, estimate the effect of Projects Nos. 4 and 5 on the average electric power rates of a representative group of participants and the cost impact of a temporary power supply deficit as compared to a temporary power supply surplus. The study must be completed by March 15, 1982. The legislation provides that the Supply System and Pacific shall reimburse the State for the cost of the study as part of the cost of construction of Projects Nos. 4 and 5.

Washington Laws 1981, ch. 173 provides that the Supply System may negotiate a contract for completion and start up of a nuclear plant when it is approximately eighty percent complete.

#### THE PARTICIPANTS, COMPANIES AND OWNERS

Of the 116 preference customers of Bonneville, 104 are Project No. 1 Participants, 94 are Project No. 2 Participants and 103 are Project No. 3 Participants. The number of Participants by category in each Net Billed Project are as follows:

<u>Category of Participant</u>	<u>Project No. 1</u>	<u>Project No. 2</u>	<u>Project No. 3</u>
Municipalities .....	28	27	28
Districts .....	29	22	28
Cooperatives .....	47	45	47
Total .....	104	94	103

The Project No. 1 Participants have contracted to purchase 67.53% of the capability of Project No. 1 during the period 1980 to 1996 and 100% of the capability of Project No. 1 thereafter. The Project No. 1 Companies (The Montana Power Company, Pacific Power & Light Company, Portland General Electric Company, Puget Sound Power & Light Company, and The Washington Water Power Company) have contracted to purchase 32.47% of the capability of Project No. 1 during the period 1980 to 1996.

The Project No. 2 Participants have contracted to purchase 100% of the capability of Project No. 2.

The Project No. 3 Participants have contracted to purchase 100% of the Supply System's Ownership Share of the capability of Project No. 3. The Project No. 3 Owners (Pacific Power & Light Company, Portland General Electric Company, Puget Sound Power & Light Company and The Washington Water Power Company) own 30% of Project No. 3 pursuant to the Project No. 3 Ownership Agreement.



The net billing arrangements between the Supply System, the Participants and Bonneville for the Net Billed Projects and the other net billed projects will increase the amount of capacity and energy available to the Federal System by the amount of their output. This, in turn, will make more capacity and energy available from Bonneville to all of its customers, including the Participants. Each of the Participants is a statutory preference customer of Bonneville and, as such, has a priority over non-preference customers on power sold by Bonneville from the Federal System.

In 1980, the Participants in all Net Billed Projects served approximately 1,363,000 power customers with total sales of energy of approximately 53 billion kilowatt-hours. Operating revenues of the Participants totaled \$759,345,085. Of that amount, districts' revenues were \$330,262,152, municipalities' revenues were \$295,037,697 and the cooperatives' revenues were \$134,045,236. The centerfold map shows the areas served by the Participants.

Exhibit A attached hereto shows the number of customers and power sales in 1980 for each Participant, Company or Owner, and indicates its share of each Net Billed Project capability.

### THE NET BILLING AGREEMENTS

On February 6, 1973, the Supply System, Bonneville and each Project No. 1 Participant entered into a Project No. 1 Net Billing Agreement under the terms of which the Project No. 1 description, as set forth in Exhibit B thereto, included the use of the generating facilities which are a part of the Hanford Project. Subsequently, on May 31, 1974, the Supply System, Bonneville and each Project No. 1 Participant entered into Amendatory Agreement No. 1 to each Project No. 1 Net Billing Agreement (the "Project No. 1 Amendatory Agreements"). Under the terms of the Project No. 1 Amendatory Agreements, among other things, the Project No. 1 description was changed so that it no longer includes the use of the Hanford Project generating facilities. However, the provisions relating to the obligations incurred with respect to the Hanford Project after July 1, 1980, remain in effect.

On January 4, 1971, the Supply System, Bonneville and each Project No. 2 Participant entered into a Project No. 2 Net Billing Agreement.

On September 25, 1973, the Supply System, Bonneville and each Project No. 3 Participant entered into a Project No. 3 Net Billing Agreement.

Many of the provisions of the Net Billing Agreements have been summarized under the caption "Security for the Net Billed Bonds". A summary of certain additional provisions of the Net Billing Agreements, as amended, follows. Except where the text indicates otherwise, reference to Project No. 1 Net Billing Agreements is to such Agreements as amended by the Project No. 1 Amendatory Agreements. The full text of the form of the Net Billing Agreements, as amended, may be obtained from the Supply System. The summary describes the common features of, and highlights the differences among, the Net Billing Agreements for each Net Billed Project. The Net Billing Agreements for the same Net Billed Project are identical except as to the Participants' shares.

The capitalization of any word or words which are not conventionally capitalized (e.g. Project, Participants) indicates that such words are defined in the Net Billing Agreements. (The same practice is followed in the summaries of the Project Agreements, the Project No. 3 Ownership Agreement and the Net Billed Resolutions which follow.)

#### Term

Each Net Billing Agreement became effective upon execution and delivery and will terminate as provided therein. See "Termination", below.

Although the Net Billing Agreements may be terminated prior to the maturity of any respective Net Billed Bonds, the obligation of each of the respective Participants thereunder to pay its proportionate share of debt service on any respective Net Billed Bonds shall continue until the respective Net Billed Bonds have been retired, and Bonneville will continue to be obligated to offset or credit these payments against payments pursuant to the respective Participant's Bonneville contracts.

#### Ownership and Operation

With respect to each Project No. 1 and Project No. 2 Net Billing Agreement, the Supply System will use its best efforts to arrange for the financing, design, construction, operation and maintenance of Projects Nos. 1 and 2, respectively. With respect to each Project No. 3 Net Billing Agreement, the Supply System will perform its duties, and exercise its rights under the Project No. 3 Ownership Agreement. For a discussion of such rights and duties see the caption "The Project No. 3 Ownership Agreement".

#### Sale, Purchase and Assignment

The Supply System sells, and each Participant purchases, its Participant's Share of the respective Net Billed Project Capability and each Participant in turn assigns its Participant's Share of such capability to Bonneville. Such shares in each Net Billed Project for selected years are shown in the last four columns of Exhibit A attached hereto. With respect to Project No. 3 Participants, the Project No. 3 Participant's Share in each contract year is the percentage of the Supply System's Ownership Share of Project No. 3 Capability specified for such year in Exhibit A to the Project No. 3 Net Billing Agreements. Two or more Project No. 3 Participants may agree to a reallocation of their Participant's Shares so long as, among other requirements, the aggregate of the increases is equal to the aggregate of the decreases and the reallocation does not cause Bonneville's estimate of the payments to be made by a Project No. 3 Participant to the Supply System to exceed 86.95% of Bonneville's estimate of its billings to the Project No. 3 Participant.

The provisions of the Net Billing Agreements with respect to payments are summarized under the caption "Security for the Net Billed Bonds" above.

If Bonneville is unable to satisfy its obligation to an affected Participant by net billing, assignment or cash payment and determines that this condition will continue for a significant period, the affected Participant may direct that all or a portion of the energy associated with its Participant's Share be delivered by the Supply System for the Participant's account at a specified point of delivery, either for the expected period of such inability or the remainder of the term of the Net Billing Agreement, whichever is specified by the Participant when it elects to have such energy delivered to it. The amount of energy delivered will be limited to the amount of the Participant's Share for which payment by Bonneville cannot be made.

#### Termination

With respect to Project No. 1 and Project No. 2, if either such Project is ended pursuant to Section 15 of the respective Project Agreement, as described below, Supply System will give notice of termination of the affected Net Billing Agreements effective upon the date of termination of the respective Project Agreement. The Supply System shall then terminate all activities relating to construction and operation of such Project and shall undertake the salvage and disposition or sale of such Project as provided in the respective Project Agreement. After such termination, the Supply System shall provide monthly accounting statements to Bonneville and each Participant in such Project of all costs associated with such termination. The monthly accounting statements will credit against such costs all amounts received by the Supply System from the disposition of Project assets, including in the case of Project No. 1, amounts payable under the Project No. 1 Exchange Agreements. Such monthly accounting statements will continue until all respective Net Billed Bonds are paid or funds are set aside for such

payment. If the monthly accounting statements show that such costs exceed such credits, such Participant will pay its portion of such excess costs to the Supply System. The payments will be made at times and in amounts sufficient to discharge on a current basis such Participant's Percentage or Share, as the case may be, of the amount which the Supply System is required to pay into the various funds provided in the respective Net Billed Resolution for debt service and all other purposes.

With respect to Project No. 3, if the Supply System is unable to participate in ownership, construction, or operation of such Project due to licensing, financing, construction or operating conditions which are beyond its control, or if the Supply System is in default under the Project No. 3 Ownership Agreement and has been requested by Bonneville to give notice of termination, or if the owners of Project No. 3 invoke the procedure to end such Project set forth in the Project No. 3 Ownership Agreement, the Supply System shall give notice of termination of the Project No. 3 Net Billing Agreements effective on the date of such notice. The Supply System shall then terminate its activities relating to construction and operation of Project No. 3 and shall undertake the salvage, discontinuance, decommissioning and disposition or sale of its ownership interest in such Project, all in accordance with the Project No. 3 Ownership Agreement. After such termination, the Supply System will make monthly accounting statements to Bonneville and each Project No. 3 Participant of all costs associated with such termination, including debt service. The monthly accounting statements will credit against such costs all amounts received by the Supply System from the disposition of the Supply System's Ownership Share of Project No. 3 assets. Such monthly accounting statements will continue at least until all Project No. 3 Bonds have been paid or funds are set aside for their payment. If the monthly accounting statements show that such costs exceed such credits, the Project No. 3 Participant will pay its portion of such excess costs to the Supply System. The payments will be made at times and in amounts sufficient to discharge on a current basis the Project No. 3 Participant's Share of the amount which the Supply System is required to pay into the various funds provided in the Project No. 3 Resolution for debt service and all other purposes.

The costs of termination for each Net Billed Project include all of Supply System's accrued costs and liabilities resulting from Supply System's ownership, construction, operation (including cost of fuel) and maintenance of and renewals and replacements to the terminating Project, all other Supply System costs resulting from its ownership of such Project and the salvage, discontinuance, decommissioning, and disposition or sale thereof, and all amounts which Supply System is required under the respective Net Billed Resolution to pay in each year into the various funds provided in such Resolution for debt service and all other purposes. Under the terms of the Net Billing Agreements, Bonneville is obligated to pay the Participants in each Net Billed Project, and such Participants are obligated to pay the Supply System, the total annual costs of such Project, including costs associated with termination of such Project. See also the caption "Security for the Net Billed Bonds".

#### **Modification of Agreement**

The Net Billing Agreements shall not be amended, modified or otherwise changed by agreement of the parties in any manner that will impair or adversely affect the security afforded by its provisions for the payment of the principal, interest and premium, if any, on the Net Billed Bonds.

#### **Provisions Required by Statute or Executive Order**

The Net Billing Agreements contain provisions required by Statute or Executive Order relating to contract work hours and safety standards, convict labor, equal opportunity employment and the interest of a member of Congress. Under the provisions of Executive Order 11246 of September 24, 1965 and the Rules and Regulations and relevant Orders of the Secretary of Labor thereunder, the Supply System has been granted by the Director, Office of Federal Contracts Compliance, U.S. Department

of Labor, a limited exemption from the provisions permitting cancellation, termination, and suspension of the Net Billing Agreements in the event of non-compliance with the equal opportunity clause contained in said Agreements.

### THE PROJECT AGREEMENTS

On February 6, 1973, the Supply System and Bonneville entered into an agreement (the "Project No. 1 Agreement") which, among other things, provides standards for the design, licensing, financing, construction, fueling, operation and maintenance of Project No. 1, and for the making of any replacements, repairs or capital additions thereto. Subsequently on May 31, 1974, the Supply System and Bonneville entered into Amendatory Agreement No. 1 to the Project No. 1 Agreement for the purpose of changing the Project No. 1 description to conform to the changes made in the Project No. 1 Net Billing Agreements.

On January 4, 1971, the Supply System and Bonneville entered into an agreement (the "Project No. 2 Agreement", which, among other things, provides standards for the design, licensing, financing, construction, fueling, operation and maintenance of Project No. 2, and for the making of any replacements, repairs or capital additions thereto.

On September 25, 1973, the Supply System and Bonneville entered into an agreement (the "Project No. 3 Agreement" and, together with the Project No. 1 Agreement and the Project No. 2 Agreement, the "Project Agreements") which, among other things, contains provisions with respect to the financing, construction, operation and maintenance of the Project No. 3, and the making of any replacements, repairs or capital additions thereto, and budgeting under the Project No. 3 Net Billing Agreements.

A summary of some of the provisions of the Project Agreements follows. Copies of the Project Agreements may be obtained from the Supply System.

#### Terms

The Project No. 1 and Project No. 2 Agreements became effective each upon its execution and delivery and will terminate when the respective Net Billed Project is terminated as provided in Section 15 of the respective Project Agreement.

Section 15 in each of the Project No. 1 and Project No. 2 Agreements provides that the respective Net Billed Project shall terminate and the Supply System shall cause such Project to be salvaged, discontinued, decommissioned and disposed of or sold in whole or in part to the highest bidder or bidders, or disposed of in such other manner as the parties may agree when:

(a) Supply System determines it is unable to construct, operate, or proceed as owner of the respective Net Billed Project due to licensing, financing, or operating conditions or other causes which are beyond its control.

(b) The parties determine the respective Net Billed Project is not capable of producing energy consistent with Prudent Utility Practice or, if the parties disagree, the Project Consultant so determines, or

(c) Bonneville directs the end of such Project pursuant to the provisions of Section 11(a), which provides that if the estimated cost of a replacement or repair or capital addition required by a governmental agency after the Date of Commercial Operation exceeds 20 percent of the then depreciated value of the respective Net Billed Project, Bonneville may direct that the Supply System end the respective Net Billed Project in accordance with Section 15.

The Project No. 3 Agreement became effective upon its execution and delivery and will terminate when the Project No. 3 Net Billing Agreements terminate.

For a discussion of contract provisions relating to the end of Project No. 3, see "End of Project" under the caption "The Project No. 3 Ownership Agreement".

#### **Design, Licensing and Construction of the Projects**

With respect to the Project No. 1 and Project No. 2 Agreements, the Supply System agrees among other things (i) to perform its duties and exercise its rights under such agreement in accordance with Prudent Utility Practice (ii) to use its best efforts to obtain all licenses, permits and other rights and regulatory approvals necessary for the ownership, construction, and operation of the respective Net Billed Project; (iii) to construct the respective Net Billed Project in accordance with Prudent Utility Practice; (iv) to keep Bonneville informed of all significant matters with respect to planning and constructive of such Project; and (v) to use its best efforts to schedule the Date of Commercial Operation for each respective Net Billed Project as near as possible to the date set forth therein.

With respect to Project No. 3 Agreement, the Supply System agrees among other things (i) to perform its duties and exercise its rights under such agreement and the Project No. 3 Ownership Agreement in accordance with Prudent Utility Practice; and (ii) to keep Bonneville informed of all significant matters with respect to construction or operation of Project No. 3 where practicable in time for Bonneville to comment thereon before decisions are made, and (iii) to confer with Bonneville during the development of the Supply System's proposals for such matters when practical to do so. For a more complete discussion of the Supply System's duties with respect to Project No. 3, see the caption "The Project No. 3 Ownership Agreement".

"Prudent Utility Practice" at a particular time means any of the practices, methods and acts, including those engaged in or approved by a significant proportion of the electrical utility industry prior to such time, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, would have been expected to accomplish the desired result at the lowest reasonable cost consistent with reliability, safety and expedition. In evaluating whether any act or proposal conforms to Prudent Utility Practice, Bonneville and the Supply System and any Project Consultant shall take into account the fact that the Supply System is a municipal corporation with statutory duties and responsibilities, and the objective to integrate the entire Project Capability with the generating resources of the Federal Columbia River Power System in order to achieve optimum utilization of the resources of that system taken as a whole and to achieve efficient and economical operation of that system.

Bonneville will use its best efforts to construct, operate and maintain necessary facilities to interconnect each Net Billed Project with the Federal System so as to be ready to receive generation from such Project on or before the initial test and operation of such Project.

#### **Financing**

With respect to each Net Billed Project the Supply System shall use its best efforts to issue and sell respective Net Billed Bonds to finance the cost of such Project and the completion thereof, as such costs are defined in the respective Net Billed Resolution, and to finance the cost of any capital additions, renewals, repairs, replacements or modifications to such Net Billed Project; provided, however, that such Net Billed Bonds may then be legally issued and sold.

Net Billed Resolutions are subject to approval by Bonneville, and Bonneville has approved each such Net Billed Resolution and the Net Billed Supplemental Resolutions.

#### **Representation by Bonneville on the Committee Established Pursuant to the Project No. 3 Ownership Agreement**

The Supply System will appoint a member designated by Bonneville to the Committee established pursuant to the Project No. 3 Ownership Agreement, who shall have the right to vote the lesser of 50%

of the Supply System's Project No. 3 Ownership Share or the sum of the Project No. 3 Participant's Shares assigned to Bonneville under the Project No. 3 Net Billing Agreements at the beginning of the Contract Year.

The Supply System will not proceed with the following elective items under the Project No. 3 Ownership Agreement without the concurrence of Bonneville's representative on the Committee: (i) notice to repair Project No. 3 if the cost of repair is in excess of 20% of the depreciated value of Project No. 3, (ii) renewals and replacements not necessary to assure design capability and additions not required by governmental agencies, (iii) construction of Project No. 3 if any other party to the Project No. 3 Ownership Agreement does not participate for the reasons set forth in such Project No. 3 Ownership Agreement.

#### **Budgets**

Separate Construction Budgets and Annual Budgets, for each Net Billed Project, will be prepared annually. Both the Construction Budgets and the Annual Budgets and any revision thereof are to be submitted to Bonneville and are subject to its approval. In the absence of any objection by Bonneville a budget will become effective within 30 days after submittal, in the case of the Construction and Annual Budgets, and within 7 days, in the case of any revision thereof.

All accounts shall be kept so as to permit conversion to the applicable system of accounts prescribed for electric utilities by the Federal Power Commission.

#### **Operation and Maintenance**

The Supply System shall operate and maintain the Net Billed Projects in accordance with Prudent Utility Practice and in accordance with the requirements of government agencies having jurisdiction.

#### **Bonds for Replacements, Repairs and Capital Additions**

If in any Contract Year the amounts in any Net Billed Project's Annual Budget for renewals, repairs and replacements and for capital additions and betterments necessary to achieve design capability or required by governmental agencies ("Amounts for Extraordinary Costs"), whether or not such amounts are costs of operation or costs of construction, exceed the amount of reserves, if any, maintained for such purpose pursuant to the respective Net Billed Resolution plus the proceeds of insurance, if any, available by reason of loss or damage to the respective Net Billed Project, by the lesser of:

(1) \$3,000,000 or

(2) an amount by which the amount of Bonneville's estimate of the total of the net billing credits available in such Contract Year to the Participants in such Project and the amounts of such reserves and insurance proceeds, if any, exceeds the Annual Budget for such Contract Year exclusive of Amounts for Extraordinary Costs,

the Supply System will, in good faith, use its best efforts to issue and sell respective Net Billed Bonds to pay such excess.

#### **Bonneville's Approval and Project Consultant**

If any proposal or item subject to approval by Bonneville is disapproved by Bonneville and an alternative proposal or item is suggested by Bonneville, the Supply System shall adopt such suggestion or within seven days after receipt of such disapproval, shall appoint a Project Consultant acceptable to Bonneville to review the proposal or item. Proposals or items found by the Project Consultant to be consistent with Prudent Utility Practice shall become immediately effective. Proposals or items found by the Project Consultant to be inconsistent with Prudent Utility Practice shall be modified to conform

to the recommendation of the Project Consultant or as the parties otherwise agree and shall become effective as and when modified. If any proposal or item referred to the Project Consultant has not been resolved and will affect the continuous operation of the respective Net Billed Project, the Supply System shall continue to operate such Net Billed Project and may proceed with the item as proposed by the Supply System, or as proposed by Bonneville, or as modified by mutual agreement of the Supply System and Bonneville. If the Supply System proceeds with the item as proposed by it, and the item is determined by the Project Consultant to be inconsistent with Prudent Utility Practice, the Supply System shall bear any net increase in the cost of construction or operation of the respective Net Billed Project resulting from such item without charge to such Net Billed Project to the extent such item is found by the Project Consultant to be inconsistent with Prudent Utility Practice.

#### **Provisions Required by Statute or Executive Order**

Each Project Agreement contains certain provisions required by Statute or Executive Order relating to contract work hours and safety standards, convict labor, equal opportunity employment and the interest of a member of Congress. Under the provisions of Executive Order 11246 of September 24, 1965 and the Rules and Regulations and relevant Orders of the Secretary of Labor thereunder, the Supply System has been granted by the Director, Office of Federal Contract Compliance, U. S. Department of Labor, a limited exemption from the provisions permitting cancellation, termination, and suspension of each Project Agreement in the event of non-compliance with the equal opportunity clause contained in each Agreement.

### **THE PROJECT NO. 3 OWNERSHIP AGREEMENT**

The following is a summary of certain provisions of the Project No. 3 Ownership Agreement and does not purport to be complete. A copy of the Project No. 3 Ownership Agreement may be obtained from the Supply System.

#### **Ownership of Project No. 3**

Project No. 3 shall be owned by the Parties as tenants in common. The Supply System has an undivided interest of 70% and Pacific Power & Light Company, Portland General Electric Company, Puget Sound Power & Light Company and The Washington Water Power Company have undivided interests of 10%, 10%, 5% and 5% respectively. A Party's Ownership Share may be adjusted upon the occurrence of certain events, as described below.

Each Party promptly and with due diligence shall take all necessary actions and seek all regulatory approvals, licenses and permits to carry out its obligations under the Project No. 3 Ownership Agreement.

The Parties waive the right to partition of Project No. 3.

The duties, obligations and liabilities of the Parties are several and not joint or collective, and none of the Parties shall be jointly or severally liable for the acts, omissions, or obligations of any of the other Parties.

The Supply System shall construct, operate and maintain Project No. 3 and shall have possession and control of Project No. 3 for all the Parties.

#### **Committee**

There shall be a Committee composed of seven members, three to be appointed by Supply System (one of whom will be designated by Bonneville pursuant to the Project No. 3 Agreement), and one member to be appointed by each other Party. Each Committee member shall have the right to vote that part of the Ownership Share of the Party appointing him as designated in the notice of appointment,

and the member appointed by Bonneville shall have the right to vote the portion of the Supply System's Ownership Share provided in the Project No. 3 Agreement. The total voting rights of the members of the Committee appointed by each Party shall be equal to such Party's Ownership Share.

The Supply System shall keep all members of the Committee informed of all significant matters with respect to planning, construction, operation or maintenance of Project No. 3, and when practicable, in time for members to comment thereon before decisions are made, and shall confer with the Committee, or separately with members thereof, during the development of the Supply System's proposals regarding such matters when practicable to do so. Upon request of any Committee member, the Supply System shall furnish or make available to all members of the Committee, with reasonable promptness and at reasonable times, any and all other information relating to the planning, construction, operation or maintenance of Project No. 3.

The Supply System shall submit each of the matters listed below to the Committee for approval, which approval must be by a vote of Committee members having combined Ownership Share voting rights of more than 80%:

Determination of the Minimum Capability of Project No. 3.

Any proposal made by Committee members, appointed by Parties other than Supply System, having Ownership Share voting rights of 20% or more, or by the Committee member designated by Bonneville

Construction budgets and budgets of Annual Costs and changes therein

Any increase in the working fund in the Construction Trust Account or in the Operating Trust Account described below

Award of any contract or approval of any change order, in either case in excess of \$500,000

Fuel Plan, changes therein and determinations relating thereto

Scheduled outages

Insurance coverage, including limits and choice of insurers

Estimate of cost of repair or damage to Project No. 3 if in excess of \$1,000,000, and estimate of the value of Project No. 3 without repair

Sales of salvage materials in excess of such minimum amount as is established by the Committee.

If any of the above matters cannot be resolved by the required vote of the Committee, procedures have been established to resolve the issue in accordance with Prudent Utility Practice.

"Prudent Utility Practice" means any of the practices, methods and acts, which, in the exercise of reasonable judgment in the light of the facts (including practices, methods and acts engaged in or approved by a significant portion of the electrical utility industry prior thereto) known at the time the decision was made, would have been expected to accomplish the desired result at the lowest reasonable cost consistent with reliability, safety and expedition. Prudent Utility Practice is not limited to the optimum practice, method or act, but rather a spectrum of possible practices, methods or acts. In evaluating whether any matter conforms to Prudent Utility Practice there shall be taken into account (i) the fact that Supply System is a municipal corporation and operating agency under the laws of the State of Washington; and (ii) the objective to integrate the Project Capability with the generating resources of the Federal System and the generating resources of other systems operated by the Parties to achieve optimum utilization of the resources of such systems.

Supply System shall submit the following additional matters to the Committee and shall proceed on such matters only upon unanimous approval of the Committee:

(i) Selection of the site of the Project No. 3

(ii) Selection of the type of nuclear steam supply system



- (iii) Selection of the method of heat disposition
- (iv) Award of contracts for nuclear steam supply system and turbine-generators
- (v) Selection of an architect-engineer
- (vi) Extension of insurance to any additional unit or generating project
- (vii) Capital additions to Project No. 3 after the Date of Commercial Operation which are not necessary to assure design capability, or are not required by governmental agencies.

If the Committee is unable to reach unanimous agreement within sixty days after submission by Supply System of any of the matters (i) through (v) listed above, then unless the Committee unanimously agrees otherwise, Supply System shall notify the Parties in writing and they shall then terminate Project No. 3, or one or more of the Parties may elect to proceed with Project No. 3 upon reimbursing the non-electing Parties for their Costs of Construction and Fuel. Upon such reimbursement, the interest of the non-electing Parties in Project No. 3 shall vest in the electing Parties. Each of the Parties has agreed to the Supply System's determination of the matters listed in (i) through (v) above.

#### **Construction, Licensing, Operation and Maintenance**

The Supply System shall (a) take whatever action is necessary or appropriate to seek and obtain all licenses, permits and other rights and regulatory approvals necessary for the construction, operation and maintenance of Project No. 3; (b) prosecute construction of Project No. 3 in accordance with Prudent Utility Practice, NRC licensing requirements, any applicable Federal or State laws and regulations thereunder, and plans and specifications for Project No. 3 prepared or recommended by Project No. 3 architect-engineer, and so as to schedule the Date of Commercial Operation as near as may be to September 1, 1981; (c) operate and maintain Project No. 3 in accordance with Prudent Utility Practice, giving due consideration to the recommendations of the Committee and the manufacturer's warranty requirements and in such a manner as to meet the requirements of the NRC and other government agencies having jurisdiction, to safeguard the health and safety of persons and safety of property, and, as necessary in the normal course of business, to assure the continued operation and maintenance of Project No. 3.

#### **Construction and Operating Payments**

Construction Budgets and budgets of Annual Costs, except Fuel costs, and revisions thereof shall be submitted to the Committee for approval at the times specified in the Project No. 3 Ownership Agreement.

Costs of Construction and Annual Costs, including Fuel costs, shall be paid from the Construction Trust Account and Operating Trust Account, respectively, which the Supply System is required to establish and maintain as separate accounts in a bank located in Washington meeting all requirements imposed upon depositories for any of the Parties. All moneys received by the Supply System under the Project No. 3 Ownership Agreement shall be deposited in the appropriate Trust Account. Payments by the Parties shall be made at the times specified in the Project No. 3 Ownership Agreement.

The Supply System shall keep up-to-date books and records of all financial transactions and other arrangements in carrying out the terms of the Project No. 3 Ownership Agreement. All accounts shall be so kept as to permit conversion to the system of accounts prescribed for electric utilities by FERC. The Supply System shall cause all books and records to be audited by independent certified public accountants of national reputation acceptable to all the Parties at approximately annual intervals and when accounts are closed. Copies of such audits shall be supplied to each Party. Each Party shall have the right to examine and copy all plans, specifications, bids and contracts relating to Project No. 3.

### **Fuel and Scheduling**

The Supply System shall arrange for Fuel in amounts so that each Party may utilize its Ownership Share of Project No. 3 in a manner which such Party estimates is best suited to its individual system needs. Each year the Supply System will prepare and submit to the Committee for approval a ten-year fuel management plan, which shall be revised as reasonably required to reflect changes in conditions. Each Party shall furnish to the Supply System forecasts of its generation requirements from Project No. 3 to be used in preparing each Fuel Plan.

At the time of each fueling, the Supply System shall submit to the Committee for approval its determination of the next fueling date (the "Forecast Refueling Date"), the kilowatt-hours of net energy available to each Party to such Date (the "Energy Entitlement") and the cost per kilowatt-hour of its Energy Entitlement. Each Party's Energy Entitlement shall equal as nearly as practicable such Party's forecasted generation requirements.

Generally each Party shall be entitled to receive, as scheduled by it, its Ownership Share of the Project Capability, and each Party shall schedule energy from the Project in such a manner that its Energy Entitlement is adequate to maintain such Party's Ownership Share of Minimum Capability until the next Forecast Refueling Date.

Each Party shall order at least its Ownership Share of the Fuel necessary to insure operation at Minimum Capability to the Forecast Refueling Date.

Any Party may (i) order less than its Ownership Share of the Fuel necessary to insure operation at Minimum Capability to the Forecast Refueling Date, (ii) require that such Date be advanced or delayed, (iii) use the Energy Entitlement of other Parties, or (iv) require that Project No. 3 not be operated, upon arranging for equivalent alternate capacity and energy for the other Parties, but any such action shall not adversely affect the availability of capacity and energy to which any other Party is entitled from Project No. 3 or any other Party's costs for such capacity and energy.

The Supply System shall schedule Project outages, other than fueling outages, and submit them to the Committee for approval as far in advance as practicable, but may shut down Project No. 3 to meet governmental requirements or to avoid hazard to Project No. 3 or any person or property.

### **Insurance**

Supply System shall procure at the earliest practicable time and thereafter maintain in force for the benefit of the Parties such insurance coverage for the construction, operation, maintenance and repair of Project No. 3 as the Committee may determine, but not less than shall be required under the contract to be executed with the Project Architect Engineer, and not less than will satisfy the requirements of the NRC, and conform to Prudent Utility Practice.

### **Liabilities; Waiver of Subrogation**

Each of the Parties releases each of the other Parties from any claim for loss or damage, including consequential loss or damage, arising out of the construction, operation, maintenance, reconstruction, and repair of the Project due to negligence, including gross negligence, but not any claim for loss or damage resulting from breach of any contract relating to Project No. 3 including the Project No. 3 Ownership Agreement, or for willful or wanton misconduct. Any loss or expense to the Parties or any Party, other than damages to any Party resulting from loss of use and occupancy of Project No. 3 or any part thereof, resulting from Project No. 3 and based upon injury to or death of persons or damage to or loss of Project property and property of other parties, to the extent not covered by collectible insurance, shall be charged to Costs of Construction or Annual Costs, whichever may be appropriate.

Each Party shall cause its insurers to waive any rights of subrogation against each of the other Parties, its agents and employees, for losses, costs, damages or expenses arising out of the construction, operation, maintenance, reconstruction or repair of Project No. 3.

#### **Uncontrollable Forces**

No Party shall be considered to be in default in the performance of any of the obligations under the Project No. 3 Ownership Agreement other than the obligation to pay its Ownership Share of costs and expenses, if failure of performance shall be due to uncontrollable forces, defined in the Project No. 3 Ownership Agreement as any cause beyond the control of the Party affected and which, by the exercise of reasonable diligence, the Party is unable to overcome. Any Party rendered unable to fulfill any obligation by reason of uncontrollable forces shall exercise due diligence to remove such inability with all reasonable dispatch.

#### **Damage to Project No. 3**

If Project No. 3 suffers damage resulting from causes other than ordinary wear, tear or deterioration to the extent that the Supply System's estimate of the cost of repair is less than 20% of the then depreciated value of Project No. 3, and if the Parties do not unanimously agree that Project No. 3 shall be ended (see "End of Project" below), the Supply System shall promptly submit a revised Construction Budget or budget of Annual Costs, as appropriate, and shall proceed to repair the Project, and each Party shall pay its Ownership Share of the cost of such repair.

If Project No. 3 suffers damage to the extent that the Supply System's estimate of the cost of repair exceeds 20% of the then depreciated value of Project No. 3, computed according to the Project No. 3 Ownership Agreement, the Supply System shall determine the estimated fair market value of Project No. 3 if it is then terminated without repair. Thereafter, each Party which gives notice in writing to each of the other Parties of its desire that Project No. 3 be repaired, shall pay a part of the total cost of repair in the proportion that its Ownership Share bears to the total of the Ownership Shares of all Parties giving such notice. If any Party has given such notice, the Ownership Share of each Party which has not given notice shall be reduced at the end of each month to an Ownership Share determined by multiplying such Party's Ownership Share prior to such loss by a fraction the numerator of which is the estimated fair market value of Project No. 3 if it is terminated without repair, and the denominator of which is said fair market value plus the actual expenditures for repair. The amount of such reduction shall be proportionately added to the Ownership Share of each Party giving such notice.

If Project No. 3 suffers damage to the extent that the Supply System's estimated cost of repair exceeds 20% of the then depreciated value of Project No. 3 and no Party gives the notice referred to above, Project No. 3 shall be ended.

#### **Default**

Upon failure of a Party to make any payment when due, or to perform any obligation herein, any other Party may make written demand upon said Party, and if said failure is not cured within 10 days from the date of such demand, it shall constitute a default at the expiration of such period. Any nondefaulting Party may take any action, in law or equity, including an action for specific performance, to enforce the Project No. 3 Ownership Agreement and to recover for any loss, damage or payment advances incurred by reason of such default.

#### **Assignment**

The Project No. 3 Ownership Agreement shall be binding upon and shall inure to the benefit of successors and assigns of the Parties; provided, however, that no transfer or assignment of other than all of a Party's interest in Project No. 3 to a single entity shall operate to give the assignee or transferee the status or rights of a Party under the Project No. 3 Ownership Agreement, and no transfer or assignment thereunder shall operate to increase the number of members on the Committee. Transfer or

assignment shall not relieve a Party of any obligation under the Project No. 3 Ownership Agreement except to the extent agreed to in writing by the other Parties.

#### **End of Project**

When Project No. 3 can no longer be made capable of producing electricity consistent with Prudent Utility Practice or the requirements of governmental agencies having jurisdiction or is no longer licensed by the NRC, or when Project No. 3 is ended as a result of damage thereto as described above, the Supply System shall sell for removal all saleable parts of Project No. 3, exclusive of Fuel, to the highest bidders. After deducting all costs of ending Project No. 3, the Supply System shall close the appropriate Trust Account and, if there are net proceeds, distribute to each Party its Ownership Share of such proceeds. The Supply System shall liquidate the Fuel, and after making all required payments and receiving all due receipts, shall disburse the proceeds to the owners as their interests appear. In the event the costs of ending Project No. 3 exceed available funds, each Party shall pay its Ownership Share of such excess as incurred.

If one or more of the Parties is rendered incapable of proceeding with its obligations under the Project No. 3 Ownership Agreement by reason of (i) inability to finance or (ii) failure to obtain necessary legal authorizations, including regulatory approvals, which condition is beyond the ability of such Party to remedy by reasonable means within a reasonable time, one or more of the other Parties may, within 90 days after notice by a Party of the occurrence of the condition, elect to proceed with Project No. 3 without the disabled Party; provided, however, that if the disabled Party is proceeding with all due diligence to remove such disability, the election shall not be made until 90 days after final order or other final disposition of the matter; provided further, that if delay would cause substantial additional costs to be incurred if the election were so postponed, the electing Parties may proceed as necessary to avoid or minimize delay, preserving the rights of the disabled Party until final order or other final disposition. The Parties so electing shall promptly reimburse each non-electing Party for its Costs of Construction and costs of Fuel, if any, incurred under the Project No. 3 Ownership Agreement. Upon such reimbursement, the non-electing Parties' interest in Project No. 3 shall forthwith vest in the electing Parties in such proportion as the electing Parties may agree.

### **DESCRIPTION OF 1981 NET BILLED BONDS**

#### **The Project No. 1 Bonds and the Project No. 1 1981 Bonds**

The Project No. 1 Resolution creates and establishes an issue of Project No. 1 Bonds of the Supply System which may be issued from time to time to pay the Cost of Construction of Project No. 1 and to establish reserves as therein provided. The Project No. 1 1981 Bonds are part of such issue.

The Project No. 1 1981 Bonds will be dated September 1, 1981, and will be issued in coupon form in the denomination of \$5,000, registrable as to principal only, and in fully registered form in denominations of \$5,000 and any multiples thereof. Principal and semi-annual interest (January 1 and July 1, commencing January 1, 1982) on coupon Project No. 1 1981 Bonds and principal on fully registered Project No. 1 1981 Bonds will be payable at the option of the holder at Seattle-First National Bank, Seattle, Washington, The First National Bank of Chicago, Chicago, Illinois, and Manufacturers Hanover Trust Company, New York, New York. Payment of interest on fully registered bonds will be made by Morgan Guaranty Trust Company of New York, New York, which has been appointed the Bond Fund Trustee for Project No. 1. Coupon Project No. 1 1981 Bonds and fully registered Project No. 1 1981 Bonds are interchangeable at the principal office of the Bond Fund Trustee.

#### **Description of Project No. 1 1981 Bonds**

The Project No. 1 1981 Bonds will mature \$20,000,000 principal amount on July 1, 2001, \$30,000,000 principal amount on July 1, 2003 and \$265,000,000 principal amount on July 1, 2017, bearing interest at the rate of 14¾%, 8¾% and 15%, respectively.

**Sinking Fund Installments.** The Project No. 1 1981 Bonds due July 1, 2001 shall be retired by July 1 of each year in accordance with the following schedule:

<u>Year</u>	<u>Principal Amount</u>	<u>Year</u>	<u>Principal Amount</u>
1997 .....	\$ 4,000,000	2000 .....	\$ 4,000,000
1998 .....	4,000,000	2001 .....	4,000,000
1999 .....	4,000,000		

The Project No. 1 1981 Bonds due July 1, 2003 shall be retired by July 1 of each year in accordance with the following schedule:

<u>Year</u>	<u>Principal Amount</u>	<u>Year</u>	<u>Principal Amount</u>
1999 .....	\$ 6,000,000	2002 .....	\$ 6,000,000
2000 .....	6,000,000	2003 .....	6,000,000
2001 .....	6,000,000		

The Project No. 1 1981 Bonds due July 1, 2017 shall be retired by July 1 of each year in accordance with the following schedule:

<u>Year</u>	<u>Principal Amount</u>	<u>Year</u>	<u>Principal Amount</u>
2004 .....	\$ 4,650,000	2011 .....	\$12,725,000
2005 .....	5,560,000	2012 .....	15,955,000
2006 .....	6,605,000	2013 .....	34,830,000
2007 .....	7,815,000	2014 .....	52,560,000
2008 .....	9,205,000	2015 .....	20,420,000
2009 .....	10,810,000	2016 .....	27,550,000
2010 .....	10,660,000	2017 .....	45,655,000

**Redemption:** The Project No. 1 1981 Bonds due July 1, 2017 will be subject to redemption prior to maturity at the option of the Supply System on and after July 1, 1996, in whole at any time, or in part by lot on any interest payment date, at the respective redemption prices (expressed as percentages of the principal amount) set forth below, together with accrued interest to the date fixed for redemption:

<u>Period During Which Redeemed</u> <u>(Both Dates Inclusive)</u>	<u>Redemption Prices</u>
July 1, 1996 to June 30, 1997 .....	103%
July 1, 1997 to June 30, 1998 .....	102
July 1, 1998 to June 30, 2003 .....	101
July 1, 2003 and thereafter .....	100

The Supply System further reserves the right to redeem prior to maturity the Project No. 1 1981 Bonds (a) due July 1, 2001, July 1, 2003 and July 1, 2017, in part by lot on any sinking fund installment date and the immediately preceding January 1, upon payment of the principal amount thereof from the respective sinking fund installments, and (b) due July 1, 2017 in part by lot on any interest payment date on and after July 1, 1986 upon payment of 101% of the principal amount thereof from excess construction fund proceeds, in each case together with accrued interest to the date fixed for redemption.

The Supply System also reserves the right to redeem the Project No. 1 1981 Bonds at any time prior to maturity, in whole at any time, or in part on any interest payment date in inverse order of their maturities and by lot within a maturity, from proceeds received from the sale or disposition of property or in the event Project No. 1 is terminated as provided in the Project No. 1 Agreement, upon payment of the principal amount thereof together with accrued interest to the date fixed for redemption.

### The Project No. 2 Bonds and the Project No. 2 1981 Bonds

The Project No. 2 Resolution creates and establishes an issue of Project No. 2 Bonds of the Supply System which may be issued from time to time to pay the Cost of Construction of Project No. 2 and to establish reserves as therein provided. The Project No. 2 1981 Bonds are part of such issue.

The Project No. 2 1981 Bonds will be dated September 1, 1981 and will be issued in coupon form in the denomination of \$5,000, registrable as to principal only, and in fully registered form in denominations of \$5,000 and any multiples thereof. Principal and semi-annual interest (January 1 and July 1, commencing January 1, 1982) on coupon Project No. 2 1981 Bonds and principal on Registered Project No. 2 1981 Bonds will be payable at the option of the holder at Peoples National Bank of Washington in Seattle, Washington, American National Bank and Trust Company of Chicago in Chicago, Illinois, and Manufacturers Hanover Trust Company in New York, New York. Payment of interest on fully registered Project No. 2 1981 Bonds will be made by Continental Illinois National Bank and Trust Company of Chicago, Chicago, Illinois, which has been appointed the Bond Fund Trustee for Project No. 2. Coupon Project No. 2 1981 Bonds and fully registered Project No. 2 1981 Bonds are interchangeable at the principal office of the Bond Fund Trustee.

### Description of Project No. 2 1981 Bonds

The Project No. 2 1981 Bonds will mature \$30,000,000 principal amount on July 1, 2001, \$100,000,000 principal amount on July 1, 2003, \$30,000,000 principal amount on July 1, 2006 and \$50,000,000 principal amount on July 1, 2012, bearing interest at the rate of 14¾%, 8¼%, 14½% and 13¼%, respectively.

**Sinking Fund Installments:** The Project No. 2 1981 Bonds due July 1, 2001, 2003, 2006 and 2012 shall be retired by July 1 of each year in accordance with the following schedule:

Bonds Due 2001		Bonds Due 2003		Bonds Due 2006		Bonds Due 2012	
Year	Principal Amount	Year	Amount Principal	Year	Principal Amount	Year	Principal Amount
1997...	\$6,000,000	1999..	\$20,000,000	2004..	\$10,000,000	2007..	\$ 6,195,000
1998...	6,000,000	2000..	20,000,000	2005..	10,000,000	2008..	6,920,000
1999...	6,000,000	2001..	20,000,000	2006..	10,000,000	2009..	7,740,000
2000...	6,000,000	2002..	20,000,000			2010..	8,650,000
2001...	6,000,000	2003..	20,000,000			2011..	9,675,000
						2012..	10,820,000

**Redemption:** The Project No. 2 1981 Bonds due July 1, 2006 and July 1, 2012 will be subject to redemption prior to maturity at the option of the Supply System on and after July 1, 1996, in whole at any time, or in part on any interest payment date in inverse order of their maturities and by lot within a maturity, at the respective redemption prices (expressed as percentages of the principal amount) set forth below, together with accrued interest to the date fixed for redemption:

Period During Which Redeemed (Both Dates Inclusive)	Redemption Prices
July 1, 1996 to June 30, 1997 .....	103%
July 1, 1997 to June 30, 1998 .....	102
July 1, 1998 to June 30, 2003 .....	101
July 1, 2003 and thereafter .....	100

The Supply System further reserves the right to redeem prior to maturity the Project No. 2 1981 Bonds (a) due July 1, 2001, July 1, 2003, July 1, 2006 and July 1, 2012, in part by lot on any sinking fund installment date and the immediately preceding January 1 upon payment of the principal amount thereof from the respective sinking fund installments, and (b) due July 1, 2012, in part by lot on any interest

payment date on and after July 1, 1983 upon payment of 101% of the principal amount thereof from excess construction fund proceeds, in each case together with accrued interest to the date fixed for redemption.

The Supply System further reserves the right to redeem the Project No. 2 1981 Bonds at any time prior to maturity, in whole at any time, or in part on any interest date in inverse order of their maturities and by lot within a maturity, from proceeds received from the sale or disposition of property or in the event Project No. 2 is terminated as provided in the Project No. 2 Agreement, upon payment of the principal amount thereof together with accrued interest to the date fixed for redemption.

*Redemption at the Option of the Holder.* The holder of each Project No. 2 1981 Bond due July 1, 2012 will have the right to payment on July 1, 1991, or on any July 1 thereafter and prior to the stated maturity date thereof, of the principal amount of such Bond; provided that such holder shall have exercised such right by completing and executing in person or by attorney authorized in writing, the notice provided on such Bond and presenting such Bond at the principal office of the Bond Fund Trustee for the Project No. 2 Bonds during the July 1 to January 2 period which immediately precedes the July 1 on which the holder wishes payment. Any exercise of such right shall be irrevocable. Following the exercise of such right, such Bond Fund Trustee shall sign the acknowledgement on such Bond and shall thereafter as soon as is reasonably practicable return it to the holder at its address appearing on such notice. In the case of fully registered Project No. 2 1981 Bonds due July 1, 2012 in a denomination in excess of \$5,000, the owner may exercise such right as to any portion thereof which is an integral multiple of \$5,000. In the case of coupon Project No. 2 1981 Bonds due July 1, 2012, all unmatured interest coupons must be attached when such Bonds are presented for payment.

#### **The Project No. 3 Bonds and the Project No. 3 1981 Bonds**

The Project No. 3 Resolution creates and establishes an issue of Project No. 3 Bonds of the Supply System which may be issued from time to time to pay the Supply System's Cost of Construction of Project No. 3 and to establish reserves. The Project No. 3 1981 Bonds are a part of such issue.

The Project No. 3 1981 Bonds will be dated September 1, 1981, and will be issued in coupon form in the denomination of \$5,000, registrable as to principal only, and in fully registered form in denominations of \$5,000 and any multiples thereof. Principal and semi-annual interest (January 1 and July 1, commencing January 1, 1982) on coupon Project No. 3 1981 Bonds and principal on registered Project No. 3 1981 Bonds will be payable at the option of the holder at Rainier National Bank, Seattle, Washington, Harris Trust and Savings Bank, Chicago, Illinois, and Chemical Bank, New York, New York. Payment of interest on fully registered Project No. 3 1981 Bonds will be made by Seattle-First National Bank, Seattle, Washington, which has been appointed the Bond Fund Trustee for Project No. 3. Coupon Project No. 3 1981 Bonds and fully registered Project No. 3 1981 Bonds are interchangeable at the office of the Bond Fund Trustee.

#### **Description of Project No. 3 1981 Bonds**

The Project No. 3 1981 Bonds will mature \$20,000,000 principal amount on July 1, 2003, \$20,000,000 principal amount on July 1, 2006 and \$185,000,000 principal amount on July 1, 2018 bearing interest at the rate of 8¼%, 14½% and 15%, respectively.

*Sinking Fund Installments:* The Project No. 3 1981 Bonds due July 1, 2003 shall be retired by July 1 of each year in accordance with the following schedule:

<u>Year</u>	<u>Principal Amount</u>	<u>Year</u>	<u>Principal Amount</u>
1999 .....	\$4,000,000	2002 .....	\$4,000,000
2000 .....	4,000,000	2003 .....	4,000,000
2001 .....	4,000,000		

The Project No. 3 1981 Bonds due July 1, 2006 shall be retired by July 1 of each year in accordance with the following schedule:

<u>Year</u>	<u>Principal Amount</u>	<u>Year</u>	<u>Principal Amount</u>
2004 .....	\$6,665,000	2006 .....	\$6,670,000
2005 .....	6,665,000		

The Project No. 3 1981 Bonds due July 1, 2018 shall be retired by July 1 of each year in accordance with the following schedule:

<u>Year</u>	<u>Principal Amount</u>	<u>Year</u>	<u>Principal Amount</u>
2011 .....	\$16,580,000	2015 .....	\$28,765,000
2012 .....	19,025,000	2016 .....	33,030,000
2013 .....	21,835,000	2017 .....	18,975,000
2014 .....	25,065,000	2018 .....	21,725,000

**Redemption:** The Project No. 3 1981 Bonds due July 1, 2006 and July 1, 2018 will be subject to redemption prior to maturity at the option of the Supply System on and after July 1, 1996, in whole at any time, or in part on any interest payment date in inverse order of their maturities and by lot within a maturity, at the respective redemption prices (expressed as percentages of the principal amount) set forth below, together with accrued interest to the date fixed for redemption:

<u>Period During Which Redeemed</u> <u>(Both Dates Inclusive)</u>	<u>Redemption Prices</u>
July 1, 1996 to June 30, 1997 .....	103%
July 1, 1997 to June 30, 1998 .....	102
July 1, 1998 to June 30, 2003 .....	101
July 1, 2003 and thereafter .....	100

The Supply System further reserves the right to redeem prior to maturity the Project No. 3 1981 Bonds, (a) due July 1, 2003, July 1, 2006 and July 1, 2018, in part by lot on any sinking fund installment date and the immediately preceding January 1, upon payment of the principal amount thereof from the respective sinking fund installments and (b) due July 1, 2018, in part by lot on any interest payment date on and after January 1, 1986, upon payment of 101% of the principal amount thereof from excess construction fund proceeds, in each case together with accrued interest to the date fixed for redemption.

The Supply System further reserves the right to redeem the Project No. 3 1981 Bonds at any time prior to maturity, in whole at any time, or in part on any interest payment date in inverse order of their maturities and by lot within a maturity, from proceeds received by the Supply System from the sale or disposition of properties of Project No. 3 or in the event the Project No. 3 Net Billing Agreements are terminated as provided therein, upon payment of the principal amount thereof together with accrued interest to the date fixed for redemption.

#### Notice of Redemption

Notice of redemption of 1981 Net Billed Bonds is to be given by publication of a notice at least once on any business day of the week in a daily financial paper or in a daily newspaper of general circulation printed in the English language, published in each of the cities of Seattle, Washington, Chicago, Illinois, and New York, New York, the date of publication to be not less than 30 nor more than 60 days prior to the date fixed for redemption. The appropriate Bond Fund Trustee may approve substitute publication if a required publication cannot be made. Notice of redemption of 1981 Net Billed Bonds is also to be mailed not less than 25 days nor more than 60 days before the redemption date to the registered owners of 1981 Net Billed Bonds which are to be redeemed, but such mailing shall not be a condition precedent to redemption and failure to mail or receive any such notice shall not affect the validity of the redemption proceedings.



## SUMMARY OF CERTAIN PROVISIONS OF THE NET BILLED RESOLUTIONS AND SUPPLEMENTAL RESOLUTIONS

The following summary is a brief outline of certain provisions contained in the Net Billed Resolutions and the Supplemental Resolutions and is not to be considered as a full statement thereof. This summary is qualified by reference to and is subject to the Net Billed Resolutions and the Supplemental Resolutions, copies of which may be examined at the principal offices of the Supply System and the respective Bond Fund Trustees and Paying Agents for the Net Billed Bonds.

### Subsequent Series of Net Billed Bonds

The Supply System covenants to issue additional series of Project No. 1, Project No. 2 or Project No. 3 Bonds to the extent required to pay the Supply System's Cost of Construction of each Net Billed Project and to establish the reserves required by each Net Billed Resolution to the extent such reserves are not funded from other sources. Such Bonds may be issued upon compliance with the following principal conditions:

(1) There shall have been delivered to the Supply System a certificate of the issuing Project's Bond Fund Trustee that no default exists in the payment of principal of and interest on any outstanding Net Billed Bond for the issuing Project, and there has been delivered to such Bond Fund Trustee a certificate of the Secretary of the Board of Directors of the Supply System that in the case of Project No. 1, the Net Billing Agreements, Exchange Agreements and Project Agreement are in full force and effect and have not been amended in any manner adversely affecting the Supply System and the holders of Project No. 1 Bonds, or in the case of Projects Nos. 2 and 3 that the Net Billing Agreements and Project Agreements are in full force and effect and have not been amended in any manner adversely affecting the Supply System and the holders of Project No. 2 or Project No. 3 Bonds.

(2) Such Project No. 1, Project No. 2 or Project No. 3 Bonds shall be either serial or term bonds or a combination thereof, with the final maturity date to be no later than July 1, 2017, on July 1, 2012 or no later than July 1, 2018, respectively.

(3) There shall have been filed with the issuing Project's Bond Fund Trustee and Construction Fund Trustee and with the Supply System, a certificate of such Project's Construction Engineer as to the amount expended for, and the amount remaining available to pay, Cost of Construction and the times funds will be required to pay such Cost, and, if the estimated Cost of Construction has increased, the reasons for such increase.

### Additional Obligations Other Than Net Billed Bonds

The Supply System may also issue additional bonds ranking on a parity with the Project No. 1, Project No. 2 or Project No. 3 Bonds and secured by an equal charge and lien on the revenues of the appropriate Project or, in the case of Project No. 3, the Supply System's Ownership Share of the Project ("additional bonds"), for the following purposes:

(1) to comply with an order of any governmental agency with authority to issue, make or enforce an order or decision requiring the installation of additional facilities or modifications at or in the related Net Billed Project;

(2) to comply with requirements of the related Project Agreement for the issuance of additional bonds to pay for renewals, repairs and replacements and for capital additions and betterments necessary to achieve design capability or required by governmental agencies;

(3) With respect to Projects No. 1 or No. 3, and subject to the respective Project Agreement, to provide funds for capital additions and betterments to such Project which in the opinion of the respective Consulting Engineer are necessary or desirable to improve operating reliability or to reduce unit power costs;

(4) With respect to Projects Nos. 1 and 3, and subject to the respective Project Agreement, to provide funds for the purchase of Fuel for such Project; and

(5) to refund at any time any Net Billed Bonds or additional bonds.

The Supply System may not issue any additional bonds pursuant to the Net Billed Resolutions unless prior to or simultaneously with the issuance of such bonds the Supply System has in effect valid written contracts for the sale of capability, power and energy of the issuing Project or, in the case of Project No. 3, the Supply System's Ownership Share of the Project, which, in the opinion of the Supply System and of the Consulting Engineer, will produce revenues at least sufficient to enable the Supply System to meet all of its obligations under the issuing Project's Resolution. Such contracts (1) must be for terms extending at least to the final maturity date of the Project No. 1, Project No. 2 or Project No. 3 Bonds, (2) unless such contracts are with the parties to the Net Billing Agreements and, in the case of Project No. 1, the Project No. 1 Exchange Agreements, must in the opinion of the Consulting Engineer provide a sound basis for the issuance of such additional bonds or, in the case of Project No. 2, must be with purchasers which, in the opinion of the Consulting Engineer, have the ability and financial responsibility to meet their obligations under such contracts, and (3) must contain terms with respect to payments for such Project (or the Supply System's Ownership Share of Project No. 3) capability, power and energy and the items of annual power costs to be included in the price for such capability, power and energy which are no less favorable to the Supply System than the terms of the Net Billing Agreements and, in the case of Project No. 1, the Net Billing Agreements and Project No. 1 Exchange Agreements.

Additional bonds for each Net Billed Project may be either serial or term bonds or a combination thereof, with the final maturity date to be not later than the respective final maturity date of the Net Billed Bonds or additional bonds to be refunded in the case of refunding bonds or a date which is not later than the expiration of the service life of the facilities or Fuel, as the case may be, being financed in the case of all other additional bonds, provided that additional bonds for Project No. 2 for refunding purposes must mature on July 1, 2012, and for other purposes may mature on July 1, 2012. A separate bond fund is to be created for each project and payments into such bond fund for the retirement of such additional bonds are to commence within 5 years from the date thereof or, in the case of refunding bonds, at the time when payments with respect to the retirement of the refunded Project No. 1, 2 or 3 Bonds or additional bonds would be required if such Bonds or additional bonds were not refunded. From the proceeds of sale of additional bonds or revenues of the Supply System available at the time of issuance, an amount equal to the maximum amount of interest to become due on such bonds in any six-month period is to be deposited in the reserve account in such bond fund, and such account is to be maintained at such amount; provided that such amount, in the case of refunding bonds, may be so deposited at the time when the refunded Project No. 1, 2 or 3 Bonds or additional bonds are no longer deemed outstanding and may be accomplished at that time from transfers from the Reserve Account for the Project No. 1, 2 or 3 Bonds or the reserve account for the additional bonds being refunded.

#### **Effect of Amendments Adopted March 21, 1978 and August 5, 1980 (Project No. 1)**

Resolution No. 963 adopted by the Board of Directors of the Supply System on March 21, 1978 amends the Project No. 1 Resolution to delete the requirements with respect to the final maturity date of Project No. 1 Bonds set forth in "Subsequent Series of Bonds". Such amendment will become effective when consented to by the holders of 66⅔% of the outstanding \$535,000,000 principal amount of Project No. 1 Bonds issued prior to 1978 or when such Project No. 1 Bonds are no longer outstanding.

Resolution No. 1111 adopted by the Board of Directors of the Supply System on August 5, 1980, amends the Project No. 1 Resolution to delete the provisions with respect to the final maturity date of refunding bonds set forth in "Additional Obligations other than Bonds". Such amendment will become effective when consented to by the holders of 66⅔% of the outstanding \$1,045,000,000 principal amount of Project No. 1 Bonds issued prior to 1980 or when such Bonds are no longer outstanding.

**Effect of Amendment Adopted October 21, 1980 (Project No. 2)**

Resolution No. 1117, adopted by the Board of Directors of the Supply System on October 21, 1980, amends the Project No. 2 Resolution to delete the provisions with respect to the final maturity date of Project No. 2 Bonds set forth in "Subsequent Series of Bonds" and with respect to the final maturity date of refunding bonds set forth in "Additional Indebtedness other than Bonds". Such amendment will become effective when consented to by the holders of 66 $\frac{2}{3}$ % of the Project No. 2 Bonds issued prior to 1980 or when such Project No. 2 Bonds are no longer outstanding.

**Effect of Amendment Adopted February 11, 1981 (Project No. 3)**

Resolution No. 1142, adopted by the Board of Directors of the Supply System on February 11, 1981, amends the Project No. 3 Resolution to delete the provisions with respect to the final maturity date of Project No. 3 Bonds set forth in "Subsequent Series of Bonds" and with respect to the final maturity date of refunding bonds set forth in "Additional Obligations other than Bonds". Such amendment will become effective when consented to by the holders of 66 $\frac{2}{3}$ % of the Project No. 3 Bonds issued prior to 1981 or when such Project No. 3 Bonds are no longer outstanding.

**Construction Fund; Application of Bond Proceeds**

The Project No. 1 Resolution establishes a Washington Public Power Supply System Project No. 1 Construction Fund and a Fuel Account therein, to be held by the Construction Fund Trustee. Morgan Guaranty Trust Company of New York is Construction Fund Trustee under the Project No. 1 Resolution.

The proceeds of the sale of the Project No. 1 1981 Bonds will be applied as follows:

- (a) An amount equal to the accrued interest on the Project No. 1 1981 Bonds will be credited to the Interest Account in the Project No. 1 Bond Fund.
- (b) An amount equal to one-half of the maximum annual interest on the Project No. 1 1981 Bonds will be credited to the Reserve Account in the Project No. 1 Bond Fund..
- (c) The sum of \$79,192,000 will be credited to the Fuel Account in the Project No. 1 Construction Fund.
- (d) The balance of the Project No. 1 1981 Bond proceeds will be deposited in the Project No. 1 Construction Fund.

The Project No. 2 Resolution establishes a Washington Public Power Supply System Nuclear Project No. 2 Construction Fund and a Fuel Account therein, to be held by the Construction Fund Trustee. Continental Illinois Bank and Trust Company of Chicago is Construction Fund Trustee under the Project No. 2 Resolution.

The proceeds of sale of the Project No. 2 1981 Bonds will be applied as follows:

- (a) An amount equal to the accrued interest on the Project No. 2 1981 Bonds from their date to the date of their delivery to the initial purchasers will be credited to the Interest Account in the Project No. 2 Bond Fund.
- (b) An amount equal to one-half of the maximum annual interest on the Project No. 2 1981 Bonds will be credited to the Reserve Account in such Bond Fund.
- (c) The sum of \$12,629,000 will be credited to the Fuel Account in the Project No. 2 Construction Fund.
- (d) The balance of Project No. 2 1981 Bond proceeds will be deposited in Project No. 2 Construction Fund.

The Project No. 3 Resolution establishes a Washington Public Power Supply System Nuclear Project No. 3 Construction Fund to be held in trust by the Supply System.

The proceeds of sale of the Project No. 3 1981 Bonds will be applied as follows:

- (a) An amount equal to the interest on such Project No. 3 Bonds from their date to September 1, 1982, will be credited to the Interest Account in the Project No. 3 Bond Fund.

(b) Such amount as the Supply System determines to be necessary to provide for the Reserve Account requirement will be credited to the Reserve Account in the Project No. 3 Bond Fund.

(c) The balance of the Project No. 3 Bond proceeds will be deposited in the Project No. 3 Construction Fund.

The Project No. 3 Resolution provides that if working capital is not provided for by September 1, 1982, or if a Reserve and Contingency Fund requirement of \$3,000,000 is not provided for by the Date of Commercial Operation, through revenues received pursuant to the Project No. 3 Net Billing Agreements, such amounts will be provided from Project No. 3 Bond proceeds.

The proceeds of sale of subsequent series of Project No. 1, Project No. 2 or Project No. 3 Bonds will be applied as follows:

(a) An amount equal to the interest accrued on such series of Net Billed Bonds from their date to the date of their delivery to the initial purchasers will be credited to the Interest Account in the Bond Fund for the respective Project.

(b) An amount equal to one-half of the maximum annual interest on such series of Net Billed Bonds will be credited to the Reserve Account in the Bond Fund for the respective Project if such amount is not funded by payments under the Net Billing Agreements relating to such Project.

(c) Such amounts, if any, as the Supply System determines will be credited to the Fuel Account in the Construction Fund for Project No. 1 and Project No. 2.

(d) The balance of such Bond proceeds will be deposited in the Construction Fund for the respective Project, provided a part of such proceeds may be deposited in the Revenue Fund for such Project as required for additional working capital.

Moneys in each Net Billed Project Construction Fund are to be used to pay the Supply System's Cost of Construction of each respective Project, which includes costs (or in the case of Project No. 3, the Supply System's Ownership Share of costs) of constructing and acquiring such Project, obtaining permits and licenses and acquiring property and Fuel, trustees' and paying agents' fees, taxes and insurance premiums, the cost of engineering services and administrative and overhead expenses of the Supply System allocable to the acquisition and construction of such Project. The cost of acquiring Fuel for each Project will be paid from such Project's Fuel Account.

Each Net Billed Resolution prescribes certain procedures designed to safeguard payments or transfers from each Project's Construction Fund, including, among others, certificates by the appropriate Construction Engineer and, for Projects Nos. 1 and 2, a detailed itemization by the Supply System of the amounts to be paid and the purposes thereof.

Moneys remaining in a Net Billed Project Construction Fund after providing for payment of all Cost of Construction in the case of Project No. 1 or 2, and all of the Supply System's Cost of Construction in the case of Project No. 3, and after required payments, if any, to other accounts, are to be transferred to such Project's Bond Retirement Account.

#### **Other Funds Established by the Net Billed Resolutions; Flow of Revenues**

Each Net Billed Resolution also establishes a separate project Revenue Fund, Bond Fund (including an Interest Account, a Principal Account, a Bond Retirement Account and a Reserve Account), Fuel Fund and Reserve and Contingency Fund. All such funds are to be held by the Supply System, except for the Bond Funds, each of which is to be held by the appropriate Bond Fund Trustee.

*Project No. 1 Revenue Fund:* The gross revenues derived by the Supply System from its ownership and operation of Project No. 1 are to be paid into the Project No. 1 Revenue Fund. Moneys in such Revenue Fund are to be used for the purpose of making required payments into the Hanford Project Revenue Fund and the Project No. 1 Bond Fund and any special funds for additional bonds, paying for the costs of operating and maintaining Project No. 1, making required payments into the Project No. 1

Fuel Fund and the Reserve and Contingency Fund, making repairs, renewals, replacements, additions, betterments and improvements to and extensions of Project No. 1 and paying all other charges or obligations against the revenues pledged to the Project No. 1 Revenue Fund.

The Supply System covenants and agrees that, for so long as any bonds-issued pursuant to Resolution No. 178 are outstanding and unpaid, it will pay from the Project No. 1 Revenue Fund into the Hanford Project Revenue Fund amounts sufficient to enable the Supply System to pay from the Hanford Project Revenue Fund all obligations of the Supply System payable from moneys on deposit in said Fund as the same become due and payable, to the extent such obligations are not otherwise provided for, including amounts sufficient to enable the Supply System (a) to make when due the payments from the Hanford Project Revenue Fund to the Hanford Project Revenue Bond Fund and Hanford Project Reserve and Contingency Fund required by Resolution No. 178, (b) to maintain working capital for the Hanford Project in an amount at least equal to \$1,000,000 and (c) to pay all other Project Annual Costs (as defined in the Hanford Project Exchange Agreements providing for the sale by the Supply System of power and energy from the Hanford Project to the Hanford Project Participants and the exchange thereof with Bonneville for firm power and energy).

So long as any bonds issued pursuant to Resolution No. 178 are outstanding and unpaid, such payments shall constitute a prior and paramount charge and lien over all other charges or claims whatsoever against the Project No. 1 Revenue Fund and the revenues pledged thereto.

The Supply System and Bonneville have agreed in the Project No. 1 Agreement that the Supply System shall not agree to the continued operation of the Hanford Project if such operation will increase the amounts which otherwise would have been payable by the Project No. 1 Participants under the Project No. 1 Net Billing Agreements.

Copies of Resolution No. 178 and the form of the Hanford Project Exchange Agreements may be obtained from the Supply System.

*Project No. 1 Bond Fund:* From the revenues theretofore paid into the Project No. 1 Revenue Fund, the Supply System is to pay monthly into the Project No. 1 Bond Fund, for the credit of the Interest Account and the Principal Account, respectively, after making the required payments to the Hanford Project Revenue Fund, fixed amounts sufficient in the aggregate to pay the principal of and interest on the Project No. 1 Bonds as the same become due and payable. Payments to the Interest Account in the Project No. 1 Bond Fund began in September 1980.

Monthly payments to the Principal Account are to be sufficient to pay outstanding serial Project No. 1 Bonds as they mature.

Monthly payments to the Project No. 1 Bond Retirement Account to retire any term Project No. 1 Bonds are to be made at the times and in the amounts specified in the supplemental resolution providing for the issuance of such term Bonds. Moneys in said Bond Retirement Account are to be applied by the Project No. 1 Bond Fund Trustee to the purchase or redemption of outstanding Project No. 1 Bonds.

There is required to be paid into and maintained in the Project No. 1 Reserve Account, for each series of Project No. 1 Bonds outstanding, an amount equal to the largest amount of interest on such Bonds during any six month period from the date of such Bonds to the final maturity date thereof. Upon the delivery of the Project No. 1 1981 Bonds, the amount required for the outstanding Project No. 1 Bonds and the Project No. 1 1981 Bonds will have been deposited in said Reserve Account. The Reserve Account requirement for additional Project No. 1 Bonds shall be deposited therein from Project No. 1 Bonds proceeds or revenues available therefor at the time of issuance of such Bonds. The Supply System is required to maintain the required amount in said Reserve Account by payments from the Project No. 1 Revenue Fund.

*Project No. 1 Fuel Fund:* Beginning on the Date of Commercial Operation, all payments for Fuel for Project No. 1 will be made from the Project No. 1 Fuel Fund. After the Date of Commer-

cial Operation, after making the required payments into the Hanford Project Revenue Fund and the Project No. 1 Bond Fund and into any separate bond fund for additional bonds and after paying or making provisions for payment of the reasonable and necessary costs of operating and maintaining Project No. 1, including taxes or payments in lieu thereof, the Supply System will transfer from the Project No. 1 Revenue Fund to said Fuel Fund the following amounts:

- (1) the amount included in the annual budget for Fuel adopted pursuant to the Project No. 1 Project Agreement,
- (2) all amounts received as Fuel credits, including the proceeds of the sale of Fuel, and
- (3) any additional amounts necessary to avoid a deficiency in the Project No. 1 Fuel Fund.

*Project No. 1 Reserve and Contingency Fund:* Beginning on September 25, 1980, the Supply System is required to pay monthly out of the Project No. 1 Revenue Fund into the Project No. 1 Reserve and Contingency Fund, after making the required payments into the Hanford Project Revenue Fund and the Project No. 1 Bond Fund, any separate bond fund established for additional bonds and the Project No. 1 Fuel Fund, and after paying or making provision for payment of the reasonable and necessary costs of operating and maintaining Project No. 1, including taxes or payments in lieu thereof, an amount equal to 10% of the aggregate of the amounts required to be paid during such month into the Interest, Principal and Bond Retirement Accounts in the Project No. 1 Bond Fund and into any special funds for interest, principal and bond retirements in respect of additional bonds. In any event, by the Date of Commercial Operation the Supply System will deposit in said Reserve and Contingency Fund the sum of \$3,000,000 either through the aforesaid payments into said Fund or from revenues otherwise available therefor in the Project No. 1 Revenue Fund or, to the extent such moneys are not available, from Project No. 1 Bond proceeds.

*Project No. 2 Revenue Fund:* The gross revenues derived by the Supply System from its ownership and operation of Project No. 2 are to be paid into the Project No. 2 Revenue Fund. Moneys in such Revenue Fund are to be used for the purpose of making required payments into the Project No. 2 Bond Fund and any special funds for additional bonds, paying for the costs of operating and maintaining Project No. 2, making required payments into the Project No. 2 Fuel Fund and the Project No. 2 Reserve and Contingency Fund, making repairs, renewals, replacements, additions, betterments and improvements to, and extensions of, Project No. 2, and paying all other charges or obligations against such revenues.

*Project No. 2 Bond Fund:* From the revenues theretofore paid into the Project No. 2 Revenue Fund, the Supply System is to pay monthly into the Project No. 2 Bond Fund, for the credit of the Interest Account and the Principal Account, respectively, fixed amounts sufficient in the aggregate to pay the principal of and interest on the Project No. 2 Bonds as the same become due and payable. Payments to the Interest Account began in September 1977.

Monthly payments to the Principal Account began in September 1977, and are required to be sufficient to pay outstanding serial Project No. 2 Bonds as they mature.

Monthly payments to the Project No. 2 Bond Retirement Account to retire any term Project No. 2 Bonds are to be made at the times and in the amounts specified in the supplemental resolution providing for the issuance of such term Bonds. Moneys in said Bond Retirement Account are to be applied by the Project No. 2 Bond Fund Trustee to the purchase or redemption of outstanding Project No. 2 Bonds.

There is required to be paid into and maintained in the Reserve Account for each series of Project No. 2 Bonds outstanding, an amount equal to the largest amount of interest on such Bonds during any six month period from the date of such Bonds to the final maturity date thereof. The requirement for the presently outstanding Project No. 2 Bonds was deposited from payments received pursuant to the Project No. 2 Net Billing Agreements and Project No. 2 Bond proceeds, and the requirement for the 1981 Project No. 2 Bonds will be deposited from such Bond proceeds. The Reserve Account requirement for additional Project No. 2 Bonds shall be deposited in the Reserve Account at the time of issuance

of Project No. 2 Bonds from such Bond proceeds or revenues available therefor. The Supply System is required to maintain the required amount in the Reserve Account by additional payments from said Revenue Fund.

*Project No. 2 Fuel Fund:* Beginning on the Date of Commercial Operation, all payments for Fuel for Project No. 2 will be made from the Project No. 2 Fuel Fund. After the Date of Commercial Operation, after making the required payments into the Project No. 2 Bond Fund and into any separate bond fund for additional bonds and after paying or making provision for payment of the reasonable and necessary costs of operating and maintaining Project No. 2, including taxes or payments in lieu thereof, the Supply System will transfer to said Fuel Fund the following amounts:

- (1) the amount included in the annual budget for Fuel for Project No. 2,
- (2) all amounts received as Fuel credits, including the proceeds of the sale of Fuel, and
- (3) any additional amounts necessary to avoid a deficiency in the Fuel Fund.

*Project No. 2 Reserve and Contingency Fund:* The Supply System has deposited in the Project No. 2 Reserve and Contingency Fund the sum of \$3,000,000 from moneys received pursuant to the Project No. 2 Net Billing Agreements. In each month the Supply System is required to pay out of the Project No. 2 Revenue Fund into the Project No. 2 Reserve and Contingency Fund, after making the required payments into the Project No. 2 Bond Fund, any separate bond fund established for additional bonds and the Project No. 2 Fuel Fund, and after paying or making provision for payment of the reasonable and necessary costs of operating and maintaining the Project No. 2, an amount equal to 10% of the aggregate of the amounts required to be paid during such month into the Interest, Principal and Bond Retirement Accounts in said Bond Fund and into any special funds for interest, principal and bond retirements in respect of additional bonds.

*Project No. 3 Revenue Fund:* The gross revenues derived by the Supply System from its ownership and operation of the Supply System's Ownership Share of Project No. 3 are to be paid into the Project No. 3 Revenue Fund. The sum of \$3,000,000 of working capital for the Supply System's Ownership Share of Project No. 3 will be provided prior to September 1, 1982, either through revenues of the Supply System's Ownership Share of Project No. 3 or Project No. 3 Bond proceeds. Additional working capital may be provided by mutual agreement between the Supply System and Bonneville. Moneys in the Project No. 3 Revenue Fund are to be used for the purpose of making required payments into the Project No. 3 Bond Fund and any special funds for additional bonds, paying for the Supply System's Ownership Share of the costs of operating and maintaining Project No. 3, making required payments into the Project No. 3 Fuel Fund and the Project No. 3 Reserve and Contingency Fund, paying the Supply System's Ownership Share of the costs of repairs, renewals, replacements, additions, betterments and improvements to, and extensions of, Project No. 3, and paying all other charges or obligations against such revenues.

*Project No. 3 Bond Fund:* From the revenues theretofore paid into said Revenue Fund, the Supply System is to pay monthly into the Project No. 3 Bond Fund, for the credit of the Interest Account and the Principal Account, respectively, fixed amounts sufficient in the aggregate to pay the principal of and interest on the Project No. 3 Bonds as the same become due and payable. Interest on said Bonds will be capitalized to September 1, 1982; monthly payments to the Interest Account will commence on September 25, 1982.

Monthly payments to the Principal Account are to commence in the twelfth month prior to the due date of any serial Project No. 3 Bonds and be sufficient to pay such outstanding serial Bonds as they mature.

Monthly payments to the Project No. 3 Bond Retirement Account to retire any term Project No. 3 Bonds are to be made at the times and in the amounts specified in the supplemental resolution providing for the issuance of such term Bonds. Moneys in said Bond Retirement Account are to be applied by the Bond Fund Trustee to the purchase or redemption of outstanding Project No. 3 Bonds.

There is required to be paid into and maintained in the Project No. 3 Reserve Account for each series of Project No. 3 Bonds outstanding, an amount equal to the largest amount of interest on such Bonds during any six month period from the date of such Bonds to the final maturity date thereof. By September 1, 1982, the Supply System will deposit the required amount in said Reserve Account either from Project No. 3 Bond proceeds or amounts received under the Project No. 3 Net Billing Agreements and deposited in the Project No. 3 Revenue Bond. The Supply System is required to maintain the required amount in said Reserve Account at all times thereafter by additional payments from said Revenue Fund. If any Project No. 3 Bonds are issued after September 1, 1982, the additional amount required to be deposited in said Reserve Account shall be deposited therein from such Bond proceeds or revenues available therefor at the time of issuance of such Bonds.

*Project No. 3 Fuel Fund:* Beginning on the Date of Commercial Operation, all payments for Fuel for Project No. 3 will be made from the Project No. 3 Fuel Fund. After the Date of Commercial Operation, after making the required payments into said Bond Fund and into any separate bond fund for additional bonds and after paying or making provision for payment of the Supply System's Ownership Share of the reasonable and necessary costs of operating and maintaining Project No. 3, including taxes or payments in lieu thereof, the Supply System will transfer to said Fuel Fund the following amounts:

- (1) the amount included in the annual budget for Fuel adopted pursuant to the Project No. 3 Project Agreement,
- (2) all amounts received by the System from Fuel credits, including the proceeds of the sale of Fuel, and
- (3) any additional amounts necessary to avoid a deficiency in said Fuel Fund.

*Project No. 3 Reserve and Contingency Fund:* Beginning on September 25, 1982, the Supply System is required to pay monthly out of the Project No. 3 Revenue Fund into the Project No. 3 Reserve and Contingency Fund, after making the required payments into the Project No. 3 Bond Fund, any separate bond fund established for additional bonds and the Fuel Fund, and after paying or making provision for payment of the Supply System's Ownership Share of the reasonable and necessary costs of operating and maintaining Project No. 3, an amount equal to 10% of the aggregate of the amounts required to be paid during such month from said Revenue Fund into the Interest, Principal and Bond Retirement Accounts in said Bond Fund and into any special funds for interest, principal and bond retirements in respect of additional bonds. In any event, by the Date of Commercial Operation, the Supply System will deposit in said Reserve and Contingency Fund the sum of \$3,000,000 either through the aforesaid payments into said Fund or revenues otherwise available therefor in said Revenue Fund or, to the extent such moneys are not available, from Project No. 3 Bond proceeds.

Moneys in each Net Billed Project's Reserve and Contingency Fund are required to be used to make up deficiencies in the respective Project Bond Fund or in any bond funds established for additional bonds for which funds are not available in the respective Project's Construction Fund or Reserve Account or in the construction fund or reserve account in respect of additional bonds, respectively. To the extent not required for any such deficiency, moneys in each Project's Reserve and Contingency Fund may be used after the respective Date of Commercial Operation for any one or more of the following purposes:

- (i) to pay the cost of renewals, replacements and normal additions to and extensions of such Net Billed Project; and
- (ii) to pay extraordinary operation and maintenance costs or the Supply System's Share of such costs in the case of Project No. 3, including extraordinary costs of Fuel and the cost of preventing or correcting any unusual loss or damage (including major repairs) to such Project.

*Investment of Funds:* The term "Investment Securities" for each of the Net Billed Projects means (i) direct obligations of, or obligations the principal of and interest on which are unconditionally guaran-



ted by, the United States of America; (ii) general obligation bonds of any state of the United States rated by a nationally recognized bond rating agency in either of the two highest rating categories assigned by such rating agency; (iii) bonds, debentures, notes or participation certificates issued by the Bank for Cooperatives, the Federal Intermediate Credit Bank, the Federal Home Loan Bank System, the Export-Import Bank of the United States, Federal Land Banks or the Federal National Mortgage Association or of any agency of or corporation wholly owned by the United States of America; (iv) Public Housing Bonds or Project Notes issued by Public Housing Authorities and fully secured as to the payment of both principal and interest by a pledge of annual contributions to be paid by the United States of America or any agency thereof or in the case of Project No. 3, New Housing Authority Bonds or Project Notes issued by public agencies or municipalities and fully secured as to the payment of both principal and interest by a pledge of annual contributions to be paid by the United States of America or any agency thereof. In addition, for Projects Nos. 1 and 3, the term "Investment Securities" means (a) bank time deposits evidenced by certificates of deposit, and bankers' acceptances, issued by any bank, trust company or national banking association authorized to do business in the State of Washington, which is a member of the Federal Reserve System, provided that the aggregate of such bank time deposits and bankers' acceptances issued by any bank, trust company or banking association do not exceed at any time fifty per centum (50%) of the aggregate of the capital stock, surplus and undivided profits of such bank, trust company or banking association; and (b) bank time deposits evidenced by certificates of deposit, and bankers' acceptances, issued by any bank, trust company or national banking association authorized to do business in any state of the United States of America other than the State of Washington, which is a member of the Federal Reserve System, provided that the aggregate of such bank time deposits and bankers' acceptances issued by any bank, trust company or banking association do not exceed at any one time twenty-five per centum (25%) of the aggregate of the capital stock, surplus and undivided profits of such bank, trust company or banking association and provided further that such capital stock, surplus and undivided profits shall not be less than Fifty Million Dollars (\$50,000,000); while for Project No. 2, the term "Investment Securities" includes bank time deposits evidenced by certificates of deposit issued by any bank, trust company, or national banking association authorized to do business in the State of Washington, which is a member of the Federal Reserve System, provided that such bank time deposits in any bank, trust company, or banking association do not exceed at any one time in the aggregate twenty-five per centum (25%) of the total of the capital stock and surplus of such bank, trust company or banking association. For Project No. 1 only, the term also includes evidences of indebtedness issued by any corporation organized and existing under the laws of any state of the United States of America rated by any nationally recognized bond rating agency in either of the two highest rating categories assigned by such rating agency:

Moneys in the Project No. 1 Revenue Fund not required for immediate disbursement are to be invested in Investment Securities described in clauses (i) through (iv) above maturing or redeemable at or prior to the estimated time for disbursement of such moneys. Moneys in the Project No. 1 Interest Account, Principal Account and Bond Retirement Account are to be invested in Investment Securities described in clauses (i) through (iv) above maturing on or before the respective dates when such moneys will be required for the purposes intended. Moneys in the Project No. 1 Reserve Account not required for immediate disbursement are to be invested in Investment Securities described in clauses (i) through (iv) above maturing or redeemable within 7 years from the date of investment. Moneys in the Project No. 1 Fuel Fund and Reserve and Contingency Fund not required for immediate disbursement are to be invested in Investment Securities maturing or redeemable within 7 years from the date of investment. Moneys in the Project No. 1 Construction Fund are to be invested by the Project No. 1 Construction Fund Trustee in Investment Securities maturing or redeemable within 5 years of the date of investment.

Moneys in the Project No. 2 Revenue Fund not required for immediate disbursement are to be invested in Investment Securities described in clauses (i) through (iv) above maturing or redeemable at or prior to the estimated time for the disbursement of such moneys. Moneys in the Project No. 2

Interest Account, Principal Account and Bond Retirement Account are to be invested in Investment Securities described in clauses (i) through (iv) above maturing not later than 2 days prior to the respective dates when such moneys will be required for the purposes intended. Moneys in the Project No. 2 Reserve Account not required for immediate disbursement are to be invested in Investment Securities described in clauses (i) through (iv) above maturing or redeemable within 7 years from the date of investment. Moneys in the Project No. 2 Fuel Fund and Reserve and Contingency Fund not required for immediate disbursement are to be invested in Investment Securities maturing or redeemable within 2 years and 7 years, respectively, from the date of investment. Moneys in the Project No. 2 Construction Fund are to be invested by the Construction Fund Trustee in Investment Securities maturing or redeemable within 5 years of the date of investment.

Moneys in the Project No. 3 Revenue Fund not required for immediate disbursement are to be invested in Investment Securities maturing or redeemable at or prior to the estimated time for the disbursement of such moneys. Moneys in the Project No. 3 Interest Account, Principal Account and Bond Retirement Account are to be invested in Investment Securities described in clauses (i) through (iv) above maturing on or before 30 days after the respective dates when such moneys will be required for the purposes intended, provided that any such investment of moneys in the Interest Account representing interest capitalized from the proceeds of Project No. 3 Bonds may be in Investment Securities. Moneys in the Project No. 3 Reserve Account not required for immediate disbursement are to be invested in Investment Securities described in clauses (i) through (iv) above maturing or redeemable within 7 years from the date of investment. Moneys in the Project No. 3 Fuel Fund and Reserve and Contingency Fund not required for immediate disbursement are to be invested in Investment Securities maturing or redeemable within 7 years from the date of investment. Moneys in the Project No. 3 Construction Fund are to be invested in Investment Securities maturing or redeemable within 7 years of the date of investment.

*Excess Moneys:* For each of the Net Billed Projects moneys and the value of Investment Securities in each Project's Reserve and Contingency Fund in excess of \$3,000,000 plus the commitments or obligations incurred by or the requirements of the Supply System for any of the purposes for which such Reserve and Contingency Fund may be used constitute "excess moneys" in respect of such Fund; for Project Nos. 1 and 2, moneys and the value of Investment Securities in each Project's Reserve Account in excess of the amounts required to be maintained in such Reserve Account constitute "excess moneys" in respect of such Account; for Project No. 3, moneys and the value of Investment Securities described in clauses (i) through (iv) set forth in "Investment of Funds" in the Project No. 3 Reserve Account in excess of the amounts required to be maintained in said Reserve Account constitute "excess moneys" in respect of such Account.

If as of any June 30 excess moneys exist in the Reserve and Contingency Fund for any Net Billed Project, such moneys shall be paid proportionately into such Project's Reserve Account and the reserve account for any series of additional bonds to the extent of any deficiency therein, and the balance of such excess moneys shall be paid into such Project's Revenue Fund.

If as of any June 30, excess moneys exist in the Reserve Account for any Net Billed Project, such moneys shall be paid proportionately into such Project's reserve account for any series of additional bonds to the extent of any deficiency therein and the balance of such excess moneys shall be paid into such Project's Revenue Fund; except that, prior to September 1, 1982, excess moneys in the Project No. 3 Reserve Account shall be paid into the Project No. 3 Construction Fund.

If as of any June 30 or, in the case of Project No. 3, any June 30 following September 1, 1982, there shall exist in any Net Billed Project's Revenue Fund, after giving effect to any transfer of excess moneys from such Project's Reserve Account and Reserve and Contingency Fund to such Fund, an amount which exceeds the Supply System's required amount of working capital for such Project, the amount of such excess is to be applied to reduce annual power costs under the Net Billing Agreements. For Projects Nos. 1 and 3, the "required amount of working capital" shall be \$3,000,000 or such greater

amount as may be decided upon by the Supply System and Bonneville with the approval of the Consulting Engineer. For Project No. 2, the "required amount of working capital" shall be \$3,000,000 or such lesser amount (not less than \$2,000,000) or such greater amount as may be decided upon by the Supply System and Bonneville with the approval of the Consulting Engineer. In addition, if the Supply System and Bonneville agree, all or any part of such excess over required working capital for a Net Billed Project may be applied to the making of repairs, renewals, replacements, additions, betterments and improvements to, and extensions of, such Project, or in the case of Project No. 3, the Supply System's Ownership Share of such items, the purchase or redemption of Bonds for such Project or for other purposes in connection with such Project or the Supply System's Ownership Share of Project No. 3.

#### **Certain Covenants**

Certain covenants of the Supply System with the holders of the Net Billed Bonds and the holders of additional bonds are summarized as follows:

*The Hanford Project:* Under the Project No. 1 Resolution, the Supply System (a) will not issue any evidences of indebtedness under Resolution No. 178 so long as the obligations of said resolution are satisfied under the Project No. 1 Resolution, (b) will discharge all of its duties and obligations under Resolution No. 178, (c) will make all payments and deposits to be made under the provisions of Resolution No. 178 from moneys to be provided pursuant to the Project No. 1 Resolution if and to the extent such obligations are not otherwise provided for, (d) will, on each December 31, apply any excess of amounts in the Hanford Project Revenue Fund over the required amount of working capital to reduce the amounts required by the Project No. 1 Resolution to be deposited in the Hanford Project Revenue Fund, and (e) will not amend Resolution No. 178 in any manner which adversely affects the rights of Bondholders under the Project No. 1 Resolution.

*The Net Billed Projects:* The Supply System will, subject to the Project Agreements for each of the Net Billed Projects and the Ownership Agreement for Project No. 3, complete construction of the Net Billed Projects at the earliest practicable time, operate such Projects and the business in connection therewith in an efficient manner and at reasonable cost, maintain such Projects in good condition and make all necessary and proper repairs, renewals, replacements, additions, extensions and betterments to such Projects.

*Rates:* The Supply System will dispose of all capability of and power and energy from Project No. 1 solely for the benefit and account of such Project and pursuant to the provisions of the Project No. 1 Net Billing Agreements and the Project No. 1 Exchange Agreements; and the Supply System will maintain and collect rates and charges for capability, power and energy and other services, facilities and commodities sold, furnished or supplied through such Project, which will be adequate, whether or not the generation or transmission of power by such Project is suspended, interrupted or reduced for any reason whatever, to provide revenues sufficient, among other things, (i) to make the required payments into the Hanford Project Revenue Fund, (ii) to pay the expenses of operating and maintaining Project No. 1, (iii) to make the required payments into the Project No. 1 Bond Fund and any special funds for additional bonds and (iv) to make the required payments into the Project No. 1 Fuel Fund and Project No. 1 Reserve and Contingency Fund.

The Supply System will dispose of all capability of and power and energy from Project No. 2 solely for the benefit and account of such Project and pursuant to the provisions of the Project No. 2 Net Billing Agreements; and the Supply System will maintain and collect rates and charges for capability, power and energy and other services, facilities and commodities sold, furnished or supplied through such Project, which will be adequate, whether or not the generation or transmission of power by such Project is suspended, interrupted or reduced for any reason whatever, to provide revenues sufficient, among other things, (i) to pay the expenses of operating and maintaining such Project, (ii) to make the required payments into the Project No. 2 Bond Fund and any special funds for additional bonds, and (iii) to make the required payments into the Project No. 2 Fuel Fund and Project No. 2 Reserve and Contingency Fund.

The Supply System will dispose of all capability of and power and energy from the Supply System's Ownership Share of Project No. 3 solely for the benefit and account of the Supply System's Ownership Share of such Project and pursuant to the provisions of the Project No. 3 Net Billing Agreements and the Project No. 3 Power Sales Agreement; and the Supply System will maintain and collect rates and charges for power and energy, including capability, and other services, facilities and commodities sold, furnished or supplied through such Project, which will be adequate, whether or not the generation or transmission of power by the Project is suspended, interrupted or reduced for any reason whatever, to provide revenues sufficient, among other things, (i) to pay the Supply System's Ownership Share of the expenses of operating and maintaining such Project, (ii) to make the required payments into the Project No. 3 Bond Fund and any special funds for additional bonds, and (iii) to make the required payments into the Project No. 3 Fuel Fund and Project No. 3 Reserve and Contingency Fund.

*Net Billing Agreements, Exchange Agreements and Project Agreement:* The Supply System will not voluntarily consent to any amendment or permit any rescission of or take any action under or in connection with any of the Project Agreements, the Net Billing Agreements, the Project No. 1 Exchange Agreements or the Project No. 3 Ownership Agreement which will in any manner impair or adversely affect the rights of the Supply System or any of its Bondholders; or take any action under or in connection with the Net Billing Agreements or the Project No. 1 Exchange Agreements which will reduce the payments provided for therein.

*Disposition of Properties:* The Supply System will not sell, mortgage, lease or otherwise dispose of any properties of Project No. 1 unless (a) simultaneous provision is made for the retirement in full of the Project No. 1 Bonds and any additional bonds and the Hanford Project Bonds or (b) the properties to be disposed of are unserviceable, inadequate, obsolete or no longer required for use in connection with Project No. 1, in which case \$100,000 of the moneys received therefor are to be transferred to the Project No. 1 Reserve and Contingency Fund and the balance is to be paid proportionately into the Project No. 1 Bond Retirement Account and bond retirement accounts created for additional bonds, unless such disposition is in connection with the replacement of such properties or the disposition of Fuel, in which case all moneys received from such disposition are to be transferred to the Project No. 1 Reserve and Contingency Fund or the Project No. 1 Fuel Fund, respectively, or (c) the transfer of such properties in whole or in part is by operation of law, in which case moneys received therefor are to be paid proportionately into said Bond Retirement Account and bond retirement accounts for additional bonds.

The Supply System will not sell, mortgage, lease or otherwise dispose of any properties of Project No. 2 unless (a) simultaneous provision is made for the retirement in full of the Project No. 2 Bonds and any additional bonds or (b) the properties to be disposed of are unserviceable, inadequate, obsolete or no longer required for use in connection with Project No. 2, in which case \$50,000 of the moneys received therefor are to be transferred to the Project No. 2 Reserve and Contingency Fund and the balance is to be paid proportionately into the Project No. 2 Bond Retirement Account and bond retirement accounts created for additional bonds, unless such disposition is in connection with the replacement of such properties or the disposition of Fuel, in which case all moneys received from such disposition are to be transferred to the Project No. 2 Reserve and Contingency Fund or the Project No. 2 Fuel Fund, respectively, or (c) the transfer of such properties in whole or in part is by operation of law, in which case moneys received therefor are to be paid proportionately into said Bond Retirement Account and bond retirement accounts for additional bonds.

The Supply System will not sell, mortgage, lease or otherwise dispose of its Ownership Share of any properties of Project No. 3 unless (a) simultaneous provision is made for the retirement in full of the Project No. 3 Bonds and any additional bonds or (b) the properties to be disposed of are unserviceable, inadequate, obsolete or no longer required for use in connection with Project No. 3, in which case \$100,000 of the moneys received therefor are to be transferred to the Project No. 3 Reserve and Contingency Fund and the balance is to be paid proportionately into the Project No. 3 Bond Retirement Account and bond retirement accounts created for additional bonds, unless such disposition is in con-

nection with the replacement of such properties or the disposition of Fuel, in which case all moneys received from such disposition are to be transferred to the Project No. 3 Reserve and Contingency Fund or the Project No. 3 Fuel Fund, respectively, or (c) the transfer of such properties in whole or in part is by operation of law, in which case moneys received therefor are to be paid proportionately into said Bond Retirement Account and bond retirement accounts for additional bonds.

Notwithstanding the provisions of clauses (b) and (c) above with respect to each Net Billed Project, moneys received by the Supply System prior to the Date of Commercial Operation for a Net Billed Project as a result of any sale, lease, transfer or other disposition specified therein shall be transferred to such project's Construction Fund.

*Insurance:* The Supply System will keep Project Nos. 1 and 2 and its Ownership Share of Project No. 3 insured, to the extent such insurance is available at reasonable cost against risks of direct physical loss or damage to or destruction of each such Project, accidents, casualties, or negligence, including liability insurance and employer's liability, at least to the extent that similar insurance is usually carried by private utility corporations operating like properties.

In the event that any loss or damage to the properties of any Net Billed Project occurs during the Period of Construction of such project, the Supply System is to transfer the insurance proceeds, if any, in respect of such loss or damage to such Project's Construction Fund; any insurance proceeds received by the Supply System in respect of such loss or damage occurring thereafter are to be transferred into such Project's Reserve and Contingency Fund, or, in the case of insurance covering loss or damage to Fuel, to such Project's Fuel Fund.

*Books of Account:* The Supply System will keep proper books of account, showing Project Nos. 1 and 2 and its Ownership Share of Project No. 3 as separate utility systems, in accordance with the rules and regulations of the Division of Municipal Corporations of the State Auditor's office of the State of Washington and in accordance with the Uniform System of Accounts prescribed by the Federal Power Commission. Such books of account are to be audited annually by a firm of independent certified public accountants of national reputation. Bondholders may obtain copies of the annual financial statements showing the financial condition of the Project and the annual audit report by sending a written request therefor to the Supply System.

*Consulting Engineer:* The Supply System will retain a nationally recognized independent consulting engineer or engineering firm to render continuous engineering counsel in the operation of each Net Billed Project. In addition to his other duties, the Consulting Engineer shall prepare, not later than 18 months after the respective Date of Commercial Operation of each Project, and each 3 years thereafter, a report for each such Project based upon a survey of such Project and the operation and maintenance thereof. Each report is to show, among other things, whether the Supply System has satisfactorily performed and complied with certain covenants in such Project's Resolution. The Consulting Engineer is also required to report to the respective Bond Fund Trustee and the Supply System upon the economic soundness and feasibility of all contemplated renewals, replacements, additions, betterments and improvements to, and extensions of, Project Nos. 1 and 3 involving an expenditure of \$500,000 or more, and Project No. 2 involving an expenditure of \$100,000 or more. The Consulting Engineer is also required to file annually a certificate with each Bond Fund Trustee describing the insurance then in effect for the respective Project and stating whether or not such insurance complies with the requirements of the respective Resolution. In the event of any loss or damage in excess of \$500,000 (or in the case of Project No. 2, in excess of \$100,000), whether or not covered by insurance, the Consulting Engineer is to ascertain the amount of such loss or damage and deliver to the Supply System a certificate setting forth the amount and nature of such loss or damage, together with recommendations as to whether or not such loss or damage should be replaced or repaid. Copies of any such triennial report, annual certificate as to insurance or certificate in respect of any such loss or damage will be sent to Bondholders filing with the Supply System written requests therefor.

### **Events of Default; Remedies**

Under each Net Billed Resolution, the happening of one or more of the following events constitutes an Event of Default: (i) default in the performance of any obligation with respect to payments into the respective Revenue Fund; (ii) default in the payment of the principal of or default for 30 days in the payment of interest on any of the respective Net Billed Bonds or additional bonds, or any sinking fund installment on any Project No. 1 or Project No. 2 Bonds or additional bonds; (iii) default for 90 days in the observance and performance of any other of the covenants, conditions and agreements of the Supply System in the respective Resolution; (iv) the sale or conveyance of any properties of the respective Net Billed Project except as permitted by the respective Resolution or the forfeiture through fault of the Supply System of any license, franchise, permit or other privilege necessary or desirable in the operation of such Project; (v) the entering by any court of competent jurisdiction of an order, judgment or decree (a) appointing a receiver, trustee or liquidator for the Supply System or the whole or any substantial part of the respective Net Billed Project, (b) approving a petition filed against the Supply System under Federal bankruptcy laws, or (c) assuming custody or control of the Supply System or of the whole or any substantial part of the respective Net Billed Project under the provisions of any other law for the relief or aid of debtors and such order, judgment or decree shall not be vacated or set aside or stayed (or, in case custody or control is assumed by said order, such custody or control shall not be otherwise terminated), within (60) days from the date of the entry of such order, judgment or decree; and (vi) the Supply System (a) admits in writing its inability to pay its debts incurred in the ownership and operation of the respective Net Billed Project generally as they become due, (b) files a petition in bankruptcy or seeking a composition of indebtedness, (c) consents to the appointment of a receiver of its creditors, (d) consents to the appointment of a receiver of the whole or any substantial part of the respective Net Billed Project, (e) files a petition or an answer seeking relief under Federal bankruptcy laws, or (f) consents to the assumption by any court of competent jurisdiction under the provisions of any other law for the relief or aid of debtors of custody or control of the Supply System or of the whole or any substantial part of the respective Net Billed Project.

In case an Event of Default has occurred which has not been cured, each trustee appointed by or pursuant to the provisions of the Net Billed Resolution governing the project in default is required to exercise such of the rights and powers vested in it by such Resolution and use the same degree of care and skill in the exercise thereof as a prudent man would exercise or use under the circumstances in the conduct of his own affairs.

If an Event of Default shall have occurred and shall not have been remedied, the respective Bond Fund Trustee or the holders of 20% in principal amount of the respective Bonds and additional bonds then outstanding against the project in default, may declare the principal of all such Bonds and additional bonds and the interest accrued thereon to be immediately due and payable, but such declaration may be annulled under certain circumstances.

After the occurrence of an Event of Default and prior to the curing of such Event of Default, the Bond Fund Trustee of the Net Billed Project in default, may, to the extent permitted by law, take possession and control of such Net Billed Project and operate and maintain the same, prescribe rates for capability or power sold or supplied through the facilities of such Project, collect the gross revenues resulting from such operation and perform all of the agreements and covenants contained in any contract which the Supply System is then obligated to perform. Such gross revenues, after payment of operating expenses, and in the case of Project No. 1, after additional payment of the amounts required by the Project No. 1 Resolution to be paid into the Hanford Project Revenue Fund, shall be applied to the payment of principal of and interest on the defaulting Net Billed Project's Bonds and additional bonds. After all sums then due in respect of such Bonds and additional bonds have been paid, and after all Events of Default have been cured or secured to the satisfaction of the defaulting Net Billed Project's Bond Fund Trustee, such Bond Fund Trustee is required to relinquish possession and control of such Net Billed Project to the Supply System.

The Resolutions empower each Bond Fund Trustee to file proofs of claims for the benefit of the holders of the defaulting Net Billed Project's Bonds and additional bonds in bankruptcy, insolvency, or reorganization proceedings and to institute suit for the collection of sums due and unpaid in connection with such Bonds and additional bonds, to enforce specific performance of covenants contained in the Net Billed Resolution governing the project in default or to obtain injunctive or other appropriate relief for the protection of the holders of such Net Billed Bonds and additional bonds.

The holders of a majority in principal amount of the defaulting Net Billed Project's Bonds and additional bonds at the time outstanding have the right to direct the time, method and place of conducting any proceeding for any remedy available to the defaulting Net Billed Project's Bond Fund Trustee, or exercising any trust or power conferred upon such Bond Fund Trustee, but such Bond Fund Trustee must be provided with reasonable security and indemnity and also may decline to follow any such direction if it shall be advised by counsel that the action or proceeding so directed may not lawfully be taken or if in good faith determines that the action or proceeding so directed would involve it in personal liability or that the action or proceeding so directed would be unjustly prejudicial to the holders of such Bonds or additional bonds not parties to such direction. No holder of any Net Billed Bond has any right to institute suit to enforce any provision of the respective Resolution or the execution of any trust thereunder (except to enforce the payment of principal or interest installments as they mature), unless the respective Bond Fund Trustee has been requested by the holders of not less than 20% in aggregate principal amount of such Bonds and additional bonds then outstanding to exercise the powers granted it by such Resolution or to institute such suit and unless such Bond Fund Trustee has refused or failed, within 60 days after the receipt of such request and after having been offered adequate security and indemnity, to comply with such request. In the event a Bond Fund Trustee has failed or refused to comply with the aforesaid request, each Net Billed Resolution provides for the creation of a "Bondholders' Committee".

#### **Amendments; Supplemental Resolutions**

Any amendment to a Resolution may be made by the Supply System with the consent of the holders of 66⅔% in principal amount of the Net Billed Bonds issued pursuant to such Resolution and additional bonds then outstanding and with the consent of the holders of 66⅔% in principal amount of such outstanding Bonds and additional bonds which are adversely affected by an amendment which does not equally affect all other such outstanding Bonds and additional bonds, provided that no such amendment shall permit a change in the date of payment of principal of or any installment of interest on any such Bond or additional bond or a reduction in the principal or redemption price thereof or the rate of interest thereon without the consent of each such Bondholder so affected.

Without the consent of any Bondholder, the Supply System may adopt supplemental resolutions: to authorize the issuance of subsequent series of Project No. 1, Project No. 2 or Project No. 3 Bonds or additional bonds; to add to the covenants of the Supply System contained in, or to surrender any rights reserved to or conferred upon it by, a Net Billed Resolution; to add to the restrictions contained in a Net Billed Resolution upon the issuance of additional indebtedness; to confirm as further assurance any pledge under a Resolution of the revenues of the respective Net Billed Project or other moneys; otherwise to modify any of the provisions of a Resolution (but no such modification may be effective while any of the Bonds or additional bonds theretofore issued pursuant to such Resolution are outstanding); or to cure any ambiguity or defect or inconsistent provision in such Resolution, or to insert such provisions clarifying matters or questions arising under such Resolution as are necessary or desirable in the event any such modifications are not contrary to or inconsistent with such Resolution, provided that the appropriate Bond Fund Trustee shall consent thereto.

#### **Supplemental Resolution No. 804**

Under the provisions of Supplemental Resolution No. 804 adopted April 13, 1976, the Supply System has reserved the right to convert Project No. 3 from a nuclear thermal generating plant to a fossil fuel generating plant consisting of one or more units of a maximum rated capacity not to substantially exceed the rated capacity of Project No. 3. This change would be subject to the approval

of Bonneville and each Project No. 3 Participant and Project No. 3 Company as well as the consent of 66⅔% of the holders of the \$150,000,000 Series 1975 Bonds heretofore issued for Project No. 3, and review by the appropriate committees of Congress. The holders of the Project No. 3 1981 Bonds and other bonds would not be required to approve such change in Project No. 3. The Supply System has covenanted that it will not authorize the change if it would affect the tax exempt status of the Project No. 3 Bonds.

#### **Defeasance**

The obligations of the Supply System under the Project No. 1 and Project No. 2 Resolutions shall be fully discharged and satisfied as to any Project No. 1 or Project No. 2 Bond, respectively, and such Bond shall no longer be deemed to be outstanding thereunder when payment of the principal of and the applicable redemption premium, if any, on such Bond plus interest to the due date thereof (a) shall have been made or caused to be made in accordance with the terms thereof, or (b) shall have been provided by irrevocably depositing with the respective Bond Fund Trustee or the Paying Agents therefor in trust solely for such payment (i) moneys sufficient to make such payments or (ii) non-callable securities listed in clauses (i) through (iv) under the caption "Investment of Funds" maturing as to principal and interest in such amounts and at such times as will insure the availability of sufficient moneys to make such payment, and, except for the purposes of such payment, such Bond shall no longer be secured by or entitled to the benefits of the Resolution pursuant to which such Bond was issued, provided that, with respect to Project No. 1 or Project No. 2 Bonds which by their terms may be redeemed or otherwise prepaid prior to the stated maturities thereof but are not then redeemable, no deposit under (b) above shall constitute such discharge and satisfaction unless such Bond shall have been irrevocably called or designated for redemption on the first date thereafter such Bond may be redeemed in accordance with the provisions thereof and notice of such redemption shall have been given or irrevocable provision shall have been made for the giving of such notice.

The obligation of the Supply System under the Project No. 3 Resolution shall be fully discharged and satisfied as to any Project No. 3 Bond and such Bond shall no longer be deemed to be outstanding thereunder when payment of the principal of and the applicable redemption premium, if any, on such Bond plus interest to the due date thereof (a) shall have been made or caused to be made in accordance with the terms thereof, or (b) shall have been provided by irrevocably depositing with the Bond Fund Trustee or the Paying Agents therefor in trust solely for such payment (i) moneys sufficient to make such payments or (ii) Investment Securities listed in clauses (i) through (iv) under the caption "Investment of Funds" maturing as to principal and interest in such amounts and at such times as will insure the availability of sufficient moneys to make such payment, and, except for the purposes of such payment, such Bond shall no longer be secured by or entitled to the benefits of the Project No. 3 Resolution; provided that, with respect to Project No. 3 Bonds which by their terms may be redeemed or otherwise prepaid prior to the stated maturities thereof but are not then redeemable, no deposit under (b) above shall constitute such discharge and satisfaction unless such Bond shall have been irrevocably called or designated for redemption on the first date thereafter such Bond may be redeemed in accordance with the provisions thereof and notice of such redemption shall have been given or irrevocable provision shall have been made for the giving of such notice.

### **LITIGATION**

#### **Supply System**

Except as set forth in the immediately following subcaptions there is no litigation pending or, to the knowledge Supply System, threatened, questioning the corporate existence of the Supply System, or the title of the officers of the Supply System to their respective offices, or the validity of the 1981 Net Billed Bonds, or the power and authority of the Supply System to issue the 1981 Net Billed Bonds, or the validity of the Net Billing Agreements and Project Agreements for the Net Billed Projects, including each such agreement as amended by Amendatory Agreement No. 1 thereto for Project No. 1, or the



validity of the Project No. 1 Exchange Agreements, each as amended by Amendatory Agreement No. 1 thereto for Project No. 1, or the validity of the Ownership Agreement for Project No. 3, or the power and authority of the Supply System to fix, charge and collect rates for the sale of power and energy, including capability, from the Net Billed Projects as provided in the Net Billed Resolutions, for each Net Billed Project.

#### **Corporate Existence and Powers**

On July 12, 1978 an Answer and Counterclaim were filed by the defendants in a lawsuit brought by the Supply System in the Superior Court for Grays Harbor County, (*Washington Public Power Supply System v. Date et al.*, No. 70423). In such lawsuit the Supply System obtained a temporary restraining order, and sought a permanent injunction, enjoining the defendants from trespassing on the site of Projects Nos. 3 and 5. The defendants are 22 individuals and four branches of an organization called the Crabshell Alliance. In their Answer and Counterclaim the defendants pray that the Supply System be enjoined from continuing construction and operation of the Net Billed Projects and Projects Nos. 4 and 5. In addition to claims of false arrest allegedly resulting in damages of at least \$1,500,000, the defendants claim, among other things, (i) that the Washington statutes providing for the creation of the Supply System and its powers and their interpretation by the Supply System violate the Constitution of the State of Washington, (ii) that the Supply System is not a properly constituted municipal corporation and joint operating agency, (iii) that the Supply System has exceeded its legal authority by constructing nuclear reactors, (iv) that the Net Billed Projects and Projects Nos. 4 and 5 constitute takings of property without just compensation and due process of law and will cause radiation harmful to the defendants, their children and their property for which they are entitled to substantial damages and (v) that such projects will cause a twelvefold increase in the cost of electricity to defendants, depriving them of property without due process to their damage in the amount of \$40,000,000,000. Bond Counsel and Special Counsel to the Supply System are of the opinion that such enumerated claims of the defendants are without merit.

#### **Equal Employment Opportunity**

Several claims are presently pending before the United States Equal Employment Opportunity Commission ("EEOC") alleging race or sex discrimination in violation of Title VII of the Civil Rights Act of 1964, as amended. Additionally, some of these claimants have filed similar charges with the Office of Federal Contracts Compliance Programs ("OFCCP") alleging race and sex discrimination in violation of Executive Order 11246. On February 20, 1979 in a civil action brought by one of the claimants against the Supply System in the United States District Court, Eastern District of Washington, the Court found violations of Federal civil rights statutes relating to race or sex discrimination with respect to that claimant and awarded damages to the plaintiff. The Supply System has appealed this decision. This same claimant has brought a second action against the Supply System in the same court alleging additional violations of state and Federal civil rights statutes relating to race or sex discrimination. Eight claimants who had previously filed EEOC charges have filed civil actions in the same court alleging violations of the various State and Federal civil rights statutes and seeking equitable relief and damages in the amount of \$625,000. On June 1, 1981 an additional claimant commenced an action in Federal Court alleging race discrimination and seeking \$1,200,000 in general damages and punitive damages equalling 1% of the Supply System's annual operating budget from 1976 through 1980.

The Director of OFCCP has granted the Supply System a limited exemption from the cancellation, termination and suspension provisions contained in the Net Billing Agreements, the Project No. 1 Exchange Agreements and the Project Agreements. The Supply System does not have such a limited exemption from the corresponding provisions contained in its leases of the Project No. 1 and Project No. 2 sites from DOE. In the opinion of Bond Counsel and Special Counsel to the Supply System, the obligations of Bonneville, the Participants, the Companies and the Supply System under the aforementioned Agreements would remain in full force and effect regardless of any action taken by OFCCP and DOE.

### **Project No. 2 Contractor Litigation**

In February 1976, Bovee & Crail Construction Company ("Bovee") filed a lawsuit against the Supply System in the United States District Court for the Eastern District of Washington, Northern Division (Cause No. C-76-43), in connection with the termination by the Supply System of a civil construction contract for Project No. 2. Subsequently the Supply System filed its answer and a counterclaim against Bovee and against Maryland Casualty Company (Bovee's surety) and General Energy Resources, Inc. (the company of which Bovee is a wholly owned subsidiary). In its complaint, Bovee prays for damages of not less than \$24,500,000 together with interest thereon and attorneys fees and other undetermined amounts. The answer and counterclaim of the Supply System denies liability and seeks direct damages of \$13,970,000 and substantial consequential damages. A trial date, originally set for August 3, 1981, has been temporarily postponed pending the outcome of settlement discussions recently initiated among all parties to the suit.

In July 1976 Livermore Rebar, Inc., ("Livermore") a subcontractor of Bovee under the above-mentioned civil construction contract, filed a lawsuit against the Supply System, Bovee and others in the Superior Court for Benton County, Washington (No. 30704). In its complaint, Livermore prays for damages of more than \$31,900,000 including \$20,000,000 punitive damages. Further proceedings have been stayed by agreement of the parties pending the outcome of the action pending in federal court described immediately above. In the opinion of Special Counsel to the Supply System there is no merit to the claim for punitive damages but at this stage it is not possible to determine the probable outcome of any other portion of the claim.

In June 1980, the Supply System filed a lawsuit in the Superior Court of King County against Bovee-Crail/GERI, Maryland Casualty Co. (Bovee's surety) and several of its subcontractors (including the Leckenby Co.) and their sureties in connection with certain work performed prior to October 1977, by Bovee-Crail/GERI including work on the sacrificial shield wall for Project No. 2. The Supply System seeks \$118,000,000 in damages for the repair and correction of deficiencies discovered in the work performed by these contractors. The defendants have entered an appearance in the lawsuit and preliminary discovery is underway.

### **Fuel Litigation**

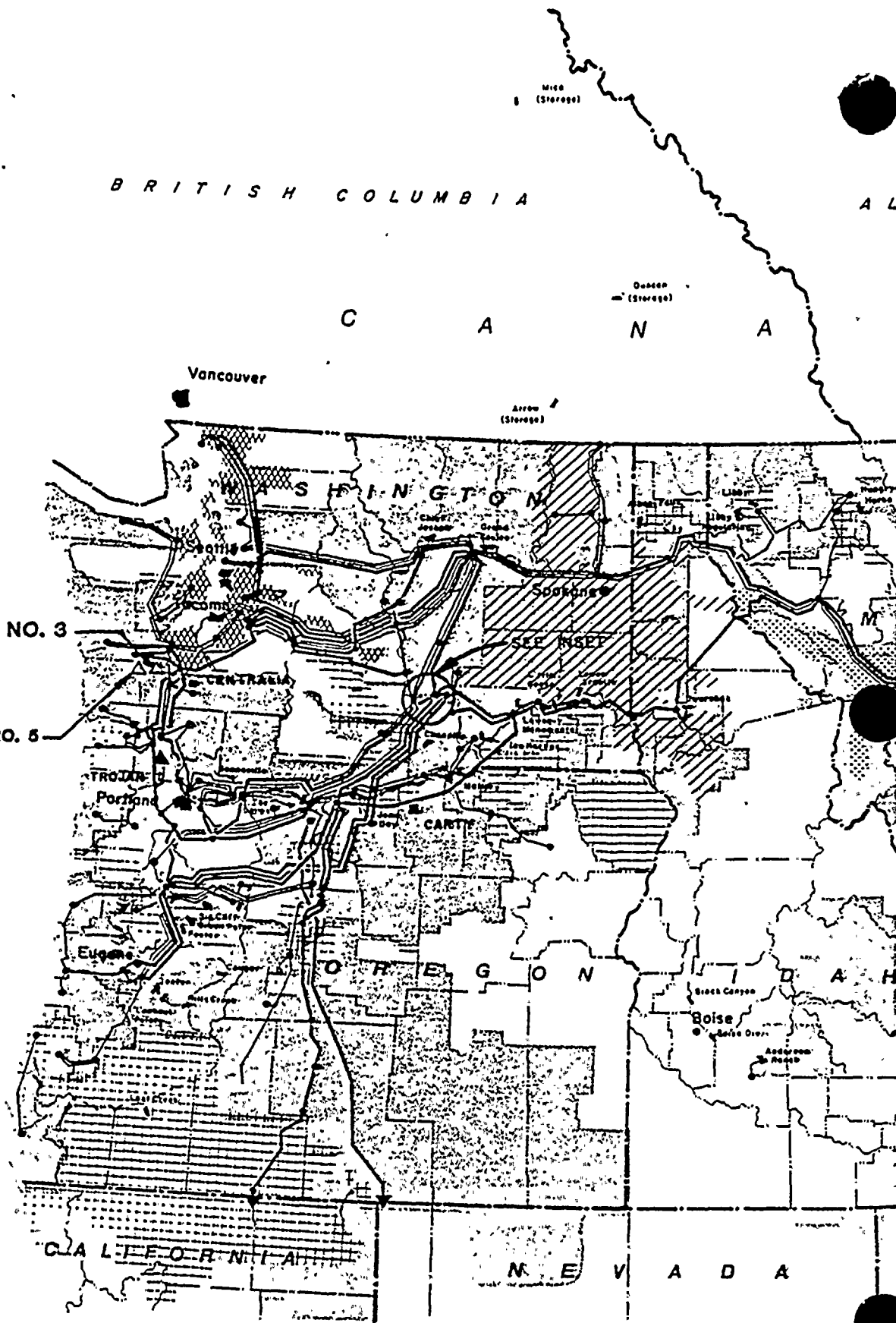
On March 13, 1981, the Supply System commenced a lawsuit in the Superior Court for King County, Washington, against Exxon Nuclear Co., Inc. ("Exxon"), Exxon Enterprises, Inc. and the parent corporation, Exxon Corporation (Cause No. 81-2-03850-6). The Supply System alleges that Exxon breached two reload fuel supply contracts, one for Project No. 2 and one for Project No. 3. For a discussion of the contracts see "Nuclear Fuel" under the captions "Project No. 2" and "Project No. 3". The litigation arose out of Exxon's refusal to give assurances that it would perform in accordance with the terms of the contracts. The Supply System is seeking judicial enforcement of the contracts. Exxon has filed an answer alleging, in part, that the contracts are no longer enforceable due to delays and changes in performance. The litigation is in the discovery phase and a trial date is not expected before October 1982. At this stage it is not possible to predict the outcome of the litigation.

### **Threatened Litigation**

In a press release dated April 21, 1981, United States Representative James Weaver of Oregon stated that "cost overruns at [Projects Nos. 1, 2 and 3] have been so great that [Bonneville] has exceeded its statutory authorizations to pay for them". Mr. Weaver's position appeared to be that Bonneville does not have the authority to make cash payments to the Supply System when net billing deficiencies occur as described in the Official Statement under the section "Security for the Net Billed Bonds". He stated that "he would take action" to block a proposed Bonneville rate increase, to block Bonneville's payments to the Supply System under the Net Billing Agreements and to stop the Net Billed Projects. Among the steps he said he could take to do so were to sue Bonneville to block its proposed July 1, 1981, rate increase and to sue the Supply System to block further issuance of bonds. To date, no such litigation has been commenced and Mr. Weaver has identified no legal basis for blocking further issuance of bonds.

NUCLEAR PROJECT NO. 3

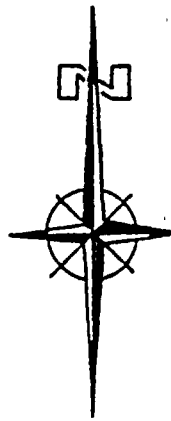
NUCLEAR PROJECT NO. 5



# ELECTRIC UTILITY PARTICIPANTS SERVICE AREAS Washington Public Power Supply System NUCLEAR PROJECTS NOS. 1, 2, AND 3

VERTA

A



## Participants

## Private Utilities

Pacific Power & Light Co.

Portland General Electric Co.

Puget Sound Power & Light Co.

Washington Water Power Co.

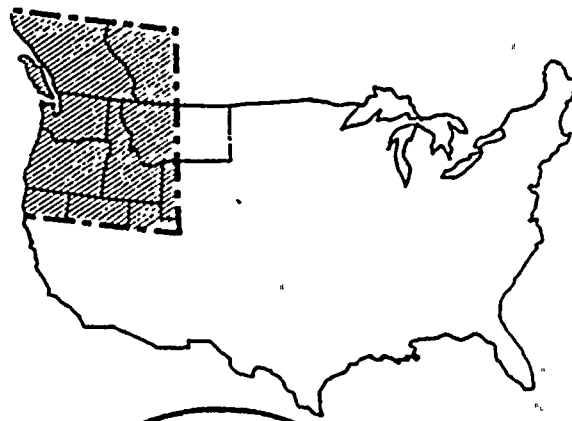
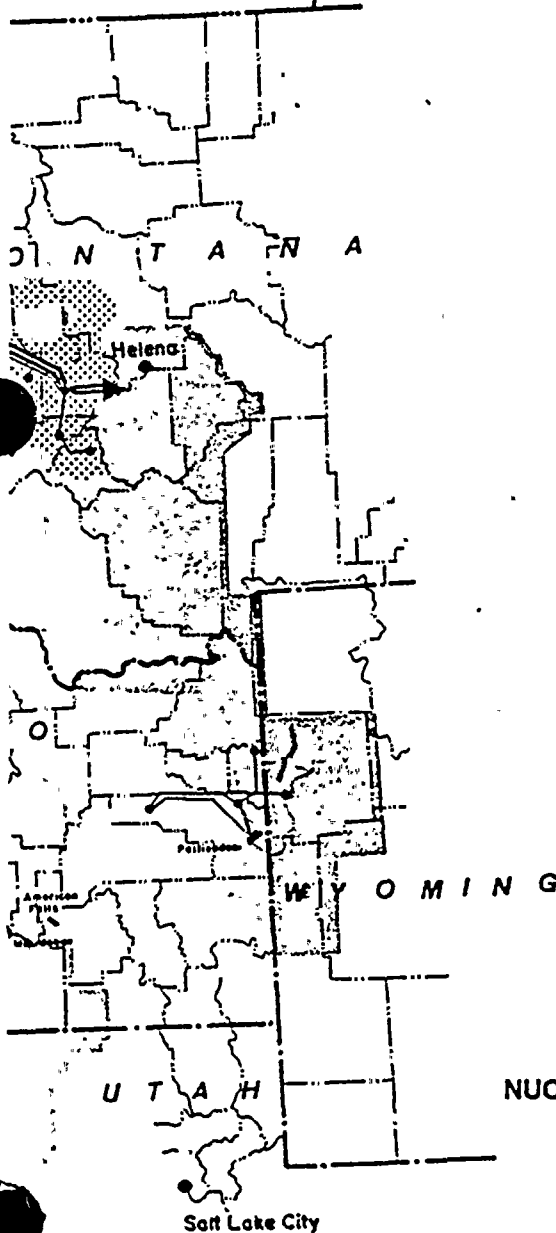
Montana Power Co.

Federal Hydro & Canadian Treaty  
Storage Projects

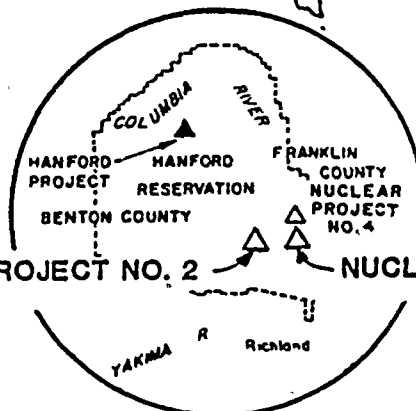
Nuclear Power Plant (operating)  
(under construction)

Fossil Fueled Power Plant (operating)

B.P.A. Transmission Facilities



NUCLEAR PROJECT NO. 2      NUCLEAR PROJECT NO. 1



prepared by  
R.W. BECK and ASSOCIATES

In the opinion of Bond Counsel and Special Counsel to the Supply System, and General Counsel to Bonneville, (a) Mr. Weaver's apparent position is without merit and Bonneville does have the authority to make cash payments under the Net Billing Agreements, (b) Bonneville is authorized and is obligated to pay the total costs of the Net Billed Projects whether or not such projects are completed or operable or operating and notwithstanding the suspension, reduction or curtailment of the output of such projects, (c) by law Bonneville's rates must be adequate to produce revenues sufficient to pay Bonneville's obligations under the Net Billing Agreements as well as its other obligations, and (d) the Supply System is authorized to issue bonds to finance its projects.

### **UNDERWRITING**

The Underwriters have jointly and severally agreed, subject to certain conditions, to purchase the 1981 Net Billed Bonds from the Supply System at an aggregate underwriting discount from the initial public offering prices set forth on the cover page of this Official Statement equal to 2.997% of the principal amount of the 1981 Net Billed Bonds and to make a bona fide public offering of the 1981 Net Billed Bonds at not in excess of such public offering prices, plus accrued interest. The Underwriters will be obligated to purchase all such 1981 Net Billed Bonds if any such 1981 Net Billed Bonds are purchased.

The 1981 Net Billed Bonds may be offered and sold to certain dealers (including Underwriters and other dealers depositing such Bonds into investment trusts) at prices lower than such public offering prices, and such public offering prices may be changed, from time to time, by the Underwriters.

### **CERTAIN LEGAL MATTERS**

Wood & Dawson, New York, New York, Bond Counsel to the Supply System, and Houghton Cluck Coughlin & Riley, Seattle, Washington, Special Counsel to the Supply System, will render opinions with respect to the validity of the 1981 Net Billed Bonds and the Net Billing Agreements and the Project Agreements for the Net Billed Projects, including each such agreement as amended by Amendatory Agreement No. 1 thereto for Project No. 1, and the Project No. 1 Exchange Agreements, each as amended by Amendatory Agreement No. 1, and the Project No. 3 Ownership Agreement. Copies of the opinions they propose to render are appended hereto as Exhibit F. Copies of such opinions will be furnished to the original purchasers without charge. Certain legal matters will be passed upon by General Counsel to the Bonneville Power Administration. Certain legal matters will be passed upon for the Underwriters by Mudge Rose Guthrie & Alexander, New York, New York, Counsel to the Underwriters.

### **TAX EXEMPTION**

In the opinion of the above named Bond Counsel and Special Counsel, the interest on the 1981 Net Billed Bonds will be exempt from taxation by the United States of America under existing laws, regulations and rulings issued by the Internal Revenue Service.

A copy of the proposed opinion of Wood & Dawson with respect to the exemption from Federal income taxation of amounts attributable to original issue discount on the 1981 Net Billed Bonds maturing on July 1, 2003 is also contained in Exhibit F.

### **RATINGS**

As noted on the cover page of this Official Statement, Moody's Investors Service, Inc. and Standard & Poor's Corporation have given the 1981 Net Billed Bonds ratings of Aaa and AAA, respectively. Ratings

were applied for by the Supply System and certain information was supplied by the Supply System to such rating agencies to be considered in evaluating the 1981 Net Billed Bonds. Such ratings reflect only the respective views of such rating agencies, and an explanation of the significance of such ratings may be obtained only from the rating agency furnishing the same. There is no assurance that either or both of such ratings will be retained for any given period of time or that the same will not be revised downward or withdrawn entirely by the rating agency furnishing the same if, in their judgment, circumstances so warrant. Any such downward revision or withdrawal of such ratings, or either of them, may have an adverse effect on the market price of the 1981 Net Billed Bonds.

#### MISCELLANEOUS

The references, excerpts and summaries contained herein of the Net Billed Resolutions, Net Billing Agreements and the Project Agreements for the Net Billed Projects, including each such agreement as amended by Amendatory Agreement No. 1 thereto for Project No. 1, the Project No. 1 Exchange Agreement, each as amended by Amendatory Agreement No. 1 thereto for Project No. 1, the Project No. 3 Ownership Agreement for Project No. 3, and the Net Billed Resolutions, do not purport to be complete statements of the provisions of such documents and reference should be made in such documents for a full and complete statement of all matters relating to the 1981 Net Billed Bonds, the basic agreements securing the 1981 Net Billed Bonds and the rights and obligations of the holders thereof. Copies of the forms of the Net Billed Resolutions, Project No. 1 Exchange Agreements, Project No. 3 Ownership Agreement, Net Billing Agreements and Project Agreements for the Net Billed Projects, including copies of the forms of such agreements as amended for Project No. 1, are available upon request at the office of the Supply System in Richland, Washington.

The authorizations, agreements and covenants of the Supply System are set forth in the Net Billed Resolutions, and neither this Official Statement nor any advertisement of the 1981 Net Billed Bonds is to be construed as a contract with the holders of the 1981 Net Billed Bonds. Any statements made in this Official Statement involving matters of opinion or of estimates, whether or not expressly so identified, are intended merely as such and not as representations of fact.

Bonneville has furnished the information contained under the caption "Bonneville Power Administration" and the information pertaining to Bonneville under the caption "Power Supply in the Pacific Northwest" and in Exhibit H. The Consulting Engineer has furnished the balance of the information contained under the latter caption.

The delivery of this Official Statement has been duly authorized by the Supply System.

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

By /s/ STANTON H. CAIN  
*President*

By /s/ ROBERT L. FERGUSON  
*Managing Director*



# EXHIBIT A

## WASHINGTON PUBLIC POWER SUPPLY SYSTEM

Participants, Companies and Owners, their customers and gross revenues, and Shares of Project capability.

Participant	1980 Statistics		Share of Project No. 1 Capability(1)		Share of Project No. 2 Capability	Share of Project No. 3 Capability(2)
	Customers	Revenues	1986-1996	Thereafter		
City of Albion, Idaho .....	162	\$ 15,101	0.003	0.004	0.016	0.002
City of Bandon, Oregon .....	2,221	909,359	0.112	0.166	0.265	0.101
Public Utility District No. 1 of Benton County, Washington .....	30,360	17,922,712	3.353	4.965	5.350	3.006
Benton Rural Electric Association, Inc. ....	8,538	4,620,405	0.208	0.308	0.666	0.451
Big Bend Electric Cooperative, Inc. ....	5,756	5,425,685	0.121	0.179	1.510	0.262
Blachly-Lane County Cooperative Electric Association .....	2,683	1,960,421	0.158	0.234	0.272	0.344
City of Blaine, Washington .....	1,565	684,971	0.074	0.109	0.185	0.071
City of Bonners Ferry, Idaho .....	1,904	837,401	0.078	0.115	0.182	0.069
City of Burley, Idaho .....	4,415	1,802,586	0.121	0.179	0.694	0.108
City of Canby, Oregon .....	3,272	1,453,675	0.200	0.296	0.090	0.179
City of Cascade Locks, Oregon .....	770	445,301	0.050	0.074	0.054	0.045
Central Electric Cooperative, Inc. ....	11,524	7,112,489	0.312	0.462	0.586	0.576
City of Centralia, Washington .....	7,114	2,532,243	0.201	0.298	0.739	0.181
Central Lincoln Peoples Utility District .....	24,222	14,901,636	2.815	4.169	4.017	2.525
Public Utility District No. 1 of Chelan County, Washington .....	23,768	12,601,015	0.338	0.501	—	0.303
City of Cheney, Washington .....	3,045	1,396,283	0.345	0.511	0.539	0.309
Public Utility District No. 1 of Clallam County, Washington .....	17,614	7,713,120	0.781	1.157	1.769	0.701
Public Utility District No. 1 of Clark County, Washington .....	79,764	39,877,928	9.883	14.635	6.151	9.543
Clatskanie Peoples Utility District .....	3,371	5,616,488	0.414	0.613	1.996	0.371
Clearwater Power Company .....	7,201	3,393,468	0.185	0.274	0.775	0.401
Columbia Basin Electric Cooperative, Inc. ....	3,575	2,357,887	0.109	0.161	0.673	0.237
Columbia Power Cooperative Association, Inc. ..	1,403	691,424	0.028	0.042	0.143	0.062
Columbia Rural Electric Association, Inc. ....	2,446	2,315,222	0.419	0.621	0.761	0.909
Consolidated Irrigation District No. 19 .....	1	493,923	0.003	0.005	—	0.004
Consumers Power, Inc. ....	13,887	7,627,472	0.721	1.068	0.453	1.569
Coos-Curry Electric Cooperative, Inc. ....	11,171	6,032,965	0.252	0.373	1.634	0.547
City of Coulee Dam, Washington .....	568	289,138	0.032	0.043	0.137	0.029
Public Utility District No. 1 of Cowlitz County, Washington .....	36,257	34,882,541	4.983	7.379	5.525	2.423
City of Declo, Idaho .....	107	44,986	0.018	0.026	0.019	0.016
Public Utility District No. 1 of Douglas County, Washington .....	10,174	7,073,426	0.030	0.044	—	0.034
Douglas Electric Cooperative, Inc. ....	7,352	3,348,687	0.223	0.331	0.365	0.484
City of Drain, Oregon .....	626	426,418	0.065	0.096	0.218	0.053
East End Mutual Electric Co., Ltd. ....	450	203,844	0.007	0.011	0.033	0.016
City of Ellensburg, Washington .....	4,992	2,319,373	0.527	0.780	1.028	0.472
City of Eugene, Oregon .....	60,932	40,817,662	0.041	0.061	—	—
Fall River Rural Electric Cooperative, Inc. ....	6,124	3,360,710	0.127	0.188	0.499	0.275
Farmers Electric Co., Ltd. ....	237	49,428	0.003	0.005	0.041	0.008
Public Utility District No. 1 of Ferry County, Washington .....	2,060	1,400,544	0.071	0.105	0.171	0.064
Flathead Electric Cooperative, Inc. ....	6,581	2,608,367	0.083	0.123	0.370	0.180
City of Forest Grove, Oregon .....	5,707	1,938,556	0.317	0.470	0.181	0.064
Public Utility District No. 1 of Franklin County, Washington .....	14,636	7,706,611	0.898	1.330	2.370	0.806
Public Utility District No. 2 of Grant County, Washington .....	26,736	25,763,617	0.328	0.486	—	0.294

(1) Shares vary slightly between 1982 and 1986.

(2) July 1, 1986 and thereafter.



# EXHIBIT A (Continued)

## WASHINGTON PUBLIC POWER SUPPLY SYSTEM

Participants, Companies and Owners, their customers and gross revenues, and Shares of Project capability.

Participant	1980 Statistics		Share of Project No. 1 Capability(1)		Share of Project No. 2 Capability	Share of Project No. 3 Capability(2)
	Customers	Revenues	1986-1996	Thereafter		
Public Utility District No. 1 of Grays Harbor County, Washington .....	33,824	\$ 21,781,617	1.862	2.758	3.075	1.670
Harney Electric Cooperative, Inc. ....	2,509	2,702,373	0.071	0.105	0.719	0.155
City of Heyburn, Idaho .....	1,056	835,480	0.113	0.167	0.504	0.101
Hood River Electric Cooperative .....	2,666	1,447,820	0.151	0.224	0.502	0.328
Idaho County Light & Power Cooperative Association, Inc. ....	2,230	868,824	0.032	0.047	0.186	0.069
City of Idaho Falls, Idaho .....	16,952	7,462,159	0.613	0.908	2.376	0.551
Inland Power & Light Company .....	19,259	10,100,956	0.581	0.860	1.222	1.259
Public Utility District No. 1 of Kittitas County, Washington .....	1,599	857,703	0.161	0.238	0.220	0.144
Public Utility District No. 1 of Klickitat County, Washington .....	7,637	4,205,306	0.349	0.517	1.009	0.314
Kootenai Electric Cooperative, Inc. ....	7,451	3,198,107	0.143	0.212	0.391	0.310
Lane Electric Cooperative, Inc. ....	9,753	4,322,408	0.363	0.537	1.452	0.786
Public Utility District No. 1 of Lewis County, Washington .....	19,541	9,503,600	0.862	1.276	2.274	0.772
Lincoln Electric Cooperative, Inc. (Montana) ...	2,068	1,271,819	0.059	0.087	0.255	0.127
Lincoln Electric Cooperative, Inc. (Washington)	1,856	1,897,597	0.038	0.056	—	0.082
Lost River Electric Cooperative, Inc. ....	1,984	1,256,186	0.038	0.056	0.202	0.083
Lower Valley Power & Light, Inc. ....	10,746	7,081,745	0.180	0.266	0.820	0.390
Public Utility District No. 1 of Mason County, Washington .....	3,456	1,213,687	0.126	0.186	0.231	0.113
Public Utility District No. 3 of Mason County, Washington .....	17,019	7,584,323	0.987	1.462	1.446	0.885
Town of McCleary, Washington .....	719	473,964	0.047	0.069	0.234	0.041
City of McMinnville, Oregon .....	7,701	4,599,731	0.608	0.900	1.227	0.383
Midstate Electric Cooperative, Inc. ....	8,456	3,687,341	0.227	0.336	0.488	0.493
City of Milton-Freewater, Oregon .....	3,951	1,132,211	0.161	0.238	0.583	0.001
City of Minidoka, Idaho .....	55	12,612	0.001	0.001	0.005	0.001
Missoula Electric Cooperative, Inc. ....	6,519	2,809,995	0.113	0.168	0.294	0.246
City of Moenmouth, Oregon .....	2,447	911,978	0.458	0.679	0.236	0.412
Nespeet Valley Electric Cooperative, Inc. ....	1,279	635,100	0.040	0.059	0.149	0.086
Northern Lights, Inc. ....	8,648	4,285,301	0.158	0.234	0.455	0.342
Northern Wasco County Peoples Utility District ..	8,375	4,256,559	0.166	0.246	0.051	0.149
Okanogan County Electric Cooperative, Inc. ....	1,455	467,293	0.026	0.038	0.190	0.055
Public Utility District No. 1 of Okanogan County, Washington .....	15,639	6,847,954	0.174	0.257	1.042	0.100
Orcas Power and Light Company .....	5,635	2,615,962	0.237	0.351	0.725	0.513
Public Utility District No. 2 of Pacific County, Washington .....	13,442	4,749,604	0.679	1.006	1.503	0.609
Public Utility District No. 1 of Pend Oreille County, Washington .....	3,357	1,690,934	0.037	0.055	—	0.033
City of Port Angeles, Washington .....	8,354	6,727,760	0.449	0.665	2.416	0.403
Prairie Power Cooperative, Inc. ....	523	321,440	0.005	0.007	0.019	0.011
Raft River Rural Electric Cooperative, Inc. ....	2,279	2,912,940	0.151	0.224	0.853	0.328
Ravalli County Electric Cooperative, Inc. ....	3,802	1,646,192	0.132	0.195	0.301	0.286
City of Richland, Washington .....	13,950	9,196,883	1.230	1.821	2.761	1.103
Riverside Electric Company, Ltd. ....	255	131,112	0.005	0.007	0.020	0.011
City of Rupert, Idaho .....	2,492	1,250,995	0.083	0.123	0.348	0.074
Rural Electric Company .....	2,438	1,172,979	0.140	0.208	0.262	0.305

(1) Shares vary slightly between 1982 and 1986.

(2) July 1, 1986 and thereafter.

# EXHIBIT A (Continued)

## WASHINGTON PUBLIC POWER SUPPLY SYSTEM

Participants, Companies and Owners, their customers and gross revenues, and Shares of Project capability.

Participant	1980 Statistics		Share of Project No. 1 Capability(1)		Share of Project No. 2 Capability	Share of Project No. 3 Capability(2)
	Customers	Revenues	1986-1996	Thereafter		
Salem Electric .....	11,814	\$ 4,955,785	0.447	0.662	0.453	0.969
Salmon River Electric Cooperative, Inc. ....	1,699	1,011,120	0.031	0.046	0.170	0.068
City of Seattle, Washington .....	288,305	115,460,970	5.811	8.605	7.193	5.043
Public Utility District No. 1 of Skamania County, Washington .....	4,093	2,326,722	0.217	0.321	0.547	0.195
Public Utility District No. 1 of Snohomish County, Washington .....	142,751	78,669,940	13.225	19.584	15.363	13.532
South Side Electric Lines, Inc. ....	661	449,198	0.022	0.032	0.073	0.047
City of Springfield, Oregon .....	20,139	11,592,078	0.186	0.275	0.363	0.167
City of Sumas, Washington .....	378	160,944	0.014	0.021	0.048	0.013
Surprise Valley Electrification Corporation .....	3,952	2,282,440	0.033	0.049	0.323	0.071
City of Tacoma, Washington .....	103,482	79,318,841	4.032	5.971	—	4.062
Tanner Electric .....	1,304	733,408	0.034	0.050	0.122	0.073
Tillamook Peoples Utility District .....	15,614	6,679,086	0.650	0.963	1.729	0.583
Umatilla Electric Cooperative Association .....	8,192	10,053,937	0.673	0.997	0.036	1.475
Unity Light and Power Company .....	1,631	805,984	0.076	0.112	0.204	0.165
Vera Irrigation District No. 15 .....	5,085	2,095,210	0.313	0.464	0.701	0.281
Vigilante Electric Cooperative, Inc. ....	4,508	2,145,918	0.028	0.042	0.294	0.062
Public Utility District No. 1 of Wahkiakum County, Washington .....	1,754	870,819	0.155	0.229	0.328	0.139
Wasco Electric Cooperative, Inc. ....	3,307	1,983,296	0.078	0.116	0.342	0.171
Wells Rural Electric Company .....	2,482	1,771,728	0.069	0.102	—	0.150
West Oregon Electric Cooperative, Inc. ....	3,341	1,910,458	0.082	0.121	0.182	0.176
Public Utility District No. 1 of Whatcom County, Washington .....	1	962,815	0.261	0.387	—	0.235
TOTAL PARTICIPANTS (104) .....	1,363,161	\$ 759,345,085	67.530	100.000	100.000	70.000
<b>Company or Owner</b>						
The Montana Power Company .....	224,482	193,276,003	6.494	0.000	—	—
Pacific Power & Light Company .....	690,350	589,191,019	6.494	0.000	—	10.000
Portland General Electric Company .....	484,127	490,236,876	6.494	0.000	—	10.000
Puget Sound Power & Light Company .....	534,086	358,321,326	6.494	0.000	—	5.000
The Washington Water Power Company .....	223,538	152,955,157	6.494	0.000	—	5.000
TOTAL COMPANIES .....	2,156,583	\$1,783,980,381	32.470	0.000	—	30.000
TOTAL .....	3,519,744	\$2,543,325,466	100.000	100.000	—	100.000

(1) Shares vary slightly between 1982 and 1986.

(2) July 1, 1986 and thereafter.

[illegible]

**EXHIBIT B**

**R. W. BECK AND ASSOCIATES**

ENGINEERS AND CONSULTANTS

PLANNING  
DESIGN  
RATES  
ENVIRONMENTAL  
ECONOMICS  
MANAGEMENT

TOWER BUILDING  
7TH AVENUE AT OLIVE WAY  
SEATTLE, WASHINGTON 98101  
206-422-3000

GENERAL OFFICE  
SEATTLE, WASHINGTON  
206-422-5000

FILE NO.

September 4, 1981

Board of Directors  
Washington Public Power Supply System  
Post Office Box 968  
Richland, Washington 99352

**Supplemental Letter to Consulting Engineer's Report  
Washington Public Power Supply System  
Projects Nos. 1, 2 and 3**

Gentlemen:

Our Report dated September 4, 1981 relating to the issuance of the Project No. 1 Series 1981D Bonds, the Project No. 2 Series 1981A Bonds and the Project No. 3 Series 1981B Bonds utilized assumed interest rates on said 1981 Net Billed Bonds and future bonds for the Net Billed Projects at 11.5% for bonds issued through June 30, 1982 and 10.0% for bonds issued thereafter. To the extent actual interest rates are higher than those assumed and are not offset by lower interest rates on subsequent financings, the costs paid by Bonneville for the Net Billed Projects will be higher.

We are of the opinion that the higher actual interest costs of the 1981 Net Billed Bonds are not of a magnitude that would cause a material change in the assumed wholesale power rates to Bonneville's preference customers, and will not adversely affect the conclusions stated in our Report.

Respectfully submitted,

**R. W. BECK AND ASSOCIATES**

# R. W. BECK AND ASSOCIATES

ENGINEERS AND CONSULTANTS

PLANNING  
DESIGN  
RATES  
ENVIRONMENTAL  
ECONOMICS  
MANAGEMENT

TOWER BUILDING  
7TH AVENUE AT OLIVE WAY  
SEATTLE, WASHINGTON 98101  
206-622-5000

GENERAL OFFICE  
SEATTLE, WASHINGTON  
206-622-5000

FILE NO.

September 4, 1981

Board of Directors  
Washington Public Power Supply System  
Post Office Box 968  
Richland, Washington 99352

**Subject: Consulting Engineer's Report  
Washington Public Power Supply System  
Projects Nos. 1, 2 and 3**

Gentlemen:

Presented herewith is a summary of our analyses, investigations and studies with respect to the proposal by the Washington Public Power Supply System (the "Supply System") to issue \$315,000,000 aggregate principal amount of its Washington Public Power Supply System Nuclear Project No. 1 Revenue Bonds, Series 1981D (the "Project No. 1 1981 Bonds"), \$210,000,000 aggregate principal amount of its Washington Public Power Supply System Nuclear Project No. 2 Revenue Bonds, Series 1981A (the "Project No. 2 1981 Bonds") and \$225,000,000 aggregate principal amount of its Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds, Series 1981B (the "Project No. 3 1981 Bonds") (collectively, the "1981 Net Billed Bonds").

The Project No. 1 1981 Bonds are proposed to be issued pursuant to Resolution No. 769, as amended, and a supplemental resolution (the "Project No. 1 Resolution"), for the purpose of paying a portion of the cost of acquiring and constructing a nuclear-fueled electric generating plant with a net generating capability of approximately 1,250,000 kilowatts and related facilities known as Washington Public Power Supply System Nuclear Project No. 1 ("Project No. 1"). The Supply System has issued for the same purpose a total of \$1,455,000,000 of its Project No. 1 Revenue Bonds in ten series: Series 1975 through Series 1981C. The Supply System's present financing program provides that additional Project No. 1 Bonds (which together with the Project No. 1 1981 Bonds and previously issued Project No. 1 Bonds are hereinafter referred to as the "Project No. 1 Bonds") will be issued at later dates and in amounts necessary to pay the cost of completing Project No. 1 and placing it into operation. After the issuance of the Project No. 1 1981 Bonds, and based upon the Supply System's 1982 Project No. 1 construction budget, the estimated amount of additional Project No. 1 Bonds expected to be issued in the future to finance Project No. 1 is \$1,420,000,000 for a total estimated financing requirement of \$3,190,000,000. The 1982 Project No. 1 construction budget does not reflect any possible impacts of a termination of Project No. 4 or Project No. 5. For a discussion see "The Supply System" under the caption "The Supply System and the Participants".

The Project No. 2 1981 Bonds are proposed to be issued pursuant to Resolution No. 640 and a supplemental resolution (the "Project No. 2 Resolution") for the purpose of paying a portion of the cost of acquiring and constructing a nuclear-fueled electric generating plant with a net generating capability of approximately 1,100,000 kilowatts and related facilities known as Washington Public Power Supply System Nuclear Project No. 2 ("Project No. 2"). The Supply System has issued for the same purpose a total of \$1,485,000,000 of its Project No. 2 Revenue Bonds in ten series: Series 1973 through

Series 1980. The Supply System's present financing program provides that additional Project No. 2 Bonds (which, together with the Project No. 2 1981 Bonds and previously issued Project No. 2 Bonds, are hereinafter referred to as the "Project No. 2 Bonds") will be issued at later dates and in amounts necessary to pay the cost of completing Project No. 2 and placing it into operation. After the issuance of the Project No. 2 1981 Bonds the estimated amount of additional Bonds expected to be issued in the future to finance Project No. 2 based on the Supply System's 1982 Project No. 2 construction budget, is \$811,000,000 for a total estimated financing requirement of \$2,506,000,000.

The Project No. 3 1981 Bonds are proposed to be issued pursuant to Resolution No. 775 and a supplemental resolution (the "Project No. 3 Resolution"), for the purpose of paying a portion of the Supply System's Ownership Share of the costs of acquiring and constructing a nuclear-fueled electric generating plant with generating capability of approximately 1,240,000 kilowatts and related facilities known as Washington Public Power Supply System Nuclear Project No. 3 ("Project No. 3"). The Supply System has issued for the same purpose a total of \$905,000,000 of its Project No. 3 Revenue Bonds in five series: Series 1975 through Series 1981A. The Supply System's present financing program provides that additional Project No. 3 Bonds (which together with the Project No. 3 1981 Bonds and previously issued Project No. 3 Bonds are hereinafter referred to as the "Project No. 3 Bonds") will be issued at later dates and in amounts necessary to pay the Supply System's share of the cost of completing Project No. 3 and placing it into operation. After the issuance of the Project No. 3 1981 Bonds, the estimated amount of additional Project No. 3 Bonds expected to be issued in the future to finance the Supply System's Ownership Share of Project No. 3, based on the Supply System's 1982 Project No. 3 construction budget, is \$1,328,000,000 for a total estimated financing requirement of \$2,458,000,000. The 1982 Project No. 3 construction budget does not reflect any possible impacts of a termination of Project No. 4 or Project No. 5. For a discussion see "The Supply System" under the caption "The Supply System and the Participants".

## **POWER SUPPLY IN THE PACIFIC NORTHWEST**

### **Historical Background**

Planning of power supply facilities in the Pacific Northwest (the states of Washington, Oregon, Idaho, and Montana west of the Continental Divide plus small adjacent portions of California, Montana, Nevada, Utah and Wyoming) has been undertaken with a high degree of cooperation for many years. The Northwest Power Pool, a voluntary organization of public, investor-owned and federal power suppliers, was established in 1942 to coordinate power operations in the Pacific Northwest and continues to assist in this function. The Pacific Northwest Utilities Conference Committee (the "PNUCC"), consisting of essentially all electric power generating interests in the region, was formed in the late 1940's to extend the functions established in the Northwest Power Pool into other areas including the advanced planning of power resources on a coordinated basis. The Public Power Council, representing over 100 publicly owned utilities and cooperatives, was formed in the late 1960's to coordinate the activities of publicly owned utilities in the further development of the region's electric power supply.

The Bonneville Power Administration ("Bonneville") was established by the Bonneville Project Act of 1937. Under the Bonneville Project Act and the Federal Columbia River Transmission System Act of 1974, Bonneville constructs and operates transmission facilities and markets power from 30 federal hydroelectric generating resources and from generating resources acquired from non-federal sources in the Pacific Northwest. Bonneville's transmission facilities, together with its generating resources, comprise the Federal Columbia River Power System (the "Federal System"). Bonneville sells electric power at wholesale to 146 utility, industrial and government customers in the Pacific Northwest including 116 public and cooperative utility customers, and sells any available surplus electric power to wholesale power purchasers within and outside the region. Bonneville is required by statute to establish rates sufficient to recover the costs of acquiring and transmitting electric power.

Until the late 1960's, nearly all the power supply in the Pacific Northwest was obtained from the hydroelectric resources of the region. By that time, most of the potential hydroelectric resources remaining to be developed were peaking resources with only limited base load energy generating capabilities. Since the electric energy loads in the region were continuing to increase, base load thermal generating resources were necessary to supply the region's increasing energy needs.

In 1968, a Ten-year Hydro Thermal Power Program was adopted which was to provide for the construction of hydro and thermal generating resources to meet the region's power requirements and to guide the region in its transition from a hydroelectric power supply base to a mixed base of hydro and thermal generating resources. This program provided for eight large thermal plants scheduled for commercial operation at various times through the early 1980's, including the Supply System's Projects Nos. 1 and 2 and the Supply System's Ownership Share of Project No. 3 (collectively, the "Net Billed Projects"). Under this program and its then existing statutory authority and in order to provide for additional power supply to its preference customers and industrial loads, Bonneville acquired the capability of certain publicly owned generating facilities by purchase under a "net billing" concept.

Early in the 1970's, it became apparent that the Ten-year Hydro Thermal Power Program would not provide adequate generating resources beyond the early 1980's. Consequently, as part of a regional cooperative power supply effort Bonneville's public and cooperative utility customers undertook to provide their own additional generating resources, such as the Supply System's Projects Nos. 4 and 5, without the acquisition of the capability thereof by Bonneville.

On December 5, 1980, federal legislation was enacted entitled the "Pacific Northwest Electric Power Planning and Conservation Act", Pub. L. 96-501 (the "Regional Power Act"). This legislation substantially changed the power supply program of the Pacific Northwest utilities, Bonneville and Bonneville's direct service industrial customers. Provisions of the Regional Power Act: (i) require Bonneville to offer to sell power to each requesting Pacific Northwest utility to meet its firm power loads in the region in excess of such utility's own committed resources; (ii) require Bonneville to offer to exchange power with Pacific Northwest utilities for residential and farming uses and to establish rates for such power that are the same as the rates paid by public bodies, cooperatives and federal agencies, and require such utilities to pass the cost benefits of any such exchanges through to these consumers; (iii) require Bonneville to offer to sell power to its existing direct service industrial customers under new long-term contracts; (iv) require Bonneville to meet its obligations to provide power through conservation to the extent that conservation is cost effective; (v) require Bonneville to meet such obligations to the extent that conservation measures are insufficient by acquisition of cost effective electric power first from renewable resources, then from generating resources utilizing waste heat or of high fuel conservation efficiency and then from other resources; (vi) authorize Bonneville to provide financial assistance for conservation measures and construction of renewable resources and to borrow from the Federal Treasury to obtain funds for such assistance; and (vii) establish a Pacific Northwest Electric Power and Conservation Planning Council composed of two representatives from each of the states of Washington, Oregon, Idaho and Montana, which Council shall prepare a regional electric power and conservation plan.

Bonneville must offer each requesting Pacific Northwest utility a net requirements power sales contract by September 5, 1981, and each utility will have one year from the date of such offer to accept. Under such contracts Bonneville will be required to meet each utility's firm power loads in excess of such utility's own committed resources. For a detailed discussion of the provisions of the Regional Power Act see "The Regional Power Act" under the caption "Bonneville Power Administration" in the Official Statement to which this report is attached (the "Official Statement").

#### **Regional Power Requirements and Resources**

In past years, a load and resource analysis for the utilities comprising the West Group of the Northwest Power Pool has been developed by the PNUCC. Because of the passage of the Regional Power Act, the PNUCC West Group Forecast was discontinued in 1981 and in its place PNUCC has published the Northwest Regional Forecast of Power Loads and Resources (the "Regional Forecast"). The Regional Forecast is a compilation of the forecasts submitted by, or for, each of the utilities in the region. The Northwest Regional Area energy load is approximately 10% larger than that of the West Group Area.

The 1981 Regional Forecast shows that a deficiency of estimated energy resources exists in all years and a deficiency of estimated peaking resources exists in ten of the eleven years included in the forecast. However, these deficiencies are smaller than the deficiencies shown in the 1980 West Group Area Forecast. The reduction of the deficiencies are due primarily to three factors: first, the inclusion,

by utilities, of additional conservation savings and end-use renewable resource potential; second, a one-time reduction by Bonneville in the load forecasts estimated by some of its customers; and third, an increase in the rate of addition of conventional resources in the later years. Resource planning in the region is based on a multi-year critical period for hydroelectric resources, which is the historical water year period that, when augmented with stored water, is the most critical with respect to system load requirements. During portions of most years substantial secondary energy, resulting from more favorable water conditions, is expected to be available.

The PNUCC load and resource analysis has historically provided the basis for long-range regional resource planning by the utilities. The data in the following table shows an average annual increase in peak requirements of 3.4% per year and an increase in energy requirements of 3.2% per year over the period 1982 through 1992. Other groups have undertaken studies of the projected electric utility loads in the region. Some of these studies indicate lower future requirements for power than those shown in the table above and some higher depending on the assumptions made in the study.

The Regional Power Act includes strong conservation elements. Although present load forecasts reflect some energy conservation efforts, a report prepared for the PNUCC by Hittman Associates Inc., a consulting firm, released in July 1981 states that growth in Pacific Northwest electric energy requirements will be substantially reduced as a result of conservation and customer-owned generation. The report indicates that the current Regional Forecast reflects about 2,990 average megawatts of conservation savings in fiscal year 1990 and that an additional 1,600 average megawatts of conservation savings are likely in 1990 as a result of conservation strategies which are cost effective at 50 mills per kilowatt-hour, in 1980 dollars, plus a 10% premium for conservation as provided for under the Regional Power Act.

The following table summarizes the estimated electric power requirements of the region, the estimated resources available to meet those requirements and the estimated surpluses or deficiencies that will exist during the period of the forecast as published in the 1981 Regional Forecast.

### REGIONAL LOADS AND RESOURCES

Year Ending June 30	ESTIMATED REQUIREMENTS(1)				ESTIMATED RESOURCES(2)					
	Public and Federal Agencies	Direct Service Industries	Investor Owned Utilities	Total Require- ments	Federal System	Public Agency Own Resources	Other Resources	Total Resources	Surplus or Deficit(3)	Percent Surplus or Deficit(3)
Peak Capability—Megawatts										
1982 .....	12,452	3,603	14,377	30,432	13,428	3,473	13,341	30,242	(190)	(0.6)
1983 .....	13,045	3,641	15,037	31,723	13,337	3,679	12,923	29,939	(1,784)	(5.6)
1984 .....	13,587	3,820	15,642	33,049	13,291	3,795	12,978	30,064	(2,985)	(9.0)
1985 .....	14,083	3,997	16,283	34,363	14,147	3,799	12,800	30,746	(3,617)	(10.5)
1986 .....	14,631	4,015	16,908	35,554	15,702	3,832	12,863	32,397	(3,157)	(8.9)
1987 .....	15,116	4,038	17,467	36,621	18,026	3,793	13,351	35,170	(1,451)	(4.0)
1988 .....	15,655	4,067	18,014	37,736	18,754	5,771	13,929	38,454	718	1.9
1989 .....	16,237	4,098	18,617	38,952	18,680	5,549	14,209	38,438	(514)	(1.3)
1990 .....	16,848	4,118	19,228	40,194	18,631	5,298	13,840	37,769	(2,425)	(6.0)
1991 .....	17,475	4,124	19,800	41,399	18,575	5,287	14,733	38,595	(2,804)	(6.8)
1992 .....	18,064	4,128	20,350	42,542	18,619	5,182	14,944	38,745	(3,797)	(8.9)
Energy Capability—Average Megawatts										
1982 .....	7,056	3,521	8,321	18,898	7,872	1,870	7,769	17,511	(1,387)	(7.3)
1983 .....	7,408	3,556	8,687	19,651	8,033	1,911	7,934	17,878	(1,773)	(9.0)
1984 .....	7,778	3,683	9,024	20,485	8,102	2,069	7,809	17,980	(2,505)	(12.2)
1985 .....	8,043	3,906	9,370	21,319	8,489	2,141	7,939	18,569	(2,750)	(12.9)
1986 .....	8,338	3,924	9,690	21,952	8,568	2,184	8,193	18,945	(3,007)	(13.7)
1987 .....	8,605	3,945	9,993	22,543	9,481	2,259	8,473	20,213	(2,330)	(10.3)
1988 .....	8,885	3,974	10,293	23,152	9,543	3,351	8,979	21,873	(1,279)	(5.5)
1989 .....	9,197	4,006	10,609	23,812	9,498	3,654	9,197	22,349	(1,463)	(6.1)
1990 .....	9,518	4,025	10,935	24,478	9,575	3,844	9,172	22,591	(1,887)	(7.7)
1991 .....	9,851	4,031	11,249	25,131	9,595	3,900	9,554	23,049	(2,082)	(8.3)
1992 .....	10,194	4,035	11,546	25,775	9,595	3,906	10,097	23,598	(2,177)	(8.4)

(Footnotes on following page)

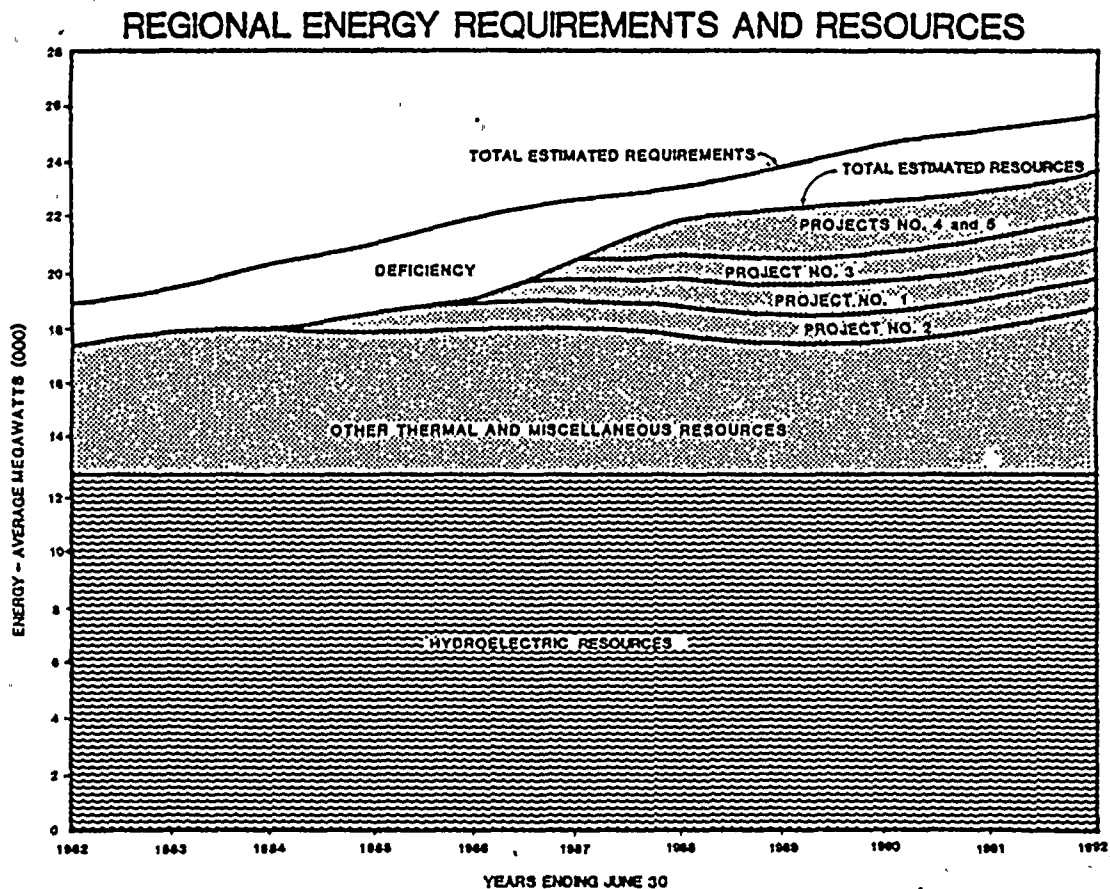


(1) Estimated requirements are by type of wholesale power user in the region. For a discussion of Bonneville's potential obligation to serve regional requirements under the Regional Power Act see "The Regional Power Act" under the caption "Bonneville Power Administration" in the Official Statement.

(2) After deducting reserves under PNUCC planning guidelines. Peak reserve requirements are based on 12% of the total area load for the first year, increasing at a rate of 1% per year up to 20%, and remaining at 20% thereafter. Reserves also include allowance for load growth reserves equal to one-half of the area load growth for utility-type loads during that year. Assumes critical water conditions. Substantial secondary energy is expected to be available under most stream flow conditions. All resources forecasted under these guidelines are licensed for construction except Puget Sound Power & Light Company's Skagit Nuclear Unit No. 1 and The Washington Water Power Company's Creston Coal Units Nos. 1, 2 and 3.

(3) After supplying all area interruptible loads (including Bonneville's industrial interruptible loads) which range from 1,002 to 1,249 megawatts on peak and 1,057 to 1,301 average megawatts of energy, not including associated line losses. Parentheses denote deficit values.

The following graph depicts the regional loads and resources shown in the above table. In order to show the region's resource mix and the extent of the hydroelectric base, the resources have been divided into hydroelectric resources and thermal and miscellaneous resources, with the Supply System's projects each shown separately.



The schedule of thermal generating plants planned or under construction as utilized in the previous table, is shown below.

<u>Principal Sponsor</u>	<u>Project</u>	<u>Location</u>	<u>Type</u>	<u>Rated Capacity (MW)</u>	<u>Probable Energy Date*</u>
<b>PROJECTS UNDER CONSTRUCTION</b>					
Idaho Power Company	Valmy No. 1	Winnemucca, NV	Coal	250	Oct. 1981
The Montana Power Company	Colstrip No. 3	Colstrip, MT	Coal	700	Jan. 1984
Washington Public Power Supply System	Project No. 2	Hanford, WA	Nuclear	1,100	Feb. 1984
Idaho Power Company	Valmy No. 2	Winnemucca, NV	Coal	250	Oct. 1984
The Montana Power Company	Colstrip No. 4	Colstrip, MT	Coal	700	Jul. 1985
Washington Public Power Supply System	Project No. 1	Hanford, WA	Nuclear	1,250	Jun. 1986
Washington Public Power Supply System	Project No. 3	Satsop, WA	Nuclear	1,240	Dec. 1986
Washington Public Power Supply System	Project No. 4	Hanford, WA	Nuclear	1,250	Jun. 1987
Washington Public Power Supply System	Project No. 5	Satsop, WA	Nuclear	1,240	Dec. 1987
<b>PROJECTS PLANNED BUT NOT LICENSED</b>					
The Washington Water Power Company	Creston No. 1	Creston, WA	Coal	500	Jul. 1987
The Washington Water Power Company	Creston No. 2	Creston, WA	Coal	500	Jan. 1989
Puget Sound Power & Light Company	Skagit No. 1	Hanford, WA	Nuclear	1,288	Jan. 1991
The Washington Water Power Company	Creston No. 3	Creston, WA	Coal	500	Jan. 1992

(\*) The probable energy dates are the later of the scheduled operation dates established by the plant sponsor or the dates determined by application of Milestones. Milestone dates are determined from a standardized schedule reflecting anticipated average planning and construction times.

#### Regional Comparison of Energy Costs

The Pacific Northwest has consistently had low rates for electric service in comparison with most other regions of the country. A comparison of residential rates for representative utilities, both public and investor-owned, in several regions has been made to show this relationship. The rates shown in the following table are averages based on a United States Department of Energy ("DOE") report. The use of other schedules applicable to particular customers or the choice of different representative utilities will yield different results. Average residential usage of electricity in the Pacific Northwest of approximately 16,000 kilowatt-hours annually is nearly twice the national average of approximately 9,000 kilowatt-hours annually, due primarily to the more extensive use of the electric space heating. In order to show the general effect of different levels of usage, average rates at usages of 6,000 kilowatt-hours per year and 12,000 kilowatt-hours per year have been calculated for each region as shown.

<u>Region</u>	<u>Average Annual Residential Bills at:*</u>			
	<u>6,000 kWh/yr.</u>		<u>12,000 kWh/yr.</u>	
	<u>Cost</u>	<u>Mills/kWh</u>	<u>Cost</u>	<u>Mills/kWh</u>
Pacific Northwest .....	\$132	22	\$233	19
Pacific Southwest .....	\$327	55	\$667	56
Northeast/New England .....	\$460	77	\$795	66
Southeast .....	\$325	54	\$607	51
Midwest .....	\$323	54	\$504	42
South .....	\$289	48	\$521	43

\* Source: "Energy Data Report: Typical Electric Bills—January 1, 1980"; U.S. Department of Energy, December 1980.

## THE SUPPLY SYSTEM AND THE PARTICIPANTS

### The Supply System

The Supply System is a municipal corporation and a joint operating agency organized under the laws of the State of Washington and has, as members, 19 public utility districts and 4 municipalities all located within the State of Washington. The Supply System has the authority to acquire, construct and operate plants, works and facilities for the generation and transmission of electric power and energy, as well as to make surveys, plans, investigations or studies in connection therewith.

The Supply System is operating a 27,500 kilowatt hydroelectric project and a 860,000 kilowatt steam-electric generating project and has under construction five large nuclear electric generating projects including the Net Billed Projects.

The following table shows the status, schedule and estimated financing required based on the 1982 project construction budgets for the Supply System's projects:

<u>Project</u>	<u>Location</u>	<u>Commercial Operation Date(1)</u>	<u>Size (MW)</u>	<u>Bonds Issued to Date (\$000)</u>	<u>Estimated Additional Financing Required (\$000)</u>	<u>Total Financing Required (\$000)</u>
Packwood .....	Packwood	June 1964	27.5	\$ 13,700	\$ —	\$ 13,700
Hanford(2) .....	Hanford	Nov. 1966	860.0	122,000	—	122,000
Project No. 1 .....	Hanford	June 1986(3)	1,250.0	1,455,000	1,735,000(4)	3,190,000(5)
Project No. 2 .....	Hanford	Feb. 1984(3)	1,100.0	1,485,000	1,021,000(4)	2,506,000(5)
Project No. 3(6) .....	Satsop	Dec. 1986(3)	868.0	905,000	1,553,000(4)	2,458,000(5)
Project No. 4 .....	Hanford	June 1987(3)	1,250.0	2,250,000	8,929,000	11,179,000(5)
Project No. 5(7) .....	Satsop	Dec. 1987(3)	1,116.0			
Totals .....			6,471.5	\$6,230,700	\$13,238,000	\$19,468,700

- (1) Hanford and Packwood Projects actual, other projects estimated.
- (2) Turbine-generated facility using steam from a nuclear reactor owned and operated by the United States Department of Energy.
- (3) Under construction.
- (4) Includes this issue.
- (5) Based upon the Supply System's 1982 project construction budgets.
- (6) Supply System's 70% ownership share. Four investor-owned utilities own 30%.
- (7) Supply System's 90% ownership share. Pacific Power & Light Company owns 10%.

The 1982 project construction budgets for each of the five projects were prepared in early 1981 and adopted by the Supply System's Board of Directors in July 1981. The 1982 project construction budgets reflect several factors that have affected the projects' schedules and costs. The schedules were extended as a result of: (a) labor stoppages at the Hanford site during the period between June and November 1980 which are estimated to have caused delays of eight months at Projects Nos. 1, 2 and 4; (b) quality assurance problems at Project No. 2 which affected construction progress; (c) a

crane accident and labor stoppage, which are estimated to have caused delays of three months at Projects Nos. 3 and 5; and (d) increased commodity quantities, manhours and construction durations resulting from a comprehensive evaluation of quantities of materials to be installed and reevaluation of achievable production rates. Other factors, including higher assumed inflation rates, interest rates and financing costs and increased requirements for materials and manhours, have increased the estimated costs of all the projects.

On June 18, 1981, a slowdown of construction work was implemented by the Supply System at the Supply System's Nuclear Projects Nos. 4 and 5 ("Projects Nos. 4 and 5"). The Supply System does not currently have sufficient funds to pay for invoices being received and for site work being performed, and the Supply System must depend upon additional funds becoming available. In order to provide such additional funds, the Supply System is proceeding with the preparation of a bond issue for Projects Nos. 4 and 5 for sale in October. There can be no assurance that such bonds can be sold, and if such bonds are not sold, there is a likelihood that both Projects Nos. 4 and 5 will be terminated. Such termination would result in increased costs and possible schedule delays on the Net Billed Projects. For a further discussion see "Status of Projects Nos. 4 and 5 and Possible Effect on Net Billed Projects" under the caption "Recent Developments" in the Official Statement.

The Supply System's Packwood Lake Hydroelectric Project, its Hanford Project, Project No. 1, Project No. 2 and its Ownership Share of Project No. 3 are each financed and operated or will be financed and operated as a separate utility system with the revenues of each system pledged solely to the obligations of such system. The Supply System is financing and will operate Project No. 4 and its 90% ownership share of Project No. 5 together as a single separate system.

#### The Participants

*Project No. 1.* The Supply System has entered into an agreement (the "Project No. 1 Project Agreement") with Bonneville which provides for the acquisition, construction, operation and ownership of Project No. 1 by the Supply System. The Supply System has also entered into agreements (the "Exchange Agreements") with Bonneville and five investor-owned utilities which are participants in the Hanford Project (the "Companies"), for the sale and disposition of a portion of the capability of Project No. 1 from July 1, 1980 through June 30, 1996, and agreements (the "Project No. 1 Net Billing Agreements") with Bonneville and 104 statutory preference customers of Bonneville (the "Project No. 1 Participants") for the sale and disposition of the remainder of Project No. 1 capability. Table I attached hereto presents certain financial and statistical data for Project No. 1 Participants and the Companies summarized from reports prepared by them.

The Project No. 1 Net Billing Agreements provide that each Project No. 1 Participant purchase its Participant's Share of Project capability and pay to the Supply System its share of the total annual costs of Project No. 1 less the amounts paid by the Companies under the Exchange Agreements or received from other sources. Under the Project No. 1 Net Billing Agreements each Participant's Share so purchased is, in turn, sold to Bonneville. Bonneville will pay the Project No. 1 Participants in the form of credits on their power bills from Bonneville, or otherwise, amounts equal to the Project No. 1 Participants' obligations to the Supply System for Project No. 1 capability. The Exchange Agreements provide that each Company purchase a 6.494% share of Project No. 1 capability during the period July 1, 1980 through June 30, 1996 and exchange with Bonneville the capability of Project No. 1 so purchased for 80,000 kilowatts of capacity and 68,000 average kilowatts of energy (595,680,000 kilowatt-hours annually) from Bonneville. During the period July 1, 1980 through June 30, 1990, the Companies will pay the Supply System under the Exchange Agreements amounts equal to the amounts the Companies would have paid to Bonneville, under Bonneville wholesale power rates then in effect, for the amount of capacity and energy received by the Companies under the Exchange Agreements. During the period July 1, 1990 through June 30, 1996 the Companies will pay to the Supply System a portion of Project No. 1's annual costs, as defined in the Exchange Agreements, equal to the percentages of Project No. 1 capability made available to the Companies. The Exchange Agreements terminate on June 30,

1996, after which all of Project No. 1's capability is sold pursuant to the Project No. 1 Net Billing Agreements and the Project No. 1 Participants agree to pay all of Project No. 1's annual costs and receive credits for those costs on their power bills from Bonneville.

*Project No. 2.* The Supply System has entered into an agreement (the "Project No. 2 Project Agreement") with Bonneville which provides for the acquisition, construction, operation and ownership of Project No. 2 by the Supply System. The Supply System has also entered into agreements (the "Project No. 2 Net Billing Agreements") with Bonneville and 94 statutory preference customers of Bonneville (the "Project No. 2 Participants") for the sale and disposition of Project No. 2 capability. Table II attached hereto presents certain financial and statistical data for Project No. 2 Participants summarized from reports prepared by them.

The Project No. 2 Net Billing Agreements provide that each Project No. 2 Participant purchase its Participant's Share of Project capability and pay to the Supply System its share of the total annual costs of Project No. 2. Under the Project No. 2 Net Billing Agreements each Project No. 2 Participant's Share so purchased is, in turn, sold to Bonneville. Bonneville is paying the Participants in the form of credits on their power bills from Bonneville, or otherwise, amounts equal to the Project No. 2 Participants' obligations to the Supply System for Project No. 2 capability.

*Project No. 3.* The Supply System has entered into an agreement (the "Project No. 3 Ownership Agreement") with Pacific Power & Light Company, Portland General Electric Company, Puget Sound Power & Light Company and The Washington Water Power Company (the "Project No. 3 Owners") which provides for the acquisition, construction, operation and ownership, as tenants in common, of Project No. 3. The Supply System's Ownership Share of Project No. 3 capability has been sold to 103 statutory preference customers of Bonneville (the "Project No. 3 Participants"). Under the Project No. 3 Ownership Agreement each party will be responsible for providing for its ownership share of the costs of construction and operation of Project No. 3 and will be entitled to its ownership share of Project No. 3's capability. Table III attached presents certain financial and statistical data for Project No. 3 Participants and the Project No. 3 Owners summarized from reports prepared by them. The parties to the Project No. 3 Ownership Agreement have designated the Supply System to act as their agent to construct, operate and maintain Project No. 3. Under the Project No. 3 Ownership Agreement the parties have ownership shares as follows:

	<u>Percentage Ownership Share</u>
Washington Public Power Supply System .....	70%
Pacific Power & Light Company .....	10%
Portland General Electric Company .....	10%
Puget Sound Power & Light Company .....	5%
The Washington Water Power Company .....	5%

The Project No. 3 Net Billing Agreements provide that each Project No. 3 Participant pay the Supply System its share of the total annual costs the Supply System incurs for its Ownership Share of Project No. 3. The Project No. 3 Participants have, in turn, assigned their shares of Project No. 3 capability to Bonneville. Bonneville pays each Project No. 3 Participant, in the form of credits on its power bills from Bonneville, or otherwise, amounts equal to the Project No. 3 Participant's obligations to the Supply System for Project No. 3 capability.

The Supply System and Bonneville have entered into a Project No. 3 Project Agreement which, among other things, provides standards for the design, construction and operation of Project No. 3 by the Supply System.

Summaries of the Project No. 3 Ownership Agreement, the Net Billing Agreements and the Project Agreements for each of the Net Billed Projects are included in the Official Statement.

The percentage shares of project capability purchased by each category of participant (districts, municipalities and cooperatives), Companies and Project No. 3 Owners are shown in the following table:

	<u>Project No. 1</u>		<u>Project No. 2</u>	<u>Project No. 3</u>
	<u>1980 to 1996</u>	<u>1996 and Thereafter</u>		<u>After July 1, 1986</u>
Districts .....	44.030%	64.869%	56.868%	39.828%
Municipalities .....	16.080	24.145	22.639	14.059
Cooperatives .....	<u>7.420</u>	<u>10.986</u>	<u>20.493</u>	<u>16.113</u>
Subtotal .....	67.530%	100.000%	100.000%	70.000%
Companies .....	32.470	0	—	—
Project No. 3 Owners ..	<u>—</u>	<u>—</u>	<u>—</u>	<u>30.000</u>
Total .....	100.000%	100.000%	100.000%	100.000%

Exhibit A to the Official Statement lists each Participant and each Company or Owner with their respective 1980 statistics on customers and revenues and their shares of each of the Net Billed Projects.

## PROJECT NO. 1

### Description

Project No. 1 is located about 140 miles southeast of Seattle, Washington, on the Hanford Reservation of DOE near the site of Project No. 2. The Supply System is also constructing its Project No. 4 on the same site. Project No. 4 is being designed and constructed as a twin to Project No. 1 and will share some common facilities with Project No. 1.

Project No. 1 will include a nuclear steam supply system manufactured by the Babcock and Wilcox Company employing a pressurized water reactor and associated facilities. Project No. 1 is expected to have a net electrical output of approximately 1,250,000 kilowatts. The nuclear steam supply system will deliver superheated steam to the turbine generator system which is rated at 1,413,000 kVA. Cooling for the turbine condenser will be provided by means of mechanical draft cooling towers. Approximately 1.5 miles of 500 kV and 2.0 miles of 230 kV transmission line is planned for construction by Bonneville to interconnect Project No. 1 with the Federal System.

### Permits and Licenses

On August 8, 1975, the State of Washington entered into a site certification agreement approving the Project No. 1 site and issued a National Pollutant Discharge Elimination System permit. On August 1, 1975, the United States Nuclear Regulatory Commission ("NRC") issued a limited work authorization under which certain preliminary construction work was begun. On December 23, 1975, the Supply System received a construction permit from the NRC under which construction of Project No. 1 is proceeding. This permit expires January 1, 1982. A request for extension has been filed with the NRC and, based on prior practice of the NRC, it is expected that the extension will be granted. In due course, an application for an operating license will be filed with the NRC.

### **Project No. 1 Nuclear Fuel**

The Supply System has contracted with Kerr McGee Corporation ("Kerr McGee") for uranium hexafluoride for the initial core. Deliveries under the Kerr McGee Contract have been completed and uranium for the initial core fuel loading has been converted and enriched. Remaining requirements for the initial core and for approximately four years additional operation will be provided by Rio Algom Ltd. and Western Nuclear, Inc. Additional uranium concentrates are under contract from Gardinier, Inc. and Gardinier Big River, Inc. ("Gardinier"). Production of uranium concentrates as a by-product by Gardinier depends upon its operation of its fertilizer facilities. Such companies have constructed the facilities necessary to produce uranium concentrates and have begun deliveries to the Supply System. The Supply System has secured enrichment of the uranium hexafluoride for a period of 30 years for Project No. 1 through a fixed commitment contract with the DOE. The Supply System has contracted with the Babcock and Wilcox Company for initial core fuel fabrication services.

Recently, Project No. 1 acquired from Project Nos. 4 and 5, approximately 2.5 million pounds of uranium concentrates and a substantial quantity of enrichment services. These uranium concentrates are sufficient for operation of the plant through the year 2000. The enrichment services can substitute for services that would have been ordered for delivery in the years 1989 to 1991.

At the present time, no operating facilities for the reprocessing of spent fuel are available and no facilities are expected to be available in the near future. The President of the United States has recently released a draft policy statement calling for, among other things, the lifting of the ban on reprocessing spent nuclear fuel and the development of solutions to the problems of radioactive waste disposal. The effects of these policies cannot be predicted at this time. In the absence of these facilities, the Supply System is providing on site spent fuel storage capacity for Project No. 1 sufficient to accommodate all spent fuel discharges until about the year 2000. It is expected that by then an appropriate program will have been implemented to accept spent fuel for placement in a suitable repository.

### **Project No. 1 Construction Program**

The Supply System has employed Bechtel Power Corporation to provide primary construction management services for Project No. 1. These construction management services have replaced those of United Engineers & Constructors Inc. who formerly provided both construction management and engineering services. The Supply System continues to retain United Engineers & Constructors Inc. to provide engineering services and certain construction management services for Project No. 1. Construction was reported by the Supply System to be approximately 41% complete as of July 1, 1981. The initial fuel loading is currently scheduled by the Supply System for August 1985 and commercial operation for June 1986. As of July 1, 1981 equipment and construction contracts totaling \$905,342,865 had been let.

### **Estimated Project No. 1 Financing Required**

The Supply System estimates that the proceeds from the Project No. 1 1981 Bonds together with monies currently available and investment income thereon will be sufficient to meet cash flow requirements of Project No. 1 until April 1982 prior to which time it is planned to issue additional Project No. 1 Bonds. Construction cost estimates are based on a scheduled commercial operation date of June 1986.

Based on the Supply System's 1982 Project No. 1 construction budget, the estimated financing requirements for Project No. 1 are shown in the following table:

**Estimated Project No. 1 Financing Required**

Equipment and Material Contracts(1) .....	\$ 336,188,000
Construction Contracts(1) .....	1,472,511,000
Construction Management(2) .....	192,636,000
Architect-Engineer(3) .....	<u>199,185,000</u>
Total Plant Construction Cost .....	\$2,200,520,000
Owner's Cost(4) .....	315,790,000
Contingency(5) .....	204,918,000
Nuclear Fuel(6) .....	<u>247,290,000</u>
Total Construction and Fuel Cost .....	\$2,968,518,000
Working Capital(7) .....	22,000,000
Reserve Account in the Bond Fund(8) .....	144,618,000
Bond Discount and Financing Costs(9) .....	88,119,000
Net Capitalized Interest During Construction(10) ...	<u>(33,255,000)</u>
Total Financing Required(11) .....	<u><u>\$3,190,000,000</u></u>

- (1) Estimated by Bechtel Power Corporation.
- (2) Estimated by Bechtel Power Corporation except for certain civil work on the containment superstructure which is under the management of United Engineers & Constructors Inc.
- (3) Estimated by United Engineers & Constructors Inc.
- (4) Estimated by the Supply System. Includes \$6,286,000 for DOE Settlement Costs (see "Hanford Project and its Relationship to Project No. 1" below).
- (5) Estimated by the Supply System. Includes an appropriate allowance for potential cost and schedule impacts which have a high probability of occurrence but are not presently considered as part of the defined scope of Project No. 1.
- (6) Estimated by the Supply System. Includes sales tax on the initial core at 5.0% and \$157,800,000 for reload fuel. Does not reflect the fuel acquisition from Projects Nos. 4 and 5 discussed under "Project No. 1 Nuclear Fuel" above.
- (7) Estimated by the Supply System. \$3,000,000 is required by the Project No. 1 Resolution.
- (8) An amount equal to the largest semi-annual interest payment on the Project No. 1 Bonds, as required by the Project No. 1 Resolution. Based on actual interest rates for outstanding Project No. 1 Bonds and assumed interest rates of 11.5% for additional Project No. 1 Bonds issued in fiscal year 1982 and 10.0% for additional Project No. 1 Bonds issued thereafter.
- (9) Includes actual discounts and financing costs for the outstanding Project No. 1 Bonds and estimates of 4.5% of the principal amount of additional Project No. 1 Bonds issued in fiscal year 1982 and 3.0% of the principal amount of additional Project No. 1 Bonds thereafter.

(Footnotes continued on following page)



- (10) Does not include interest after September 1, 1980 which is subject to payment pursuant to the Project No. 1 Net Billing Agreements and the Exchange Agreements. Computed as follows based on the same interest rates as in Footnote(8).

Gross Interest During Construction .....	\$ 232,810,000
Estimated Investment Income* .....	(266,065,000)
Net Interest During Construction ....	<u>\$( 33,255,000)</u>

\* Includes actual income through May 1981 and estimated future interest earnings on amounts in the Construction Fund at assumed rates of 12.0% for fiscal year 1982 and 10.5% thereafter.

- (11) Does not reflect any possible impacts which may result from the termination of Project No. 4 or Project No. 5.

Based on the assumptions used in developing the 1982 Project No. 1 construction budget, a summary of the total financing actually accomplished and contemplated for the future by the Supply System for Project No. 1 is shown in the following table:

Summary of Project No. 1 Financing  
(\$000)

	Outstanding Bonds	1981 Bonds	Additional Bonds	Total
Total Construction Costs .....	\$1,172,718	\$208,637	\$1,339,873	\$2,721,228
Nuclear Fuel .....	126,791	79,192	41,307	247,290
Bond Discount and Financing Costs	27,775	23,028	37,316	88,119
Interest During Construction .....	232,810	—	—	232,810
Reserve Requirements* .....	57,104	22,550	86,964	166,618
Gross Requirements .....	<u>\$1,617,198</u>	<u>\$333,407</u>	<u>\$1,505,460</u>	<u>\$3,456,065</u>
Less: Estimated Investment Income	<u>(162,198)</u>	<u>(18,407)</u>	<u>(85,460)</u>	<u>(266,065)</u>
Net Requirements .....	<u>\$1,455,000</u>	<u>\$315,000</u>	<u>\$1,420,000</u>	<u>\$3,190,000</u>

\*Includes deposits to the Reserve Account in the Bond Fund and to the Revenue Fund for working capital.

In addition to the foregoing amounts to be obtained through issuance of Project No. 1 Bonds, funds to make payments prior to the date of commercial operation as required by the Project No. 1 Resolution to the Interest and Principal Accounts in the Bond Fund and to fund the Reserve and Contingency Fund will be obtained, to the extent not otherwise provided for, from Bonneville under the Project No. 1 Net Billing Agreements and the Exchange Agreements. The following table shows the estimated amounts of such payments until the scheduled date of commercial operation of June 1986:

Payments Under the Exchange Agreements .....	\$ 300,727,000
Net Payments Under the Net Billing Agreements ...	<u>777,273,000</u>
Total Payments .....	<u>\$1,078,000,000</u>

#### Power Production

Based upon the estimated net generating capability of 1,250,000 kilowatts, Project No. 1 is expected to produce approximately 7.665 billion kilowatt-hours annually after initial operation tests and adjustments are made in the early years. Although there is not yet sufficient historical operating information available on large nuclear plants to establish an expected plant factor for Project No. 1, annual costs are based on an assumed 60% plant factor in the first year of commercial operation, 65% in the second year and 70% thereafter. During certain periods, surplus water will be available to generate additional power at existing hydroelectric projects, thereby permitting a reduction in the total amount of energy produced at thermal electric projects in the region. The extent of this reduction and its effect, if any, on the operation of Project No. 1 will depend upon conditions at the time of the availability of such hydroelectric energy and its relative cost compared to the cost of energy from Project No. 1.

### Estimated Project No. 1 Annual Costs and Payments

Based upon the financing and operating assumptions previously discussed and certain other estimated costs, the following table shows the estimated annual and unit cost of power from Project No. 1 and indicates the annual payments to the Supply System by the Companies and the Project No. 1 Participants in the years shown.

### Estimated Project No. 1 Annual Costs and Payments

(\$000)

	Fiscal Year Ending June 30,						
	1987	1988	1989	1990	1991	1992	1997
<b>PROJECT ANNUAL COST</b>							
Payment to Hanford Project(1) ....	\$ 3,112	\$ 3,126	\$ 2,994	\$ 4,349	\$ 1,752	\$ —	\$ —
<b>Other Project Costs:</b>							
Interest and Amortization(2) ....	\$307,130	\$307,130	\$307,130	\$307,130	\$307,130	\$307,130	\$307,130
Payment to Reserve and Contingency Fund(3) .....	30,713	30,713	30,713	30,713	30,713	32,384	47,582
Subtotal .....	\$337,843	\$337,843	\$337,843	\$337,843	\$337,843	\$339,514	\$354,712
Operation and Maintenance(4) ...	72,359	77,511	82,615	88,008	93,806	100,033	138,562
Decommissioning(4) .....	5,668	5,668	5,668	5,668	5,668	5,668	5,668
Fuel(5) .....	60,184	68,430	76,233	83,959	95,573	109,159	219,649
Taxes(6) .....	6,411	6,910	7,128	7,375	7,629	7,958	10,456
Subtotal .....	\$144,622	\$158,519	\$171,644	\$185,010	\$202,676	\$222,818	\$374,335
Surplus from Prior Year's Payment to Reserve and Contingency Fund(7) .....	(28,540)	(8,673)	(6,910)	(5,006)	(2,949)	(728)	0
Investment Income(8) .....	(23,246)	(23,211)	(23,222)	(23,135)	(23,094)	(23,118)	(21,544)
Total Other Project Costs ....	\$430,679	\$464,478	\$479,355	\$494,712	\$514,476	\$538,486	\$707,503
Total Project Annual Cost .....	\$433,791	\$467,604	\$482,349	\$499,061	\$516,228	\$538,486	\$707,503
Annual Energy Generation (GWH)(9) .	6,615	7,163	7,665	7,665	7,665	7,665	7,665
Annual Cost (mills/KWH)(10)(11) ..	65.6	65.3	62.9	65.1	67.3	70.3	92.3
<b>ANNUAL PAYMENTS TO THE SUPPLY SYSTEM:</b>							
Companies(12) .....	\$ 81,059	\$ 86,733	\$ 92,804	\$ 99,301	\$167,619	\$174,846	\$ —
Participants .....	352,732	380,871	389,545	399,760	348,609	363,640	707,503
Total Annual Payments .....	\$433,791	\$467,604	\$482,349	\$499,061	\$516,228	\$538,486	\$707,503

- (1) Based on the debt service on the outstanding Hanford Project Bonds and required Reserve and Contingency Fund payments less investment income and surplus Reserve and Contingency Fund payments. Payments to the Hanford Project are estimated to cease in fiscal year 1991.
- (2) Based on assumed level debt service on the Project No. 1 Bonds to 2017 at actual interest rates on outstanding Project No. 1 Bonds and interest rates ranging from 11.5% to 10.0% on the Project No. 1 1981 Bonds and on additional Project No. 1 Bonds.
- (3) The greater of 10% of annual debt service as required by the Project No. 1 Resolution or estimated renewals and replacements.
- (4) Estimated by the Supply System.
- (5) Estimated by the Supply System based on the expected cost of fuel.
- (6) Calculated at 1.5% of the wholesale value of the energy produced by Project No. 1.

(Footnotes continued on following page)

(7) Computed as follows (\$000):

	1987	1988	1989	1990	1991	1992	1997
Payment to Reserve and Contingency Fund, Prior Year	\$30,241	\$30,713	\$30,713	\$30,713	\$30,713	\$30,713	\$44,058
Renewals and Replacements, Prior Year*	(1,701)	(22,040)	(23,803)	(25,707)	(27,764)	(29,985)	(44,058)
Net Surplus**	\$28,540	\$ 8,673	\$ 6,910	\$ 5,006	\$ 2,949	\$ 728	\$ 0

\* Estimated by the Supply System. Some costs in the early years may be funded from Project No. 1 Bond proceeds.

\*\* The Net Surplus may be used for purposes other than reduction in power costs in accordance with the Project No. 1 Resolution.

- (8) Based on assumed investment rates on the balance of funds in the Reserve Account in the Bond Fund of 9.0% and the Reserve and Contingency Fund of 8.25%.
- (9) Based on an assumed 60% plant factor in the first year of operation, 65% in the second year and 70% thereafter.
- (10) Total Project Annual Cost divided by the Annual Energy Generation.
- (11) The cost of providing certain reserves and of providing interest and principal on the Project No. 1 Bonds between September 1, 1980 and the scheduled commercial operation date of June 1986 not paid by the Companies to the Supply System under the Exchange Agreements, is assumed to be paid as incurred from Bonneville revenues pursuant to the Project No. 1 Net Billing Agreements. In addition, Bonneville's total revenues will be reduced by an amount equal to payments by the Companies to the Supply System under the Exchange Agreements. For the purpose of demonstrating the total annual cost per kilowatt-hour of Project No. 1 if the above costs were capitalized, the cost to Bonneville of \$777,273,000, including the effect of reduced revenues, has been annualized over 35 years at an assumed interest rate of 10.85% per annum, which is an approximate average of Bonneville's current long term interest rates for borrowing from the Federal Treasury, as follows (\$000):

	1987	1988	1989	1990	1991	1992	1997
ADDITIONAL COSTS TO BONNEVILLE:							
Annualized Prepaid Project Cost ....	\$ 86,690	\$ 86,690	\$ 86,690	\$ 86,690	\$ 86,690	\$ 86,690	\$ 86,690
Total Annual Cost .....	\$520,481	\$554,294	\$569,039	\$585,751	\$602,918	\$625,176	\$794,193
Annual Cost (mills/KWH) ..	78.4	77.4	74.2	76.4	78.7	81.6	103.6

- (12) Companies' payments for the period July 1987 through June 1990 are based on Bonneville's estimate of its wholesale power rate to its preference customers through fiscal year 1985 and escalated thereafter at an average rate of 7.0% per year. Companies' payments for that period may differ from those shown as they are subject to the rate schedules finally adopted by Bonneville and may be increased by up to approximately \$2,000,000 per year pursuant to a letter agreement dated May 8, 1974. Companies' payments for the period July 1990 through June 1996 are estimated based on the provisions of the Exchange Agreements. Companies' payments for that period may be increased by up to approximately \$700,000 per year pursuant to a letter agreement dated May 8, 1974.

#### Hanford Project and Its Relationship to Project No. 1

Pursuant to agreements between the Supply System, Bonneville, 76 participants and the Atomic Energy Commission, the Supply System constructed the 860,000 kilowatt Hanford Project which began commercial operation in 1966. Under these agreements, Bonneville acquired the capability of the Hanford Project from the 76 participants in exchange for power from Bonneville. In 1963 the Supply System issued \$122,000,000 of Hanford Project Electric Revenue Bonds (the "Hanford Project Bonds"), of which \$46,045,000 were outstanding as of July 1, 1981. By-product steam is provided for the Hanford Project from the New Production Reactor ("NPR") owned and operated by DOE for national defense purposes.

The annual cost of Project No. 1 includes, as one of its elements, all of the annual costs of the Hanford Project not otherwise provided for, including debt service on the Hanford Project Bonds, after July 1, 1980. The existing Hanford Project Exchange Agreements will remain in effect after that date but so long as all annual costs of the Hanford Project are paid from revenues of the Hanford Project and Project No. 1, no billings are contemplated under the Hanford Project Exchange Agreements. The Supply System has entered into an agreement with DOE for the operation of the NPR and the Hanford

Project through June 30, 1983. The Project No. 1 Net Billing Agreements provide that the Supply System and Bonneville shall not enter into agreements for continued operation of the Hanford Project after October 31, 1977, if such continued operation would increase the payments of the Project No. 1 Participants under the Project No. 1 Net Billing Agreements. The Supply System, Bonneville, the 76 participants in the Hanford Project and certain of Bonneville's industrial customers have executed agreements which provide for the payment of the increased Hanford Project costs related to extending operation through June 30, 1983, from amounts other than amounts paid under the Project No. 1 Net Billing Agreements. The agreements with the industrial customers provide for payment of certain relocation costs associated with Project No. 1 based upon the amount of energy the industrial customers actually receive. (See "Hanford Project and its Relationship to Project No. 1" under the caption "Project No. 1" in the Official Statement.)

## **PROJECT NO. 2**

### **Description**

Project No. 2 is located about 140 miles southeast of Seattle, Washington on the Hanford Reservation of DOE near the site of the Supply System's Projects Nos. 1 and 4.

Project No. 2 will include a nuclear steam supply system manufactured by the General Electric Company employing a boiling water reactor and is expected to have a net generating capability of approximately 1,100,000 kilowatts. The nuclear steam supply system will include the necessary auxiliary systems required to control, contain and service the nuclear reactor core. After driving the turbine, steam will be exhausted into a condenser which will be cooled with circulating water from mechanical draft cooling towers. Water used for makeup of the circulating water cooling system will be drawn from the Columbia River and suitably treated. The main generating unit is a Westinghouse generator rated at 1,231,700 kVA. Main power transformers will step up the generator voltage to 500 kV for delivery into the Federal System. An 18.3 mile 500 kV transmission line has been constructed by Bonneville between Project No. 2 and Bonneville's Hanford Substation to effect such delivery.

### **Permits and Licenses**

The State of Washington has entered into a site certification agreement approving the Project No. 2 site and has issued a National Pollutant Discharge Elimination System permit. On March 19, 1973 the Atomic Energy Commission issued a construction permit for Project No. 2 under which construction is proceeding. There are no major permits required for construction of Project No. 2 which have not been obtained. An operating license must be obtained from the NRC before fuel loading, presently scheduled for September 1983. The Final Safety Analysis Report was submitted to the NRC in March 1978 and the application for an operating license was accepted for review by the NRC in June 1978.

### **Project No. 2 Nuclear Fuel**

The uranium for the initial fuel core has been delivered, converted and enriched, and now awaits fabrication. The Supply System has contracted with the General Electric Company for fabrication services for the initial fuel core. Fabrication of the nuclear fuel assemblies is expected to begin in November 1981.

For reload fuel the Supply System has a contract with Exxon Nuclear Co., Inc. ("Exxon") for uranium concentrates and for fuel fabrication services estimated to be sufficient for 14 years of operation based on annual refueling. Recent disputes between the Supply System and Exxon over the enforceability of the contract have resulted in the Supply System commencing litigation to ensure Exxon's performance of the contract. For a discussion of the litigation see "Fuel Litigation" under the caption "Litigation" in the Official Statement. Any increase in the costs of this contract would not have a significant impact on the financing requirements for Project No. 2, but could have an impact on the cost of power. Kerr McGee has a contract to convert uranium concentrates to uranium hexafluoride in sufficient quantities for operation of Project No. 2 through 1987. The Supply System has secured enrichment of the uranium hexafluoride for a period of 30 years for Project No. 2 through a fixed commitment contract with DOE.

At the present time, no operating facilities for the reprocessing of spent fuel are available, and no facilities are expected to be available in the near future. The President of the United States has recently released a draft policy statement calling for, among other things, the lifting of the ban on reprocessing spent nuclear fuel and the development of solutions to the problems of radioactive waste disposal. The effects of these policies cannot be predicted at this time. In the absence of these facilities, the Supply System is providing on-site spent fuel storage capacity for Project No. 2 sufficient to accommodate storage of the discharges of all spent fuel until about 1995. It is expected that by then an appropriate program will have been implemented to accept spent fuel for placement in a suitable repository.

#### **Project No. 2 Construction Program**

Construction of Project No. 2 was reported by Burns and Roe, Inc. to be approximately 86% complete as of July 1, 1981. As of that date, equipment and construction contracts totaling \$1,013,631,000 had been let. The construction schedule, as prepared by the Supply System, calls for initial fuel loading by September 1983 and commercial operation of Project No. 2 in February 1984.

#### **Estimated Project No. 2 Financing Required**

The Supply System's current cash flow projections indicate that the proceeds from the Project No. 2 1981 Bonds together with other funds available and investment income thereon will be sufficient to meet cash flow requirements of Project No. 2 until April 1982, prior to which time it is planned to issue additional Project No. 2 Bonds.

Based upon the Supply System's 1982 Project No. 2 construction budget and a commercial operation date of February 1984, the total estimated Project No. 2 financing required is set forth below.

#### **Estimated Project No. 2 Financing Required**

Equipment and Material Contracts(1) .....	\$ 199,641,000
Construction Contracts(1) .....	1,213,170,000
Construction Management(1) .....	134,322,000
Architect-Engineer(1) .....	257,578,000
<b>Total Plant Construction Cost .....</b>	<b>\$1,804,711,000</b>
Owner's Cost(2) .....	405,806,000
Contingency(3) .....	119,000,000
Nuclear Fuel(4) .....	92,505,000
<b>Total Construction and Fuel Cost .....</b>	<b>\$2,422,022,000</b>
Working Capital(5) .....	16,000,000
Reserve Account in the Bond Fund(6) .....	68,782,000
Bond Discount and Financing Cost(7) .....	55,502,000
Net Capitalized Interest During Construction(8) .....	(56,306,000)
<b>Total Financing Required .....</b>	<b>\$2,506,000,000</b>

(1) Estimated by Burns and Roe, Inc. and Bechtel Power Corporation.

(2) Estimated by the Supply System.

(3) Estimated by the Supply System. Includes an appropriate allowance for potential cost impacts which have a high probability of occurrence but are not presently considered as part of the defined scope of Project No. 2. Includes \$38,337,000 of bond discount and financing costs which were not included in the 1982 Project No. 2 construction budget estimate. The Supply System has a program to effect cost reductions in the construction costs of Project No. 2. Pending further review of the results of that program the \$38,337,000 of bond discount and financing costs are assumed to be funded from Contingencies. In the event that the cost reduction program is not successful the total estimated cost of Project No. 2 may be increased.

(Footnotes continued on following page)

- (4) Estimated by the Supply System. Includes sales tax on the initial core at 5.0% and \$34,546,000 for reload fuel.
- (5) Estimated by the Supply System. \$3,000,000 is required by the Project No. 2 Resolution.
- (6) An amount equal to the largest semi-annual interest payment on Project No. 2 Bonds, as required by the Project No. 2 Resolution. Based on actual interest rates for outstanding Project No. 2 Bonds and assumed interest rates of 11.5% for additional Project No. 2 Bonds issued in fiscal year 1982 and 10.0% for additional Project No. 2 Bonds issued thereafter.
- (7) Includes actual discount and financing costs for the outstanding Project No. 2 Bonds and estimates of 4.5% of the principal amount of additional Project No. 2 Bonds issued in fiscal year 1982 and 3.0% of the principal amount of additional Project No. 2 Bonds thereafter. Does not include \$38,337,000 of bond discount and financing costs which have been included in Contingency above. See Footnote (3).
- (8) Does not include interest after September 1, 1977 which is subject to payment pursuant to the Project No. 2 Net Billing Agreements. Computed as follows based on the same interest rates as in Footnote (6).

Gross Interest During Construction .....	\$ 120,517,000
Estimated Investment Income* .....	(176,823,000)
Net Interest During Construction .....	<u>\$ (56,306,000)</u>

\* Includes actual income through May 1981 and estimated future interest earnings on amounts in the Construction Fund at assumed rates of 12.0% for fiscal year 1982 and 10.5% thereafter.

Based on the assumptions used in developing the 1982 Project No. 2 construction budget, a summary of the total financing for Project No. 2 actually accomplished and contemplated for the future by the Supply System is shown in the following table:

**Summary of Project No. 2 Financing**  
(\$000)

	Outstanding Bonds	1981 Bonds	Additional Bonds	Total
Total Construction Costs .....	\$1,428,555	\$150,192(1)	\$750,770(2)	\$2,329,517
Nuclear Fuel .....	33,571	12,629	46,305	92,505
Bond Discount and Financing Costs .....	17,472	38,030(1)	(2)	55,502
Interest During Construction .....	120,517	—	—	120,517
Reserve Requirements(3) .....	13,959	11,769	59,054	84,782
Gross Requirements .....	\$1,614,074	\$222,286	\$846,463	\$2,682,823
Less: Estimated Investment Income .....	(129,074)	(12,286)	(35,463)	(176,823)
Net Requirements .....	<u>\$1,485,000</u>	<u>\$210,000</u>	<u>\$811,000</u>	<u>\$2,506,000</u>

(1) Additional bond discount and financing costs of \$9,656,700, resulting from the actual costs associated with the Project No. 2 1981 Bonds, were not included in the Supply System's 1982 Project No. 2 construction budget estimate. The Supply System has a program to effect cost reductions in the construction costs of Project No. 2. Pending further review of the results of that program such costs have been assumed by the Supply System to be funded from project contingencies. In the event that the cost reduction program is not successful the total estimated cost of Project No. 2 may be increased.

(2) Additional bond discount and financing costs of \$28,680,000, resulting from the actual costs associated with the Project No. 2 1981 Bonds, for additional Project No. 2 Bonds were not included in the Supply System's 1982 Project No. 2 construction budget estimate. See Footnote (1).

(3) Includes deposits to the Reserve Account in the Bond Fund and to the Revenue Fund for working capital.

In addition to the foregoing amounts obtained and to be obtained through the issuance of Project No. 2 Bonds, initial deposits into the Revenue Fund for working capital and into the Reserve and Contingency Fund, each in the amount of \$3,000,000, and deposits into the Interest, Principal and Reserve Accounts in the Bond Fund have been provided by Bonneville under the Project No. 2 Net Billing Agreements since January 1, 1977. Additional funds will be required prior to the date of commercial operation of Project No. 2 to make additional payments into the Interest and Principal Accounts and into the Reserve and Contingency Fund. Such funds will be obtained, to the extent not available from Project No. 2 Bond proceeds or otherwise, from Bonneville under the Project No. 2 Net Billing Agreements. The estimated amount of such payments until the scheduled commercial date of February 1984 is \$710,000,000.

## Power Production

Based upon the estimated net generating capability of 1,100,000 kilowatts, Project No. 2 is expected to produce approximately 6.745 billion kilowatt-hours annually after initial operational tests and adjustments are made in the early years. Although there is not yet sufficient historical operating information available on large nuclear plants to establish an expected plant factor for Project No. 2, annual costs are based on an assumed 60% plant factor in the first year of commercial operation, 65% in the second year and 70% thereafter. During certain periods, surplus water will be available to generate power at regional hydroelectric projects, thereby permitting a reduction in the total amount of energy produced at thermal electric projects in the region. The extent of this reduction and its effect, if any, on the operation of Project No. 2 will depend upon conditions at the time of the availability of such hydroelectric energy and its relative cost compared to the cost of energy from Project No. 2.

## Estimated Project No. 2 Annual Costs

Based upon the financing and operating assumptions previously discussed and certain other estimated costs, the following table shows the estimated annual and unit costs of power from Project No. 2:

### Estimated Project No. 2 Annual Costs

(\$000)

	Fiscal Year Ending June 30,						
	1984	1985	1986	1987	1988	1989	1990
Interest and Amortization(1) .....	\$ 93,618	\$231,110	\$231,110	\$231,110	\$231,110	\$231,110	\$231,110
Payment to Reserve and Contingency Fund(2) .....	9,362	23,111	23,111	23,111	23,803	25,707	27,764
Subtotal .....	\$102,980	\$254,221	\$254,221	\$254,221	\$254,913	\$256,817	\$258,874
Operation and Maintenance(3) .....	21,898	60,380	66,687	70,829	76,536	82,112	88,451
Decommissioning(3) .....	2,025	4,860	4,860	4,860	4,860	4,860	4,860
Fuel(4) .....	20,578	52,064	52,959	63,109	72,056	80,999	93,363
Taxes(5) .....	1,959	5,105	5,378	5,615	5,870	6,131	6,442
Subtotal .....	\$ 46,460	\$122,409	\$129,884	\$144,413	\$159,322	\$174,102	\$193,116
Surplus from Prior Year's Payment to Reserve and Contingency Fund(6) .....	(8,898)	(15,178)	(4,215)	(2,704)	(1,071)	—	—
Investment Income(7) .....	(7,961)	(16,019)	(15,998)	(15,975)	(15,979)	(16,032)	(16,089)
Total Project Annual Cost .....	\$132,581	\$345,433	\$363,892	\$379,955	\$397,185	\$414,887	\$435,901
Annual Energy Generation (GWH)(8) .....	2,376	5,980	6,461	6,745	6,745	6,745	6,745
Annual Cost (mills/KWH)(9)(10) ....	55.8	57.8	56.3	56.3	58.9	61.5	64.6

(1) Based on assumed level debt service on the Project No. 2 Bonds to 2012 at actual interest rates on outstanding Project No. 2 Bonds and interest rates ranging from 11.5% to 10.0% on the Project No. 2 1981 Bonds and on additional Project No. 2 Bonds.

(2) The greater of 10% of annual debt service as required by the Project No. 2 Resolution or estimated renewals and replacements.

(3) Estimated by the Supply System.

(4) Estimated by the Supply System based on the expected cost of fuel.

(5) Calculated at 1.5% of the wholesale value of energy produced by the Project No. 2.

(Footnotes continued on following page)

(6) Computed as follows (\$000):

	1984	1985	1986	1987	1988	1989	1990
Payment to Reserve and Contingency Fund, Prior Year .....	\$21,354 *	\$22,468	\$23,111	\$23,111	\$23,111	\$23,803	\$25,707
Renewals and Replacements, Prior Year** ..	(12,456)***	(7,290)	(18,896)	(20,407)	(22,040)	(23,803)	(25,707)
Net Surplus****	\$ 8,898	\$15,178	\$ 4,215	\$ 2,704	\$ 1,071	\$ 0	\$ 0

\* Total payment by Bonneville in fiscal year 1983.

\*\* Estimated by the Supply System. Some costs in the early years may be funded from Project No. 2 Bond proceeds.

\*\*\* Credit for Reserve and Contingency Fund payments from July 1, 1983 to February 1, 1984.

\*\*\*\* Net Surplus may be used for purposes other than reduction in power cost in accordance with the Project No. 2 Resolution.

(7) Based on assumed investment rates on the balance of funds in the Reserve Account in the Bond Fund of 9.0% and the Reserve and Contingency Fund of 8.25%.

(8) Based on an assumed 60% plant factor in the first year of operation, 65% in the second year and 70% thereafter.

(9) Total Project Annual Cost divided by the Annual Energy Generation.

(10) The cost of providing for interest and principal on Project No. 2 Bonds and certain reserve funds between September 1, 1977 and the date of commercial operation is assumed to be paid as incurred from Bonneville revenues pursuant to the Project No. 2 Net Billing Agreements. For the purpose of demonstrating the total annual cost per kilowatt-hour of Project No. 2 if the above costs were capitalized, the cost to Bonneville of \$710,000,000 has been annualized over 35 years at an assumed interest rate of 10.85% per annum which is an approximate average of Bonneville's current long term interest rates for borrowing from the Federal Treasury, as follows (\$000):

	1984	1985	1986	1987	1988	1989	1990
Additional Costs to Bonneville:							
Annualized Prepaid Project Cost .....	\$ 32,995	\$ 79,187	\$ 79,187	\$ 79,187	\$ 79,187	\$ 79,187	\$ 79,187
Total Annual Cost ..	\$165,576	\$424,640	\$443,079	\$459,142	\$476,372	\$494,074	\$515,088
Annual Cost (mills/KWH) .....	69.7	71.0	68.6	68.1	70.6	73.3	76.4

### PROJECT NO. 3

#### Location

Project No. 3 is located about three miles south of the community of Satsop in Grays Harbor County, Washington, approximately 16 miles east of the City of Aberdeen, and 66 miles southwest of the City of Seattle. The Supply System is also constructing its Project No. 5 on the same site. Project No. 5 is being designed and constructed as a twin to Project No. 3 and will share some common facilities with Project No. 3.

Project No. 3 nuclear steam supply system, to be supplied by Combustion Engineering, Inc., is rated at 3,817 megawatts thermal and includes reactor control systems, steam generators, and other auxiliary systems. The waste heat from the turbine condenser will be dissipated in a closed cycle condenser cooling system that will utilize a natural draft cooling tower. The turbine-generator unit, to be supplied by Westinghouse Electric Company, will have a net electrical generating capability of approximately 1,240,000 kilowatts. Project No. 3's output will be delivered into the Federal System transmission grid in the vicinity of Project No. 3.

#### Permits and Licenses

The Supply System has received site certification and a National Pollutant Discharge Elimination System permit from the State of Washington. On April 11, 1978, the NRC issued a construction permit for Project No. 3 under which construction is proceeding. In due course, an application for an operating license will be filed with the NRC.

#### Project No. 3 Nuclear Fuel

The Supply System has contracted with Allied Chemical Corporation for uranium ore concentrates for the initial core and with Exxon for uranium ore concentrates estimated to be sufficient for 14 years of operation. Kerr McGee has contracted to convert uranium concentrates to uranium hexafluoride in sufficient quantities for operation of Project No. 3 through 1988. The Supply System has secured



enrichment of the uranium hexafluoride for a period of 30 years for Project No. 3 through a fixed commitment contract with DOE. The Supply System has contracted with Exxon for reload fuel fabrication services sufficient for 14 years of operation.

Recent disputes between the Supply System and Exxon over the enforceability of the contract have resulted in the Supply System commencing litigation to ensure Exxon's performance of the contract. For a discussion of the litigation see subcaption "Fuel Litigation" under the caption "Litigation" in the Official Statement. Any increase in the costs of this contract would not have a significant impact on the financing requirements for Project No. 3, but could have an impact on the cost of power.

At the present time, no operating facilities for the reprocessing of spent fuel are available, and no facilities are expected to be available in the near future. The President of the United States has recently released a draft policy statement calling for, among other things, the lifting of the ban on reprocessing spent nuclear fuel and the development of solutions to the problems of radioactive waste disposal. The effects of these policies cannot be predicted at this time. In the absence of these facilities, the Supply System is providing on site spent fuel storage capacity for Project No. 3 sufficient to accommodate all spent fuel discharges until some time after 1996, while maintaining full core discharge capability. It is expected that by then an appropriate program will have been implemented to accept spent fuel for placement in a suitable repository.

#### **Project No. 3 Construction Program**

The Supply System has employed the firm of Ebasco Services Incorporated to design and supervise the construction of Project No. 3. Construction was reported by Ebasco Services Incorporated to be approximately 32% complete as of July 1, 1981. The initial fuel loading is currently scheduled for June 1986 and commercial operation for December 1986. As of July 1, 1981, equipment and construction contracts totaling \$1,047,362,000 have been let.

#### **Estimated Project No. 3 Financing Required**

The Supply System's 1982 Project No. 3 construction budget indicates that the total financing requirements for the Supply System's Ownership Share of Project No. 3 are estimated to be \$2,458,000,000. The present estimates of the Supply System indicate that the proceeds from the Project No. 3 1981 Bonds together with other funds available and investment income thereon will be sufficient to meet cash flow requirements of Project No. 3 until April 1982, prior to which time it is planned to issue additional Project No. 3 Bonds. Construction cost estimates are based on a scheduled commercial operation date of December 1986.

Based on the Supply System's 1982 Project No. 3 construction budget and a commercial operation date of December 1986 the estimated total financing requirements for the Supply System's Ownership Share of Project No. 3 are shown in the following table:

#### **Estimated Project No. 3 Financing Required**

Equipment and Material Contracts(1) .....	\$ 323,818,000
Construction Contracts(1) .....	1,083,442,000
Construction Management(1) .....	106,658,000
Architect-Engineer(1) .....	98,276,000
Total Plant Construction Cost .....	\$1,612,194,000
Owners Cost(2) .....	257,850,000
Contingency(3) .....	255,500,000
Nuclear Fuel(4) .....	89,067,000
Total Construction and Fuel Cost .....	\$2,214,611,000
Working Capital(5) .....	20,000,000
Reserve Account in Bond Fund(6) .....	114,891,000
Bond Discount and Financing Cost(7) .....	69,772,000
Net Capitalized Interest During Construction(8) .....	38,726,000
Total Financing Required(9) .....	<u>\$2,458,000,000</u>

(1) Estimated by Ebasco Services Incorporated.

(2) Estimated by the Supply System.

(3) Estimated by the Supply System. Includes an appropriate allowance for potential cost and schedule impacts which have a high probability of occurrence but are not presently considered as part of the defined scope of Project No. 3.

(4) Estimated by the Supply System. Includes sales tax on the initial core at 5.2% and \$36,446,000 for reload fuel.

(5) Estimated by the Supply System. \$3,000,000 is required by the Project No. 3 Resolution.

(6) An amount equal to the largest semi-annual interest payment on the Project No. 3 Bonds, as required by the Project No. 3 Resolution. Based on actual interest rates for outstanding Project No. 3 Bonds and assumed interest rates of 11.5% for additional Project No. 3 Bonds issued in fiscal year 1982 and 10.0% for additional Project No. 3 Bonds issued thereafter.

(7) Includes actual discount and financing costs for the outstanding Project No. 3 Bonds and estimates of 4.5% of the principal amount of additional Project No. 3 Bonds issued in fiscal year 1982 and 3.0% of the principal amount of additional Project No. 3 Bonds thereafter.

(8) Does not include interest on the Project No. 3 Bonds which is subject to payment pursuant to the Project No. 3 Net Billing Agreements from September 1, 1982 to date of commercial operation. Computed as follows based on the same interest rates as in Footnote (6).

Gross Interest During Construction .....	\$ 315,079,000
Estimated Investment Income* .....	(276,353,000)
Net Interest During Construction .....	<u>\$ 38,726,000</u>

\*Includes actual income through May 1981 and estimated future interest earnings on amounts in the Construction Fund at assumed rates of 12.0% for fiscal year 1982 and 10.5% thereafter.

(9) Does not reflect any impacts which may result from the termination of Project No. 4 or Project No. 5.

Based on the assumptions used in developing the 1982 Project No. 3 construction budget, a summary of the total financing actually accomplished and contemplated for the future by the Supply System for its Ownership Share of Project No. 3 costs is shown in the following table:

#### Summary of Project No. 3 Financing

	(\$000)			
	Outstanding Bonds	1981 Bonds	Additional Bonds	Total
Construction Cost .....	\$ 781,431	\$148,806	\$1,195,307	\$2,125,544
Nuclear Fuel .....	27,389	16,402	45,276	89,067
Bond Discount and Financing Costs .....	15,720	16,077	37,975	69,772
Capitalized Interest During Construction	193,457	32,300	89,322	315,079
Reserve Requirements* .....	<u>25,000</u>	<u>24,791</u>	<u>85,100</u>	<u>134,891</u>
Gross Requirements .....	\$1,042,997	\$238,376	\$1,452,980	\$2,734,353
Less: Estimated Investment Income .....	<u>(137,997)</u>	<u>(13,376)</u>	<u>(124,980)</u>	<u>(276,353)</u>
Net Requirements .....	\$ 905,000	\$225,000	\$1,328,000	\$2,458,000

\* Includes deposits to the Reserve Fund in the Bond Fund and to the Revenue Fund for working capital.

In addition to the foregoing amounts to be obtained through issuance of Project No. 3 Bonds, funds to make payments prior to the date of commercial operation as required by the Project No. 3

Resolution to the Interest and Principal Accounts in the Bond Fund and to fund the Reserve and Contingency Fund will be obtained, to the extent not otherwise provided for, from Bonneville under the Project No. 3 Net Billing Agreements during the period beginning July 1, 1982 and extending to the date of commercial operation. The estimated amount of such payments is \$756,971,000.

#### Power Production

Based upon the estimated net generating capability of 1,240,000 kilowatts, Project No. 3 is expected to produce approximately 7.604 billion kilowatt-hours annually after initial operation tests and adjustments are made in the early years. Although there is not yet sufficient historical operating information available on large nuclear plants to establish an expected plant factor for Project No. 3, annual costs for Project No. 3 are based on an assumed 60% plant factor in the first year of commercial operation, 65% in the second year and 70% thereafter. The Supply System's Ownership Share would be approximately 5.323 billion kilowatt-hours annually. During certain periods, surplus water will be available to generate power at existing hydroelectric projects, thereby permitting a reduction in the total amount of energy produced at thermal electric projects in the region. The extent of this reduction and its effects, if any, on the operation of Project No. 3 will depend upon conditions at the time of the availability of such hydroelectric energy and its relative cost compared to the cost of energy from Project No. 3.

#### Estimated Project No. 3 Annual Costs

Based upon the financing and operating assumptions previously discussed and certain other estimated costs, the following table shows the Supply System's Ownership Share of the estimated annual and unit cost of power from Project No. 3.

#### Estimated Project No. 3 Annual Costs

(\$000)

	Fiscal Year Ending June 30,					
	1987	1988	1989	1990	1991	1992
Interest and Amortization(1) .....	\$133,732	\$243,364	\$243,364	\$243,364	\$243,364	\$243,364
Payment to Reserve and Contingency Fund(2) .....	13,873	24,336	24,336	24,336	24,336	24,336
Subtotal .....	\$152,605	\$267,700	\$267,700	\$267,700	\$267,700	\$267,700
Operation and Maintenance(3) .....	21,324	53,439	51,727	55,055	58,663	62,569
Decommissioning(3) .....	2,315	3,968	3,968	3,968	3,968	3,968
Fuel(4) .....	30,646	57,709	67,097	82,399	97,299	107,553
Taxes(5) .....	530	957	1,933	1,065	1,065	1,065
Subtotal .....	\$ 54,815	\$116,073	\$123,325	\$142,487	\$160,995	\$175,155
Surplus from Prior Years Payment to Reserve and Contingency Fund(6) .....	(13,463)	(14,783)	(7,674)	(6,341)	(4,901)	(3,346)
Investment Income(7) .....	(11,349)	(17,083)	(17,057)	(17,029)	(17,000)	(16,969)
Total Project Annual Cost .....	\$182,608	\$351,907	\$366,794	\$386,817	\$406,794	\$422,540
Annual Energy Generation (GWH)(8) .....	2,650	4,783	5,163	5,323	5,323	5,323
Annual Cost (mills/KWH)(9)(10) ..	68.9	73.6	71.0	72.7	76.4	79.4

- (1) Based on assumed level debt service on the Project No. 3 Bonds to 2018 at actual interest rates on outstanding Project No. 3 Bonds and interest rates ranging from 11.5% to 10.0% on the Project No. 3 1981 Bonds and on additional Project No. 3 Bonds.
- (2) The greater of 10% of annual debt service as required by the Project No. 3 Resolution or estimated renewals and replacements.
- (3) Estimated by the Supply System.
- (4) Estimated by the Supply System based on the expected cost of fuel.

(Footnotes on following page)

(5) Calculated at 0.2 mills per kilowatt-hour of the energy produced by Project No. 3.

(6) Computed as follows (\$000):

	1987	1988	1989	1990	1991	1992
Payment to Reserve and Contingency Fund, Prior Year .....	\$23,079*	\$23,783	\$24,336	\$24,336	\$24,336	\$24,336
Renewals and Replacements, Prior Year** .....	(9,616)***	(9,000)	(16,662)	(17,995)	(19,435)	(20,990)
Net Surplus**** .....	\$13,463	\$14,783	\$ 7,674	\$ 6,341	\$ 4,901	\$ 3,346

\* Total payment by Bonneville in fiscal year 1986.

\*\* Estimated by the Supply System. Some costs in the early years may be funded from Project No. 3 Bond proceeds.

\*\*\* Credit for Reserve and Contingency Fund payments from July 1, 1986 to December 1, 1986.

\*\*\*\* The Net Surplus may be used for purposes other than reduction in power costs in accordance with the Project No. 3 Bond Resolution.

(7) Based on investment rates on the balance of funds in the Reserve Account in the Bond Fund of 9.0% and the Reserve and Contingency Fund of 8.25%.

(8) Based on an assumed 60% plant factor in the first year of operation, 65% in the second year and 70% thereafter.

(9) Total Project Annual Cost divided by the Annual Energy Generation.

(10) The cost of providing certain reserves and of providing interest and principal on the Project No. 3 Bonds between September 1, 1982 and the scheduled commercial operation date of December 1986 is assumed to be paid as incurred from Bonneville revenues pursuant to the Project No. 3 Net Billing Agreements. For the purpose of demonstrating the total annual cost per kilowatt-hour of Project No. 3 if the above costs were capitalized, the cost to Bonneville of \$756,971,000 has been annualized over 35 years at an assumed interest rate of 10.85% per annum, which is an approximate average of Bonneville's current long term interest rates for borrowing from the Federal Treasury, as follows (\$000):

Additional Costs to Bonneville:	1987	1988	1989	1990	1991	1992
Annualized Prepaid Project Cost	\$ 49,249	\$ 84,426	\$ 84,426	\$ 84,426	\$ 84,426	\$ 84,426
Total Annual Cost .....	\$231,857	\$436,333	\$451,220	\$471,243	\$491,220	\$506,966
Annual Cost (mills/KWH) ..	87.5	91.2	87.3	88.5	92.3	95.2

#### Assumptions

In the preparation of this report and in the opinions which follow it has been necessary to make certain assumptions with respect to conditions which may occur in the future. While we believe these assumptions are reasonable for the purposes of this report, we make no representation that they will in fact occur. To the extent that actual future conditions differ from the assumptions contained herein, the actual results will differ from the results obtained from use of the assumptions. Certain major assumptions used in this report include:

1. The Net Billed Projects and Projects Nos. 4 and 5 will be completed within the cost estimates in the Supply System's 1982 project construction budgets and that Projects Nos. 4 and 5 will not be terminated.
2. Project No. 1 will begin commercial operation in June 1986, Project No 2 will begin commercial operation in February 1984, and Project No. 3 will begin commercial operation in December 1986.
3. Annual costs of the Net Billed Projects are based on actual interest rates on outstanding Project No. 1, Project No. 2, and Project No. 3 Bonds issued through April 1981 and assumed interest rates on future bonds for those projects at 11.5% through June 30, 1982 and 10.0% thereafter.

4. Investment income in the Net Billed Projects 1982 construction budgets is based on actual income to May 1, 1981 and estimated future income at assumed reinvestment rates of 12.0% through June 30, 1982 and 10.5% thereafter. Investment income for the Supply System's annual cost estimates is based on an assumed interest rate of 9.0% on long term funds and 8.25% on short term funds.
5. Annual operating costs of the Net Billed Projects including Operation and Maintenance, Decommissioning, and Renewals and Replacements are as estimated by the Supply System. Nuclear fuel costs are estimated by the Supply System based on fuel contracts, an enrichment plant tails assay of 0.20% and no recycle of uranium and plutonium.
6. The Net Billed Projects will operate at an average annual plant factor of 60% in the first year of operation of each plant, 65% in the second year and 70% thereafter.
7. Amounts required to initially fund the Reserve Account in the Bond Fund and working capital, to the extent not already funded by Bonneville, will be obtained from the proceeds of future bond issues for each of the Net Billed Projects.
8. Interest and principal on the Project No. 1 Bonds between September 1, 1980 and June 1986, together with net payments into its Reserve and Contingency Fund and payments to the Hanford Project will continue to be obtained under the Project No. 1 Net Billing Agreements and the Exchange Agreements. Interest and principal on the Project No. 2 Bonds between September 1, 1977 and February 1984, together with net payments into its Reserve and Contingency Fund, will continue to be obtained under the Project No. 2 Net Billing Agreements. Interest and principal on the Project No. 3 Bonds between September 1, 1982 and December 1986, together with net payments into its Reserve and Contingency Fund, will be obtained under the Project No. 3 Net Billing Agreements.
9. Rates for Bonneville power will be as projected by Bonneville through fiscal year 1985 and will increase each year thereafter at an average rate of 7.0% per year through 1990.

#### Conclusions

Based on our studies and analyses of the Supply System's program for the Net Billed Projects, we are of the opinion that:

1. The output of the Net Billed Projects is required to meet the load growth of the utility systems of the Pacific Northwest and can readily be marketed by Bonneville when the Net Billed Projects are scheduled for initial operation.
2. The provisions of the Net Billing Agreements, the Exchange Agreements and the Project Agreements provide a sound foundation for proceeding with financing the construction of the Net Billed Projects.
3. The estimated cost of the output of the Net Billed Projects is comparable to costs expected from similar projects to be developed within the same time frame.

We have furnished to you information for the following subcaptions: "Estimated Project Financing Requirements", "Estimated Project Annual Costs and Payments", and "Power Production" under the captions "Project No. 1", "Project No. 2" and "Project No. 3"; and information other than that relating to Bonneville under the caption "Power Supply in the Pacific Northwest" in the Official Statement and Exhibits A and G thereto. In our opinion, the information furnished by us is correct.

Respectfully submitted,

R. W. BECK AND ASSOCIATES

**TABLE I**  
**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**  
**PROJECT NO. 1 PARTICIPANTS AND COMPANIES**  
**SUMMARY OF FINANCIAL AND STATISTICAL DATA**

	1978					1979
	Districts	Municipalities	Cooperatives	Companies	Total	Statistics Total
<b>STATISTICS:</b>						
<b>Customers:</b>						
Residential .....	488,001	503,703	197,182	1,853,814	3,042,700	2,941,894
Total .....	562,205	567,326	233,630	2,156,583	3,519,744	3,410,671
Energy Sales: kWh (000) .....	24,469,486	21,212,821	7,295,925	68,125,147	121,103,379	115,748,763
<b>Energy Purchases: kWh (000)</b>						
Bonneville (Hanford Project Exchange) ..	1,235,449	166,472	293,328	325,425	2,020,674	1,586,914
Bonneville .....	19,481,840	9,917,750	6,088,716	4,409,358	39,897,664	42,406,592
Other .....	3,688,253	343,037	257,200	24,506,405	28,794,895	26,069,684
Total Energy Purchase kWh (000) ..	24,405,542	10,427,259	6,639,244	29,241,188	70,713,233	70,063,190
Energy Generated: kWh (000) .....	877,894	10,493,999	14,885	44,804,666	56,191,444	53,207,314
Total Energy Requirements kWh (000)	25,283,436	20,921,258	6,654,129	74,045,854	126,904,677	123,270,504
Peak Demands: kW .....	5,610,382	4,465,140	1,848,685	14,014,862	25,939,069	24,320,698
<b>OPERATIONS:</b>						
<b>Income:</b>						
Total Operating Revenues .....	\$330,262,152	\$ 295,037,697	\$134,045,236	\$1,783,980,381	\$ 2,543,325,466	\$2,013,058,388
Other Income (Non-Operating) .....	9,621,841	10,749,549	2,881,764	165,827,796	189,080,950	153,856,452
Total Income .....	\$339,883,993	\$ 305,787,246	\$136,927,000	\$1,949,808,177	\$ 2,732,406,416	\$2,166,914,840
<b>OPERATING EXPENSES:</b>						
<b>Purchased Power:</b>						
Bonneville (Hanford Project Exchange) ..	\$ 7,942,449	\$ 2,360,318	\$ 1,982,218	\$ 1,238,300	\$ 13,523,285	\$ 5,262,857
Bonneville .....	129,600,089	53,009,630	46,511,494	46,322,280	275,443,493	180,544,048
Other .....	23,357,907	24,395,577	0	280,896,711	328,650,195	206,969,463
Total Purchased Power Expense ....	\$160,900,445	\$ 79,765,525	\$ 48,493,712	\$ 328,457,291	\$ 617,616,973	\$ 392,776,368
Generating Expense .....	11,882,562	33,893,578	152,035	376,815,730	422,743,905	356,387,620
Total Power Supply Expense .....	\$172,783,007	\$ 113,659,103	\$ 48,645,747	\$ 705,273,021	\$ 1,040,360,878	\$ 749,163,988
Depreciation .....	24,168,060	31,346,548	15,195,645	165,281,596	235,991,849	208,860,604
Other Expense (Including Taxes) .....	87,501,142	109,228,225	44,545,722	468,278,212	709,553,301	603,240,993
Total Operating Expenses .....	\$284,452,209	\$ 254,233,876	\$108,387,114	\$1,338,832,829	\$ 1,985,906,028	\$1,561,265,585
<b>CONDENSED BALANCE SHEET</b>						
<b>Assets:</b>						
Net Utility Plant .....	\$673,844,080	\$1,042,523,122	\$448,718,614	\$6,863,647,348	\$ 9,028,733,164	\$8,205,414,103
Other Property and Investments .....	52,682,125	89,923,589	18,220,644	531,381,790	692,208,148	615,049,084
Current Assets .....	143,955,194	140,005,300	52,141,108	525,894,148	861,995,750	734,063,253
Deferred Debits .....	26,712,610	48,292,894	3,416,623	140,012,061	218,434,188	178,303,541
Total Assets .....	\$897,194,009	\$1,320,744,905	\$522,496,989	\$8,060,935,347	\$10,801,371,250	\$9,732,829,981
<b>Liabilities:</b>						
Long Term Debt .....	\$260,672,158	\$ 676,371,277	\$379,703,786	\$3,485,338,178	\$ 4,802,085,399	\$4,494,363,058
Current Liabilities .....	115,916,027	59,663,731	25,301,566	930,623,428	1,131,504,752	932,999,093
Deferred Credits .....	5,552,962	58,982,630	3,238,149	306,706,238	374,479,979	337,464,807
Reserves .....	3,404,183	17,272,802	860,695	6,408,999	27,946,679	15,415,162
Contribution in Aid of Construction .....	40,266,691	28,121,013	514,052	0	68,901,756	61,154,244
Retained Earnings .....	471,381,988	480,333,452	112,878,741	3,331,858,504	4,396,452,685	3,891,433,617
Total Liabilities .....	\$897,194,009	\$1,320,744,905	\$522,496,989	\$8,060,935,347	\$10,801,371,250	\$9,732,829,981

**TABLE II**  
**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**  
**PROJECT NO. 2 PARTICIPANTS**  
**SUMMARY OF FINANCIAL AND STATISTICAL DATA**

	1980				1979 Statistics Total
	Districts	Municipalities	Cooperatives	Total	
<b>STATISTICS</b>					
<b>Customers:</b>					
Residential .....	436,356	355,427	193,725	985,508	950,851
Total .....	498,168	402,912	229,292	1,130,372	1,092,144
Energy Sales: kWh (000) .....	20,556,677	12,320,099	7,148,048	40,024,824	38,608,163
<b>Energy Purchases: kWh (000) .....</b>					
Bonneville (Hanford Project Exchange) .....	1,189,301	130,139	293,328	1,612,768	652,009
Bonneville .....	18,291,640	5,744,851	5,926,179	29,962,670	31,973,770
Other .....	924,893	389,344	257,200	1,571,437	1,122,168
Total Energy Purchases kWh (000) .....	20,405,834	6,264,334	6,476,707	33,146,875	33,747,947
Energy Generated: kWh (000) .....	873,003	6,727,444	14,885	7,615,332	6,644,437
Total Energy Requirements kWh (000) .....	21,278,837	12,991,778	6,491,592	40,762,207	40,392,384
Peak Demands: kW .....	4,917,750	2,908,346	1,807,746	9,633,842	8,893,795
<b>OPERATIONS</b>					
<b>Income:</b>					
Total Operating Revenues .....	\$281,676,422	\$174,901,194	\$130,375,911	\$ 586,953,527	\$ 458,817,721
Other Income (Non-Operating) ..	7,485,263	4,446,594	2,781,612	14,713,469	15,523,528
Total Income .....	\$289,161,685	\$179,347,788	\$133,157,523	\$ 601,666,996	\$ 474,341,249
<b>OPERATING EXPENSES:</b>					
<b>Purchased Power:</b>					
Bonneville (Hanford Project Exchange) .....	\$ 7,399,484	\$ 1,669,121	\$ 1,982,218	\$ 11,050,823	\$ 2,478,420
Bonneville .....	121,920,061	36,076,889	45,410,118	203,407,068	124,668,129
Other .....	13,741,987	306,600	0	14,048,587	3,444,230
Total Purchased Power Expense .....	\$143,061,532	\$ 38,052,610	\$ 47,392,336	\$ 228,506,478	\$ 130,590,779
Generating Expense .....	11,845,260	15,174,349	152,035	27,171,644	23,665,037
Total Power Supply Expense .....	\$154,906,792	\$ 53,226,959	\$ 47,544,371	\$ 255,678,122	\$ 154,255,816
Depreciation .....	20,612,477	20,847,400	14,813,504	56,273,381	53,698,654
Other Expense (Including Taxes) .....	74,362,380	82,287,278	42,967,872	199,617,530	163,601,189
Total Operating Expenses ..	\$249,881,649	\$156,361,637	\$105,325,747	\$ 511,569,033	\$ 371,555,659
<b>CONDENSED BALANCE SHEET</b>					
<b>Assets:</b>					
Net Utility Plant .....	\$557,693,835	\$493,821,671	\$438,885,666	\$1,490,401,172	\$1,358,476,434
Other Property and Investments ..	48,251,786	26,874,389	17,750,372	92,876,547	174,137,470
Current Assets .....	124,530,548	66,417,875	50,004,279	240,952,702	198,849,185
Deferred Debits .....	25,033,425	25,958,885	3,393,747	54,386,057	42,145,964
Total Assets .....	\$755,509,594	\$613,072,820	\$510,034,064	\$1,878,616,478	\$1,773,609,053
<b>Liabilities:</b>					
Long Term Debt .....	\$220,001,521	\$280,558,901	\$371,127,632	\$ 871,688,054	\$ 886,595,423
Current Liabilities .....	101,161,547	32,615,523	24,911,370	158,688,440	98,198,068
Deferred Credits .....	5,081,957	6,407,967	2,932,804	14,422,728	14,293,118
Reserves .....	3,404,183	6,595,156	860,695	10,860,034	2,100,192
Contributions in Aid of Construction .....	34,087,773	22,288,233	514,052	56,890,058	50,536,845
Retained Earnings .....	391,772,613	264,607,040	109,687,511	766,067,164	721,885,407
Total Liabilities .....	\$755,509,594	\$613,072,820	\$510,034,064	\$1,878,616,478	\$1,773,609,053

**TABLE III**  
**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**  
**PROJECT NO. 3 PARTICIPANTS AND OWNERS**  
**SUMMARY OF FINANCIAL AND STATISTICAL DATA**

	1980					1979
	Districts	Municipalities	Cooperatives	Owners	Total	Statistics Total
<b>STATISTICS</b>						
<b>Customers:</b>						
Residential .....	488,001	449,524	197,182	1,662,789	2,797,496	2,701,005
Total .....	562,205	506,394	233,630	1,932,101	3,234,330	3,130,761
Energy Sales: kWh (000) .....	24,469,486	18,779,918	7,295,925	60,384,127	110,929,456	106,397,099
<b>Energy Purchases: kWh (000)</b>						
Bonneville (Hanford Project Exchange) .....	1,235,449	136,439	293,328	260,340	1,925,556	1,400,797
Bonneville .....	19,481,840	8,376,345	6,088,716	3,827,141	37,774,042	40,352,920
Other .....	3,688,253	(78,593)	257,200	24,957,671	28,824,531	27,012,782
Total Energy Purchase kWh (000) .....	24,405,542	8,434,191	6,639,244	29,045,152	68,524,129	68,766,499
Energy Generated: kWh (000) .....	877,894	9,943,714	14,885	36,325,155	47,161,648	44,208,254
Total Energy Requirements kWh (000) ..	25,283,436	18,377,905	6,654,129	65,370,307	115,685,777	112,974,753
Peak Demands: kW .....	5,610,382	3,898,140	1,848,685	12,885,862	24,243,069	22,672,698
<b>OPERATIONS</b>						
<b>Income:</b>						
Total Operating Revenues .....	\$330,262,152	\$ 254,220,035	\$134,045,236	\$1,590,704,378	\$2,309,231,801	\$1,830,934,797
Other Income (Non-Operating) .....	9,621,841	7,483,906	2,881,764	136,637,782	156,625,293	131,272,234
Total Income .....	\$339,883,993	\$ 261,703,941	\$136,927,000	\$1,727,342,160	\$2,465,857,094	\$1,962,207,031
<b>OPERATING EXPENSES:</b>						
<b>Purchased Power:</b>						
Bonneville (Hanford Project Exchange) .....	\$ 7,942,449	\$ 2,184,905	\$ 1,982,218	\$ 982,100	\$ 13,091,672	\$ 4,713,067
Bonneville .....	129,600,089	52,102,638	46,511,494	41,999,976	270,214,197	171,839,126
Other .....	23,357,907	13,957,141	0	258,974,964	296,290,012	194,781,040
Total Purchased Power Expense .....	\$160,900,445	\$ 68,244,684	\$ 48,493,712	\$ 301,957,040	\$ 579,595,881	\$ 371,333,233
Generating Expense .....	11,882,562	27,590,907	152,035	326,236,348	365,861,852	316,275,227
Total Power Supply Expense .....	\$172,783,007	\$ 95,835,591	\$ 48,645,747	\$ 628,193,388	\$ 945,457,733	\$ 687,608,460
Depreciation .....	24,168,060	27,468,772	15,195,645	151,625,793	218,458,270	192,529,457
Other Expense (Including Taxes) .....	87,501,142	95,614,659	44,545,722	412,188,156	639,849,679	546,916,855
Total Operating Expenses .....	\$284,452,209	\$ 218,919,022	\$108,387,114	\$1,192,007,337	\$1,803,765,682	\$1,427,054,772
<b>CONDENSED BALANCE SHEET</b>						
<b>Assets:</b>						
Net Utility Plant .....	\$673,844,080	\$ 780,598,884	\$448,718,614	\$6,150,363,441	\$8,053,525,019	\$7,318,147,419
Other Property and Investments .....	52,682,125	71,993,970	18,220,644	400,369,877	543,266,616	483,746,830
Current Assets .....	143,955,194	119,097,154	52,141,108	458,373,057	773,566,513	651,418,935
Deferred Debits .....	26,712,610	30,906,759	3,416,623	120,010,531	181,046,523	143,032,725
Total Assets .....	\$897,194,009	\$1,002,596,767	\$522,496,989	\$7,129,116,906	\$9,551,404,671	\$8,596,345,909
<b>Liabilities:</b>						
Long Term Debt .....	\$260,672,158	\$ 500,813,901	\$379,703,786	\$3,147,000,936	\$4,288,190,781	\$3,973,584,013
Current Liabilities .....	115,916,027	47,269,936	25,301,566	817,470,715	1,005,958,244	829,163,241
Deferred Credits .....	5,552,962	6,678,521	3,238,149	226,803,183	242,272,885	219,282,931
Reserves .....	3,404,183	17,272,602	860,695	5,908,999	27,446,679	15,093,162
Contributions in Aid of Construction .....	40,266,691	28,121,013	514,052	0	68,901,755	61,154,244
Retained Earnings .....	471,381,988	402,440,524	112,878,741	2,931,933,073	3,918,634,326	3,498,068,318
Total Liabilities .....	\$897,194,009	\$1,002,596,767	\$522,496,989	\$7,129,116,905	\$9,551,404,671	\$8,596,345,909



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**EXHIBIT C**

**Bechtel Power Corporation**

Engineers - Constructors

Fifty Beale Street

San Francisco, California

Mail Address: P.O. Box 3965, San Francisco, CA 94119



September 4, 1981

Board of Directors

Washington Public Power Supply System

3000 George Washington Way

Richland, Washington 99352

Subject: WASHINGTON PUBLIC POWER SUPPLY SYSTEM  
NUCLEAR PROJECT NO. 1

Gentlemen:

In January 1981 Bechtel Power Corporation ("BPC") was retained by Washington Public Power Supply System ("Supply System") to assume certain duties of the construction engineer and to provide construction management services for Washington Public Power Supply System Nuclear Project No. 1 ("Project No. 1") being constructed on the Hanford Reservation of the United States Department of Energy ("DOE"), near Richland, Washington. BPC is also to assume the same duties of the construction engineer for Washington Public Power Supply System Nuclear Project No. 4 of similar design and located adjacent to the Project No. 1. These responsibilities for both projects were previously performed by United Engineers & Constructors Inc. ("UE&C"). Transfer of these responsibilities was completed on May 1, 1981.

BPC's responsibilities for Project Nos. 1 and 4 include: (a) management of all site construction contractors and contract administration activities; (b) implementation of the BPC quality assurance program; (c) implementation of systems for project control including cost engineering, estimating services, quantity tracking and performance measurement; (d) provision of project accounting functions; (e) application of a project labor relations program; and (f) assistance in project testing and startup.

Under a separate contract with the Supply System, UE&C has been retained as an independent engineer to perform the functions necessary for the design of Project Nos. 1 and 4 and the duties of containment constructor under the provisions of ASME Pressure Vessel Code, Section III, Division 2. UE&C will continue to be directly responsible for performance of the duties of construction engineer set out in Resolution No. 769 of the Board of Directors of the Supply System which relate to the design of Project No. 1 and the duties of containment constructor under the provisions of ASME Pressure Vessel Code, Section III, Division 2.

### **Current Estimated Projects Costs and Construction Contracts**

A construction cost estimate for Project No. 1 has been developed jointly by BPC, UE&C and the Supply System on an equitable cost basis which takes into consideration that both Project No. 4 and Project No. 1 benefit from the economics of dual unit construction and, therefore, share certain costs on the basis of the proportion of respective benefit. This estimated cost of \$2,398,438,000 was presented to the Supply System in May 1981 and is the basis for the Supply System's 1982 project construction budget which was approved by the Board of Directors in July 1981, and is set forth in Attachment A.

This estimate reflects an increase of \$822,505,000 over the May 1980 estimate. This increase results from:

- a. a 12 month extension from June 1985 to June 1986 of the commercial operation date (\$131,000,000);
- b. revisions to reflect actual experience for the factors used to establish the May 1980 estimate (such as productivity levels, manhour requirements, escalation rates and material quantities) (\$614,000,000);
- c. changes to plant structures, systems and equipment necessitated by development of the design in certain areas (including compliance with the designs of vendor furnished equipment and consideration of regulatory changes) (\$74,462,000); and
- d. transfer of operational spare parts (-\$74,000) and plant relocation costs (\$8,579,000) and station equipment costs (-\$5,462,000) from other construction costs in the May 1980 estimate to owner's cost in the May 1981 estimate as set forth in Attachment A.

The estimated cost presented above was developed utilizing UE&C provided design definitions which were adequate for estimating purposes. This cost estimate included a reassessment of Project No. 1 scope and schedule, labor productivity, revised future escalation rates from the May 1980 estimate and the variables described below.

Included in the May 1981 estimate is escalation of material and labor costs computed in accordance with specific terms for contracts already placed. The annual rate used for escalation computations was provided by the Supply System at an 11% average per year which is acceptable for estimating purposes. Escalation is applied to the total direct construction cost plus the sales tax, less the funds actually expended. The May 1981 estimate includes \$187,196,000 for future escalation and \$197,918,000 for contingencies to cover normal estimating variations. The estimate excludes (a) land; (b) nuclear fuel; (c) interest during construction; (d) Supply System administrative costs; (e) Station Equipment costs; (f) plant relocation costs; and (g) operational spare parts procured independently by the Supply System. Items for which BPC is not responsible and which therefore are not included in the estimate are: regulatory and statutory changes; rising costs of labor and materials ("escalation") beyond the assumed annual rates; abnormal weather; labor productivity and contractor performance problems (beyond a limited extent); labor disputes; significant equipment, material and skilled labor shortages; financing; changes in Project No. 1 scope or design as may be required by the Supply System or regulatory authorities; and unforeseeable and extraordinary conditions not included in the usual engineer's estimate of probable construction cost. Items such as those cited above may also result in necessary adjustments to the scheduled Project No. 1 completion date. In the event of a further schedule extension, various Project No. 1 costs will increase because of the effect on the aggregate cost for escalation, contingency, sales tax, construction facilities and engineering and construction management.

BPC is aware of the circumstances discussed under the section "Status of Projects Nos. 4 and 5 and Possible Effect on Net Billed Projects" under the heading "Recent Developments" appearing in the official statement to which this letter is attached. The resolution of circumstances concerning the financing of Project Nos. 4 and 5 may have an impact on the costs of Project No. 1; however, the extent of the impact, if any, cannot be determined at present.

The total committed costs of equipment and construction contracts awarded as of July 1, 1981 for Project No. 1 as provided by the Supply System are shown on Attachment B. These contract values have not yet been revised to reflect the Supply System's 1982 project construction budget. As noted on this attachment, these contracts totaled \$905,342,865. For many of the contracts, escalation provisions are included and prices are subject to change on the basis of changes in cost indices published by the Bureau of Labor Statistics or certain other trade indices. The equipment and construction contracts provide materials, equipment and construction services for both Project No. 1 and Project No. 4. Each such contract provides for the allocation of the costs so incurred between Project No. 1 and Project No. 4.

The Supply System informs us that it awarded these contracts by means of a competitive bidding process which solicited bids for Project No. 1 and Project No. 4, pursuant to the statutory duties of the Supply System as a joint operating agency of the State of Washington. Factors considered by the Supply System include price and the responsiveness of the bid to bidding requirements. The Supply System is also authorized to consider each bidder's experience, qualifications, available personnel and facilities. The contractors, in our present judgment, are qualified to perform the work within their contract.

#### **Project Status and Schedule**

Construction of Project No. 1 started in August 1975 under a limited work authorization granted by the Nuclear Regulatory Commission ("NRC") and a site certification agreement entered into with the State of Washington. A construction permit was issued by the NRC in December 1975.

As of July 1, 1981, the design engineering for Project No. 1 was approximately 82% complete for baseline design. Procurement of services and equipment for Project No. 1 was approximately 97% complete and construction of Project No. 1 was approximately 41% complete. Major civil work is approximately 80% complete on the Reactor Containment Building, the General Services Building and the Turbine-Generator Building. All major Nuclear Steam Supply System equipment has been installed in the Reactor Containment Building. Piping, mechanical and electrical work is in the early stages. The cooling towers are complete.

UE&C advises that the Babcock & Wilcox Nuclear Steam Supply System for Project No. 1 is of a different, more current design as compared to the Three Mile Island Plant (TMI-2), which was involved with a nuclear incident. However, UE&C and the Supply System are proceeding with those design changes which are anticipated to be required by the NRC as a result of the lessons learned from the TMI-2 incident.

Labor agreements with some craft unions in the Hanford area expired, and as a result, critical path work on Project No. 1 stopped in early June 1980. New agreements were reached, and construction on Project No. 1 resumed in October 1980. New wage agreements have recently been settled with the pipefitter's union and with the electrical worker's union. As a result of the 1980 work stoppage and a review of the total Project No. 1 scope, bulk quantity installation phasing and Project No. 1 schedule, BPC estimates the impact of the above items will revise the previous commercial operation date of June 1985 for Project No. 1 to June 1986.

#### **Conclusions**

Based upon the information provided by UE&C and the Supply System and subject to the previous discussion in this letter, it is our present opinion with respect to the Project that:

1. The present plans and design are suitable for the site, and the site is suitable for Project No. 1.
2. The program for construction is consistent with those for other installations of similar size and complexity. Completion of Project No. 1 by the date described above and within the total cost estimate described above is reasonable and obtainable.

3. All aspects of Project No. 1 are of presently proven engineering design or application, or are reasonable extensions thereof. Modifications to the design as required by TMI-2 will be implemented as they become known.

4. Project No. 1 is being designed to comply with existing licensing requirements at state and federal levels.

5. Project No. 1 is feasible from an engineering and construction standpoint and can be expected to operate reliably with normal maintenance.

Based upon the information provided by UE&C and the Supply System, the description of Project No. 1 and statement and summaries of the estimates contained in this letter and in the sections entitled "Location," "Description," "Permits and Licenses" and "Contracts and Schedule" under the heading "Project No. 1" appearing in the Official Statement to which this letter is attached are properly presented.

Very truly yours,

L. C. MCKILLIP  
*Manager of Projects*

**ATTACHMENT A**  
**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**  
**NUCLEAR PROJECT NO. 1**  
**Construction Cost Estimate**

	<u>Estimate of May 1980(1)</u>	<u>Project Estimate of May 1981(2)</u>
Structures and Improvements .....	\$ 338,802,000	\$ 504,094,000
Reactor Plant Equipment .....	257,302,000	346,664,000
Turbogenerator Unit .....	176,526,000	240,188,000
Accessory Electric Equipment .....	139,248,000	266,142,000
Miscellaneous Power Plant Equipment .....	57,521,000	101,548,000
Station Equipment .....	5,462,000	Not Included
Other Tangible Property .....	72,004,000	75,878,000
Escalation .....	215,681,000	187,196,000
Contingency and Rounding .....	82,314,000	197,918,000(5)
Total Direct Construction Cost .....	<u>\$1,344,860,000</u>	<u>\$1,919,628,000</u>
Operational Spare Parts .....	74,000	Not Included
Sales Tax .....	66,780,000	86,989,000
Architect-Engineer .....	112,864,000	199,185,000
Construction Manager .....	59,934,000	192,636,000
Owner's Cost .....	Not Included	Not Included
Plant Relocation Cost .....	(8,579,000)	Not Included
DOE Settlement .....	Not Included	Not Included
Owner's Contingencies .....	Not Included	Not Included
Total Other Construction Cost(3) ....	<u>231,073,000</u>	<u>\$ 478,810,000</u>
Total Construction Cost .....	<u>\$1,575,933,000</u>	<u>\$2,398,438,000</u>
Capitalized Interest During Construction .....	Not Included	Not Included
Total Project Construction Cost .....	<u>\$1,575,933,000</u>	<u>\$2,398,438,000</u>
Nuclear Fuel .....	Not Included	Not Included
Capitalized Interest on Nuclear Fuel .....	Not Included	Not Included
Total Nuclear Fuel .....	Not Included	Not Included
Financing Cost .....	Not Included	Not Included
Total Estimate(4) .....	<u>\$1,575,933,000</u>	<u>\$2,398,438,000</u>

**NOTES:**

- (1) Based on a commercial operation date of June 1985.
- (2) Based on a commercial operation date of June 1986.
- (3) Excludes certain direct construction costs and sales tax estimated and controlled solely by the Supply System.
- (4) See "Current Estimated Project Costs and Construction Contracts" in the letter to which this estimate is attached.
- (5) Includes \$24,308,000 for additional scope growth provided by the Supply System.

# ATTACHMENT B

## WASHINGTON PUBLIC POWER SUPPLY SYSTEM NUCLEAR PROJECT NO. 1

### Awarded Project Equipment and Construction Contracts (1) (As of July 1, 1981)

<u>Item</u>	<u>Contractor</u>	<u>Award Date</u>	<u>Present Contract</u>
Nuclear Steam Supply System (Less Fuel) .....	Babcock & Wilcox Co.	12/04/72	\$ 63,529,351
Turbine Generator and Accessories .....	Westinghouse Electric	7/05/74	45,425,565
Shop Fabricated Piping .....	B. F. Shaw Co.	1/13/78	15,799,365
Stainless Steel Liner .....	Boecon Corporation	9/19/75	8,700,427
General Construction Contract No. 1 .....	Hoffman Construction Corp.	8/22/75	6,908,533
General Construction Contract No. 2 .....	Boecon Corporation	10/22/76	18,236,207
Structural Steel—GSB and Containment .....	Allied/Capital	10/10/75	17,315,191
General Construction for CWPB, Turbine Building and Associ- ated Structures .....	Boecon Corporation	7/22/77	13,189,652
NSSS-Piping and Equipment Installation .....	J. A. Jones	2/24/78	19,423,052
Containment Liner .....	PDM Steel	8/27/74	10,937,613
Turbine-Generator and Condensor Installation .....	Foley, Wismer & Becker	8/11/78	7,033,792
Heating, Venting and Air Conditioning .....	University Mechanical	7/14/78	29,950,569
Main Electrical Contract .....	Foley, Wismer & Becker	6/09/78	124,184,606
Cooling Towers .....	Zurn Industries	12/05/75	12,642,995
Structural Steel-Turbine- Generator Building .....	Isaacson Steel Co.	6/24/77	6,038,840
Yard Piping .....	Peter Kiewit Sons' Co.	10/14/77	16,104,518
Containment and Main Steam Isolation Building Structure ..	G. F. Atkinson/Wright Schuchart-Harbor Co.	5/27/77	90,533,489
Reinforcing Bars (Superstructure) .....	Klinger Steel Co.	4/09/76	5,581,434
GSB Superstructure Above First lift and Adjacent Structures .....	G. F. Atkinson/Wright Schuchart-Harbor Co.	11/16/77	91,870,980
Piping and Mechanical Installation .....	J. A. Jones	3/24/78	109,615,321
Major Equipment Supports ....	Boecon Corporation	10/15/75	5,393,525
Fire Protection System .....	Cosco Fire Protection	3/14/80	6,830,709
Construction Services .....	Capital Development	6/22/76	13,359,644
Temporary Electrical Facilities .....	Power City Electric	1/30/75	6,451,090
One Hundred Fifty-Four Equipment and Construction Contracts, each with a value of less than \$5,000,000 .....			\$160,286,382
	Total .....		\$905,342,865

(1) Costs shown on Attachment B are incremental costs.



**Burns and Roe, Inc.**

185 Crossways Park Drive • Woodbury, New York 11797 • Telephone (516) 677-4000

Main Office  
550 Kinderkamack Road  
Oradell, New Jersey 07649

September 4, 1981

Board of Directors  
Washington Public Power Supply System  
Richland, Washington 99352

Subject: WASHINGTON PUBLIC POWER SUPPLY SYSTEM  
NUCLEAR PROJECT NO. 2

Gentlemen:

Burns and Roe, Inc. ("Burns & Roe") was selected and retained by the Washington Public Power Supply System (the "Supply System") to provide engineering, design and construction management services for the Washington Public Power Supply System Nuclear Project No. 2 ("Project No. 2") being constructed on the U.S. Department of Energy's Hanford Reservation, near Richland, Washington.

From February 1978 to June 1981, the construction of Project No. 2 was managed by a consolidated project organization consisting of Supply System and Burns and Roe personnel. Burns and Roe's personnel were integrated with the Supply System's personnel and acted at the direction and under the control of the Supply System in connection with construction management, contract administration, planning, scheduling, cost estimating, expediting, quality assurance and cost accounting. Burns and Roe continued to perform the duties of the Construction Engineer as specified in Resolution No. 640 of the Board of Directors of the Supply System.

In early 1981 the Bechtel Power Corporation ("Bechtel") was retained by the Supply System as the systems completion contractor. By June 1, 1981 the bulk construction was essentially complete. In order to reallocate resources and focus attention on the remaining engineering, construction, systems completion and turnover leading to project completion, effective June 1, 1981, the Supply System dissolved the consolidated project organization. Bechtel was assigned responsibility for management of the remaining construction, systems completion and turnover. Burns and Roe was assigned undivided responsibility for engineering and design. The Supply System retained overall project management responsibility as well as responsibility for startup and testing.

#### Project No. 2

Project No. 2 will consist of a single-unit, boiling water reactor ("BWR") electric generating station having a nominal capacity of 1,100,000 kilowatts together with the necessary transformation, switching and related 500 kV transmission facilities of the Federal Columbia River Power System. The plant layout and design, which provides for the initial development of a single 1,100,000 kilowatt unit, includes consideration of the possible future expansion to a station with another generating unit. Following is a summary description of the electric generating station.



Project No. 2 is located on the Hanford Reservation, approximately three miles west of the Columbia River and twelve miles north of the City of Richland. The plant will consist of a nuclear steam supply system, turbine-generator, cooling tower and river makeup water pumping and blowdown discharge facilities, together with associated structures, auxiliary equipment, instrumentation, controls and other accessories.

There will be seven basic structures comprising the overall power plant. These are the reactor, radioactive waste, turbine-generator, diesel generator and service buildings (together comprising the main plant), cooling towers and circulating pumphouse and river makeup water plant.

The nuclear plant will contain a General Electric Company boiling water reactor of proven design, that will have a manufacturer's guaranteed rating of 3,300 megawatts thermal and will supply approximately 14,295,000 pounds per hour of steam at 985 psia with feedwater returned at 420 degrees F. Westinghouse, the turbine-generator manufacturer, guarantees that this steam will produce an output of 1,154,000 kilowatts of generation under expected conditions of operation. After subtracting the electrical requirements for station operating auxiliaries, the net plant output will be approximately 1,093,000 kilowatts.

The turbine-generator is a tandem-compound, 6-flow unit consisting of a high-pressure turbine section on the same shaft with three low-pressure turbine sections and the electric generator. The generator is a three-phase, 60 Hertz, 1800 rpm unit rated at 1,231,700 kVA at 0.975 power factor and will generate at 25-kV. The turbine-generator plant will be complete with auxiliary systems, pumps, controls, instrumentation, electric switch-gear and fire protection equipment.

The circulating water pumphouse which provides condenser cooling water, fire system water and service auxiliary cooling water is located south of the plant adjacent to six mechanical draft cooling towers. The condenser cooling water will discharge from the turbine-generator building and return to the cooling towers. Makeup water to replace the evaporative losses of the circulating water cooling system will be obtained from the Columbia River by means of three makeup water pumps. Blowdown from the circulating water system will be discharged to the Columbia River downstream of the makeup water intake.

Diesel generators are included for emergency use in the event of loss of auxiliary power. The diesel generators are housed in a separate concrete building located adjacent to the reactor building.

The service building adjacent to the turbine-generator and reactor buildings will house offices, laboratories, locker rooms, lobby, first-aid facilities, machine shop and storerooms.

#### **Project No. 2 Status and Schedule**

Construction of Project No. 2 was started in August 1972 under a site certification by the State of Washington and an exemption granted by the Atomic Energy Commission ("AEC"), the predecessor organization of the Nuclear Regulatory Commission ("NRC"). The construction permit was granted by the AEC in March 1973 at which time construction of the reactor building substructure was started. Construction of the remainder of the main plant was started in May 1973.

Major structural and civil work on Project No. 2 is complete. The bulk of mechanical, electrical and instrumentation work is installed and the emphasis has been placed on the completion of systems to support a plant test and startup program. Construction is approximately 86% complete as of July 1, 1981.

Several factors have required revision to the previously scheduled January 1983 commercial operation date: (1) In 1980 a six-month labor dispute had severely curtailed construction activities. (2) Deficiencies in the quality of contractor documentation or construction work have been identified resulting in a need for rework or modification. (3) As a result of these deficiencies in the quality of contractor work, a hold had been placed on all safety related work until reverified to the satisfaction of

the Supply System and in certain cases the NRC. This hold was not substantially released until June 1, 1981. (4) Because of the TMI-2 incident, discussed later, key staff of the NRC were not available for processing of operating licensing applications, and this caused a delay in the operating licensing process. (5) It is expected that because of the TMI-2 incident and other new regulatory requirements, additional design changes will also be required prior to fuel load. As a result of these factors, in the second quarter of 1981 a complete reassessment of the remaining work and the time and resources necessary to accomplish this work was made. The resulting schedule leads to fuel load by September 1983 and commercial operation by February 1984. This schedule has been published and is now the basis of planning and monitoring the progress of Project No. 2.

In November 1979 the Supply System voluntarily stopped construction work on the sacrificial shield wall and pipe whip restraints in the reactor building because of discrepancies in records and work conformance to design requirements. The NRC advised the Supply System not to restart work without NRC approval and commenced an investigation of this work. In February 1980 the NRC lifted its stop work order and approved the Supply System's inspection and repair program for the pipe whip restraints.

Some repairs have been completed on the pipe whip restraints. Additional repairs or replacements are planned. Because of the prior stop work order on the sacrificial shield wall, all items designed to be attached to the wall could not be installed. A report was submitted to the NRC in August 1980 in which the Supply System and Burns and Roe concluded that a limited scope of repair was required for the wall to perform the designed functions. Based upon this report a release of the stop work order was received from the NRC in the spring of 1981. A major portion of the repairs are now complete.

In June 1980 the NRC issued a Notice of Violation to the Supply System alleging failure to assure that the contractors' quality assurance programs were properly implemented and proposing to impose civil penalties. The Supply System responded to the NRC Notice of Violation requesting mitigation of the civil penalties and proposed a plan for evaluating the quality assurance programs of each contractor and reverifying the adequacy of previously completed construction work on safety systems. In addition, the Supply System placed a hold on all construction work on safety systems pending this review. Work was resumed on a case-by-case basis with the final release of most work on June 1, 1981. The minor outstanding items are anticipated to be released in September 1981.

The containment vessel was designed and constructed in accordance with basic design criteria furnished by the General Electric Company ("GE"). GE subsequently obtained testing or design information which necessitated changes in basic design criteria. The project design was changed and physical changes are being completed on certain structures and systems to insure that they will be able to withstand the new loads resulting from revised criteria. All known design changes have been issued by Burns and Roe to the contractors. Additional changes may be required if dictated by the confirmatory analysis using the revised loads but are not expected to result in major construction changes. This containment vessel retrofit program continues as a risk to Project No. 2 with regard to the licensing basis for the loads. Programs have been implemented by the BWR owners, GE and Burns and Roe to resolve questions concerning these loads. NRC approval for fuel load depends on acceptance of these programs, since the NRC must approve the final design of all safety related aspects of Project No. 2.

On March 28, 1979, Unit 2 of the Three Mile Island Nuclear Station ("TMI-2") in Pennsylvania operated by the Metropolitan Edison Co. was involved in a nuclear incident. TMI-2 employs a pressurized water reactor which differs from the boiling water reactor being used in Project No. 2. The NRC has issued requirements for action to be taken by licensees as a result of the lessons learned from the TMI-2 incident. This includes requirements for studies and analysis, design changes, improved training and staffing, and improved procedures. The Supply System and Burns and Roe have identified the changes necessary and have developed plans of action to meet the presently known revised requirements which have been factored into the schedule. The engineering of the changes is underway. There is still

some uncertainty concerning the NRC's acceptance of these actions as well as whether additional requirements will be imposed at a future date.

The diversion of NRC staff due to the TMI-2 incident had produced a backlog within the NRC which had impacted the time processing of Project No. 2's application. The Supply System and Burns and Roe have established a licensing schedule supporting an accelerated fuel load date. The assistance and support of the NRC were requested and this accelerated licensing schedule has been agreed to by the NRC.

Recent geologic findings in and adjacent to the Hanford Reservation have required an investigation of whether these findings affect the present Design Basis Earthquake ("DBE") which governs the seismic design of Project No. 2 and Projects Nos. 1 and 4. The Supply System and its consultants are presently evaluating these new findings to determine if additional geological information and analysis are required to defend the present DBE. Design and construction are proceeding on the basis of the current plant seismic requirements.

The Fire Protection System for Project No. 2 is designed to be in accordance with NRC guidelines for nuclear plants of similar vintage. In July 1980, the NRC issued a proposed rulemaking which is applicable to operating plants and plants under construction and would impose new and expanded requirements. An assessment of the degree of compliance of the present design to the proposed NRC requirements was performed during the summer of 1980. The rule became effective in February 1981 but only applied to operating plants. In a May 8th letter to the Supply System, the NRC formally imposed the requirements of this rule on Project No. 2. Burns and Roe is currently conducting a study and performing the engineering necessary to comply with the new rules. Although the present plant design substantially complies with most of the proposed guidelines, additional fire barriers and other minor changes likely will be required. The impact of these proposed requirements cannot be determined until all the engineering evaluations are completed.

The NRC has raised questions in regard to the design of all light water reactors concerning possible Anticipated Transient Without Scram ("ATWS"). At the present time, systems for mitigation of ATWS are not a licensing requirement for Project No. 2. In order to impose such a requirement, the NRC will have to go through a rule-making process, which is not expected to be final until late 1981. It is anticipated that many changes resulting from this process will be installed in Project No. 2 after fuel load during a subsequent plant outage, but that some changes may be required prior to fuel load. Provisions have been designed and constructed into Project No. 2 for adding certain systems and components that are considered most likely to be required.

The Final Safety Analysis Report was sent to the NRC in March 1978 and the application for an operating license was accepted for review by the NRC in June 1978. Presently, primary emphasis in the licensing area consists of answering NRC review questions, preparing amendments to the Final Safety Analysis Report, participating with other BWR owners in review and discussion with the NRC of generic BWR safety issues, and submitting revised analyses and subsequent assessments of the containment vessel and associated systems and structures. The sixteenth amendment to the Final Safety Analysis Report was issued in June 1981. The operating license will be required before fuel loading presently scheduled for September 1983.

#### **Current Estimated Project No. 2 Costs and Construction Contracts**

The current total estimated cost of construction as of May 1981 is \$2,005,772,000, as shown in Attachment A of this letter. This estimate is based on achieving commercial operation by February 1984. The May 1980 construction cost estimate current at the time of the last bond issue for Project No. 2, shown in Attachment A, was \$1,464,528,000. The increase results from (1) a thirteen month extension of the commercial operation date to February 1984, as discussed above; (2) increases in the cost of the containment vessel retrofit work; (3) rework of systems and components resulting from contractor quality deficiencies; (4) changes required to comply with designs of vendor furnished

equipment and consideration of regulatory changes including TMI-2 lessons learned; (5) lower than anticipated productivity on construction contracts; (6) unanticipated escalation; (7) resultant additional architect-engineer and construction management services; (8) the effects of the labor disruption; and (9) quality assurance hold on safety systems work.

This estimate covers all nuclear electric generating plant equipment and construction, including main step-up transformers, engineering, construction management and quality assurance services, consultants, contingency and escalation applicable to the aforementioned, and sales tax.

An allowance of \$119,000,000 is included in the estimated construction cost to cover unforeseen contingency items which may be necessary as the details of design are further developed and as construction progresses. No allowance has been made specifically for additional schedule slippage.

Operational spare parts, nuclear fuel, owner's cost, owner's contingencies, interest during construction, financing costs and any allowances for judgments rendered in litigation discussed in the Official Statement to which this letter is attached as an exhibit are not included in Attachment A.

The total cost of equipment and construction contracts awarded to July 1, 1981, is shown in Attachment B of this letter. The total amount for these contracts is \$1,013,631,000, which, based on the May 1981 cost estimate, is approximately 66% of the currently estimated total value of all construction and equipment contracts for Project No. 2.

Attachment B includes contracts which contain escalation provisions. These escalation provisions are based on indices of the Bureau of Labor Statistics or other generally accepted industrial indices. In addition, provision is included in Attachment A for escalation of contracts not as yet awarded at the rate of 11% per annum.

#### Conclusions

On the basis of our current best knowledge, including information furnished by the Supply System and its contractors, and others, and current regulatory criteria, and subject to the previous discussion in this letter which should be read in conjunction with and as part of the following conclusions, it is our considered opinion with respect to Project No. 2 that:

1. The present plans and designs are suitable for the Hanford site, and the Hanford site is suitable for Project No. 2 provided the seismic requirements do not change significantly.
2. There are no major engineering or construction problems associated with Project No. 2 that require any untried design methods.
3. The program for construction is consistent with those for other installations of similar type, size and complexity, and the February 1984 commercial operation date is feasible.
4. The cost estimate for construction in Attachment A is adequate to complete the work as known at this time. Unforeseen factors delaying the commercial operation date or changing the work could increase costs beyond the present contingency referred to above.
5. Project No. 2 is feasible from an engineering and construction standpoint, is of acceptable commercial design and can be expected to operate reliably with normal maintenance.
6. The description of Project No. 2 and the statements and summaries of our estimates in Attachment A which appear in the Official Statement in the sections titled "Location", "Description", "Permits and Licenses", and "Contracts and Schedules" under the heading "Project No. 2" to which this report is an exhibit are correct in all material respects and in conformity with, and a fair and adequate presentation of, the information in this report.

Very truly yours,

KENNETH A. ROE  
*Chairman and President*

**ATTACHMENT A**  
**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**  
**NUCLEAR PROJECT NO. 2**

**Construction Cost Estimate**

	<u>Estimate of May 1980(2)</u>	<u>Estimate of May 1981(1)</u>
Structures and Improvements .....	\$ 219,367,000	\$ 252,749,000
Reactor Plant Equipment .....	420,584,000	569,796,000
Turbogenerator Unit .....	105,807,000	100,052,000
Accessory Electric Equipment .....	124,788,000	171,424,000
Miscellaneous Power Plant Equipment .....	103,820,000	140,588,000
Station Equipment .....	2,576,000	2,606,000
Other Tangible Property .....	59,759,000(3)	64,742,000
Escalation .....	102,977,000	121,732,000
Contingency .....	36,000,000	119,000,000
Total Direct Construction Cost .....	<u>\$1,175,678,000</u>	<u>\$1,542,689,000</u>
Operational Spare Parts .....	Not included	Not included
Sales Tax .....	59,342,000	71,185,000
Architect-Engineer .....	165,476,000(4)	257,578,000
Construction Manager .....	64,032,000(4)	134,322,000
Owner's Cost .....	Not included	Not included
Owner's Contingencies .....	Not included	Not included
Total Construction Cost .....	<u>\$1,464,528,000</u>	<u>\$2,005,774,000</u>
Net Capitalized Interest During Construction .....	Not included	Not included
Total Project Construction Cost .....	<u>\$1,464,528,000</u>	<u>\$2,005,774,000</u>
Nuclear Fuel .....	Not included	Not included
Financing Cost .....	Not included	Not included
Total Estimate .....	<u><u>\$1,464,528,000</u></u>	<u><u>\$2,005,774,000</u></u>

(1) Based on a commercial operation date of February 1984. This is the estimate upon which the Fiscal Year 1982 Project Construction Budget is based.

(2) Based on a commercial operation date of January 1983, and the scope of work known at the time of the estimate, May 1980. This is the estimate upon which the Fiscal Year 1981 Project Construction Budget is based.

(3) \$9,700,000 representing construction completion contract, FY 1981 budget estimate, transferred from original budget item "Other Tangible Property" to "Construction Manager".

(4) Reallocation of "Architect-Engineer" and "Construction Manager" FY 1981 budget items to reflect revised division of responsibility.

# ATTACHMENT B

## WASHINGTON PUBLIC POWER SUPPLY SYSTEM

### NUCLEAR PROJECT NO. 2

#### AWARDED PROJECT EQUIPMENT AND CONSTRUCTION CONTRACTS

(As of July 1, 1981)

<u>Item</u>	<u>Contractor</u>	<u>Awarded Date</u>	<u>Present Contract Amount</u>
Turbine Generator & Accessories . . . .	Westinghouse	5/ 2/67	\$ 35,223,000
Nuclear Steam Supply System . . . . .	General Electric	3/23/71	79,638,000
Electric Cable . . . . .	Raychem Corporation	7/09/74	6,482,000
Fire Protection System . . . . .	Sentry Automatic System	2/ 4/77	8,809,000
General Construction . . . . .	Bovee & Crail	3/30/73	27,402,000
Minor Construction & Maintenance . . .	Northwest Construction	6/22/79	8,318,000
General Construction—Completion . .	Peter Kiewit	9/30/76	24,781,000
Structural Steel . . . . .	Pittsburgh Des Moines	3/12/74	5,272,000
Architectural Construction . . . . .	Peter Kiewit	5/23/75	15,049,000
Primary Containment Vessel . . . . .	Pittsburgh Des Moines	10/20/72	10,789,000
Containment Vessel Retrofit . . . . .	Pittsburgh Des Moines	1/28/77	60,397,000
Mechanical Equipment Installation . .	Wright-Schuchart-Harbor/ BOECON/Bovee & Crail/GERI	5/10/74	379,884,000
HVAC & Plumbing Installation . . . .	Waldinger Corp.	5/10/74	50,277,000
Electrical Installation . . . . .	Fischbach/Lord	2/14/75	149,209,000
Instrumentation Installation . . . . .	Johnson Controls	11/ 5/76	29,245,000
Cooling Towers . . . . .	Marley Corporation	9/22/72	7,512,000
Make-up Water Pumphouse . . . . .	McMillin Brothers	12/27/74	5,655,000
Interim Construction Work . . . . .	Wright-Schuchart-Harbor	2/26/76	7,889,000
One Hundred Forty-six (146) Contracts each with a value less than \$5,000,000 and Miscellaneous Purchase Orders . . . . .			101,800,000
Total Awarded Equipment and Construction Contracts . . . . .			\$1,013,631,000

(1) Includes escalation paid to July 1, 1981. The total amount for awarded equipment and construction contracts includes \$62,214,000 for escalation.



**EBASCO SERVICES  
INCORPORATED**

**TWO WORLD TRADE CENTER  
NEW YORK, N. Y. 10048**

**September 4, 1981.**

**Board of Directors  
Washington Public Power Supply System  
3000 George Washington Way  
Post Office Box 968  
Richland, Washington 99352**

**Gentlemen:**

**Re: WASHINGTON PUBLIC POWER SUPPLY SYSTEM  
NUCLEAR PROJECT NO. 3  
PROJECT STATUS REVIEW AND ANALYSIS**

In January 1973, Ebasco Services Incorporated ("Ebasco") was selected and retained by the Washington Public Power Supply System ("Supply System") as Construction Engineer to provide engineering, construction management and related services for Washington Public Power Supply System Nuclear Project No. 3. Ebasco is also Construction Engineer for Washington Public Power Supply System Nuclear Project No. 5 of duplicate design and located adjacent to Nuclear Project No. 3 on a site near Satsop in southeastern Grays Harbor County, Washington.

As Construction Engineer for Nuclear Project No. 3 and Nuclear Project No. 5, Ebasco is responsible for the engineering, design quality assurance, cost estimating and reporting and construction management of Nuclear Project No. 3. In addition, Ebasco is providing related services including expediting, materials and application engineering, vendor quality assurance, applied physics and nuclear engineering, licensing, plant operations and betterment, and assistance in procurement and contract administration for contracts placed by the Supply System.

In August 1978, the Supply System merged its site organization with that of Ebasco's with the objective to more effectively utilize the personnel available and facilitate the decision making and approval process. Since these objectives were not obtained to the degree anticipated, in July 1980, Ebasco recommended to centralize the Construction Management Function at the site under the direction of Ebasco. The Supply System concurred in October 1980, that Ebasco reassume its role as an independent site organization. This organization change took place over a period of time in order that the integrity of the Quality Assurance Programs at the site be maintained, and by early 1981 was fully implemented.

**Nuclear Project No. 3**

Nuclear Project No. 3 consists of a 1,300 MWe class pressurized light-water reactor, nuclear power station, together with all necessary plant facilities including transmission facilities to interconnect with the proposed 500 kV switchyard to be constructed by the Bonneville Power Administration ("BPA"). Nuclear Project No. 3 shares certain common facilities with Nuclear Project No. 5.



Nuclear Project No. 3 is located on a site near Satsop in the southeastern portion of Grays Harbor County, approximately 16 miles east of Aberdeen and 1 mile southeast of the confluence of the Chehalis and Satsop Rivers. The site is conveniently located with respect to the main railroad line shared by the Chicago, Milwaukee, St. Paul and Pacific Railroad and the Union Pacific Railroad; U.S. Highway 12; the Chehalis River which is navigable to ocean going barges to a point approximately 5 miles west of the site; and an existing BPA transmission corridor which is part of the Federal Columbia River Power System.

The nuclear steam supply system ("NSSS"), including the fabrication of the initial nuclear fuel core, for Nuclear Project No. 3 will be supplied by Combustion Engineering, Inc. and will include the System 80 pressurized water reactor design together with two U-tube steam generators. The NSSS has a thermal rating of 3,817 MWt, and will supply approximately 18,000,000 pounds per hour of steam at 1,000 psig and 550 degrees F.

The turbine-generator will be supplied by Westinghouse Electric Corporation, and will consist of a 6-flow tandem compound steam turbine with a gross electrical output of 1,316 MWe at three and one-half inches Hg backpressure and a net electrical output of approximately 1,240 MWe. Steam exhausting from the three low-pressure sections of the turbine will be condensed by circulating water whose heat will be dissipated in a natural draft cooling tower. A groundwater intake system will provide the make-up water to replenish the evaporative losses in the cooling tower. The generator consists of a three-phase, 60 Hertz, 1,800 rpm unit rated at 1,460.5 MVA at 0.95 power factor and generates at 25 KV.

The main plant structures include the reactor containment and shield structure, the reactor auxiliary building, the fuel handling building and the control room area—all supported on a common foundation mat and referred to collectively as the Combination Structure—and the turbine-generator building. The Combination Structure will be founded on fresh sandstone rock and is designed to withstand a horizontal seismic ground acceleration of 0.32g. A natural draft hyperbolic cooling tower, 500 feet high with a base diameter of 400 feet, is the largest plant structure. In addition, there is planned an administration and service building.

As a result of the incident at the Three Mile Island Plant ("TMI-2"), the design of the NSSS for Nuclear Project No. 3 is being carefully evaluated by Ebasco, Combustion Engineering and the Supply System. The Nuclear Regulatory Commission is also conducting an overall reassessment of the safety related aspects of Nuclear Power Plant design and as a result has issued several Regulatory Guides that have, through their implementation, impacted the design of Nuclear Project No. 3. Although, additional modifications may be required, it is Ebasco's belief, based upon currently known information, that the Fiscal Year 1982 Schedule and Cost Estimate is sufficient to accommodate such modifications.

Nuclear Project No. 3 is being designed to comply with applicable existing codes, laws, standards and regulations of local, state and federal agencies, includes components and equipment of proven design or reasonable extensions of proven design concepts; and is compatible with the comprehensive land-use plans and zoning requirements of the site region.

#### **Contract Status and Methods**

As of July 1, 1981, 182 of 191 prepurchased equipment, material and construction contracts have been placed. A listing of the contracts authorized is shown in Attachment B. The remaining equipment contracts are expected to be awarded during the next twelve months.

The prepurchased equipment and construction contracts are awarded by the Supply System by means of a competitive process pursuant to the statutory requirements with which the Supply System must conform as a joint operating agency of the State of Washington. Factors considered by the Supply System include price and responsiveness of the bid to bidding requirements. The Supply System is also

authorized to consider the bidder's experience, qualifications, available personnel and facilities. In our opinion, the vendors and the contractors who have been awarded contracts by the Supply System are qualified for the particular type of work to be performed by them.

#### **Current Estimated Project No. 3 Construction Cost**

The Nuclear Project No. 3 construction cost estimate was developed on an equitable cost basis which takes into consideration that both Nuclear Project No. 3 and Nuclear Project No. 5 benefit from the economics of dual unit construction and therefore share certain costs on the basis of the proportion of respective benefit. The estimated capital cost of the items within Ebasco's scope of responsibility and included in the Fiscal Year 1982 Project Construction Cost Estimate for Nuclear Project No. 3 was \$2,653,134,000. This estimate reflects an increase of \$816,821,000 over the Project Construction Cost Estimate for Fiscal Year 1981. The reasons for the increase and the approximate contribution of each to the total are: (1) Actual award amounts and estimates for particular equipment and material exceeding those anticipated in the previous Project Construction Cost Estimate ( $\frac{1}{2}\%$ ); (2) Lower than anticipated productivities on installation contracts and allowance for same on future work (9%); (3) Historical escalation exceeding anticipated rates and allowance for higher future escalation rate for material and labor (4%); (4) Increases in contractor indirect costs resulting from reassessment of contractor support requirements and contract duration (23%); (5) Increases in bulk material quantities resulting from a more complete design basis (11%); (6) Impacts of CB&I derrick accident and boilermaker strike (1%); (7) Further implementation of regulatory impacts post TMI-2 ( $1\frac{1}{2}\%$ ); (8) Additional Architect Engineer and Construction Manager Services due to the increased scope resulting from the reorganization mentioned above and requirement to staff for an additional duration of time ( $8\frac{1}{2}\%$ ); (9) Subsequent higher sales tax and escalation ( $12\frac{1}{2}\%$ ); and (10) A higher contingency allowance (29%).

The basis for escalation and contingency, which are identified separately in the estimate, are as follows:

#### **Escalation**

Labor and material escalation is computed in accordance with the terms of current labor agreements and existing contracts. For material not presently covered by labor agreements or material contracts, escalation is computed at 11% per year for 1981 and 9% thereafter, compounded from March 1, 1981. For labor not presently covered by labor agreements or material contracts, escalation is computed at 12% per year for 1981 and 1982 and 10% per year thereafter, compounded from March 1, 1981.

A total of \$343,917,000 is included to cover escalation on awarded contracts and future escalation from March 1981 for unawarded contracts. A change of 1% in the annual escalation rates would result in an increase or decrease of approximately \$25,000,000 in the estimate.

#### **Contingency**

A total of \$350,000,000 is included as contingency to cover the potential impacts of design uncertainties (including TMI-2), quantity refinements, departures from assumed productivity rates and the schedule extension of six months as described below.

Ebasco is aware of the current financial situation relating to Nuclear Project No. 5 and that decisions made in the future to address this situation could impact the Project Construction Cost Estimate for Nuclear Project No. 3. It is, however, not possible at this time to estimate this potential impact.

#### **Nuclear Project No. 3 Status and Schedule**

As of July 1, 1981, engineering activities were 82% complete, prepurchased equipment and material procurement activities were 97% complete and construction of Nuclear Project No. 3 was approximately 32% complete. The engineering percent complete is currently being calculated in accordance with an

earned value system of measurement. This measurement system was developed to give a more accurate status in the late stages of engineering design.

Preliminary site work commenced in April 1977 and major Nuclear Project No. 3 site excavation activities are complete. Installation of the Combination Structure foundation mat concrete commenced in September 1978 and was completed during January 1979. The reactor building concrete shield wall was completed in February 1979. Work started on the Combination Structure walls and slab concrete in February 1979 and continues. Turbine Building concrete and structural steel work and installation of siding and roofing are essentially complete.

The steel containment vessel erection began in March 1979, and painting of the vessel was completed in November 1980. The dome of the vessel will be erected at a later date after all major equipment is lifted into the Reactor Building. Piping, Electrical and HVAC installation in the Reactor Auxiliary, Fuel Handling and Turbine Buildings all began in 1980. Reactor Building concrete also began in 1980. All these activities continue.

The Fiscal Year 1982 Cost Estimate has provided for a six month schedule contingency. This schedule contingency was developed by extending the commercial operation date from June 1986 to December 1986. The previous commercial operation date of June 1986 is being maintained as the Target Schedule to which all Site Construction activities are planned. Funding for this time extension has been included in the contingency account as discussed above.

## CONCLUSIONS

We have reviewed in depth those aspects of Nuclear Project No. 3 which are within Ebasco's scope of responsibility. Based upon presently known regulatory criteria and the schedular and economic assumptions set forth herein, it is our considered opinion, with respect to Nuclear Project No. 3 that:

1. The Satsop site is a suitable location for Nuclear Project No. 3.
2. All aspects of Nuclear Project No. 3 are of presently proven engineering design or application, or are reasonable extension thereof. Modifications to the design as required by TMI-2 will be implemented as they become known.
3. Nuclear Project No. 3 is being designed to comply with existing licensing requirements at local, state and federal levels.
4. The program for construction is consistent with those for other installations of similar size and complexity, and is realistic. The completion of Nuclear Project No. 3 in accordance with the scheduled commercial operation date of December 1986 is reasonably anticipated.
5. The work within Ebasco's scope of responsibility is expected to be completed within the Fiscal Year 1982 Project Construction Cost Estimate.
6. Following an initial period of testing and preliminary operation, Nuclear Project No. 3 is expected to operate in a reliable manner with normal maintenance.

The Nuclear Project No. 3 description and statements and summaries of our estimates contained in this letter which are set forth in the Official Statement in the sections titled "Location", "Description", "Permits and Licences" and "Contracts and Schedule" under the caption "Project No. 3" to which this letter is attached are correct.

Very truly yours,

W. WALLACE  
President

**ATTACHMENT A**  
**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**  
**NUCLEAR PROJECT NO. 3**

**Construction Cost Estimate**

**Ebasco Scope**

<u>FPC Account</u>	<u>Estimate as of July 1980(1)</u>	<u>Estimate as of July 1981(2)</u>
Land and Land Rights (3) .....	\$ —	\$ —
Structures and Improvements .....	423,991,000	548,427,000
Reactor Plant Equipment .....	303,961,000	462,409,000
Turbogenerator Unit .....	208,665,000	237,481,000
Accessory Electric Equipment .....	76,765,000	136,765,000
Miscellaneous Power Plant Equipment .....	62,513,000	62,546,000
Station Equipment .....	21,249,000	21,330,000
Other Tangible Property .....	115,090,000	97,917,000
Escalation .....	231,917,000	343,917,000
Contingency .....	96,951,000	350,000,000
<b>Total Direct Construction Cost .....</b>	<b>\$1,523,102,000</b>	<b>\$2,260,792,000</b>
Sales Tax .....	80,115,000	99,579,000
Architect-Engineer .....	113,423,000	140,394,000
Construction Manager .....	101,673,000	152,369,000
<b>Total Ebasco Scope .....</b>	<b>\$1,818,313,000</b>	<b>\$2,653,134,000</b>

- (1) Based on a commercial operation date of June 1986. This is the estimate upon which the Fiscal Year 1981 Project Construction Budget is based.
- (2) Based on a commercial operation date of December 1986. This is the estimate upon which the Fiscal Year 1982 Project Construction Budget is based.
- (3) All Land and Land Rights Costs are included in Owner's Cost.

# ATTACHMENT B

## WASHINGTON PUBLIC POWER SUPPLY SYSTEM

### NUCLEAR PROJECT NO. 3

#### Awarded Project Contracts

(As of July 1, 1981)

<u>Item</u>	<u>Contractor</u>	<u>Contract Award Date(1)</u>	<u>Present Contract Amount(2)</u>
Nuclear Steam Supply System .....	Combustion Engineering	7/25/73	\$ 60,470,000
Turbine Generator and Accessories ..	Westinghouse Electric	8/31/73	40,755,000
Steel Containment Vessel .....	Chicago Bridge and Iron Company	10/ 9/74	30,261,000
Surface Condensor & Accessories ....	Ecolaire, Inc.	11/24/74	5,025,000
Reinforcing Steel .....	Bethlehem Steel Corp.	6/ 2/76	16,218,000
Supply and Delivery of Concrete ....	Associated Sand & Gravel	4/13/76	8,204,000
Cooling Towers and Accessories ....	Zurn Industries	9/17/76	15,542,000
Main, Stand-by and Auxiliary Transformers and Accessories .....	General Electric	4/22/76	5,294,000
Excavation .....	S. J. Groves & Sons Co.	6/29/76	37,790,000
Piping and Piping Supports .....	Associated Piping and Engineering Corp.	3/ 2/77	31,404,000
Preliminary Yard Piping & Civil Work	Mid-Mountain Contractors	10/ 3/77	6,619,000
Reactor Auxiliary Building Foundation Mat Construction .....	Guy F. Atkinson	11/ 7/77	10,047,000
Turbine Building Concrete Construction .....	Boecon	6/29/78	15,033,000
RAB, FHB Substructure Concrete Construction .....	Morrison-Knudsen	8/24/78	107,026,000
Construction Services .....	Capital Development Co.	11/17/78	7,545,000
RAB/FHB Piping Erection and Mechanical Equipment Installation(3)	Peter Kiewit Sons' Co.	4/27/79	198,073,000
RAB, FHB and TB HVAC Equipment Installation and Duct Erection ....	Sam P. Wallace/Superior (A Joint Venture)	7/ 6/79	15,259,000
Electrical Construction .....	Fischbach & Moore Inc.	12/19/79	80,673,000
Reactor Building Concrete Construction .....	J. A. Jones Const. Co.	12/19/79	28,326,000
Turbine Generator Erection .....	Wisner & Becker	1/21/80	7,942,000
Structural Steel—Phase IV .....	Chicago Bridge and Iron Company	3/ 3/80	9,887,000
Construction of Makeup Water Wells Access and NSSS Haul Road .....	Capital Development Co.	5/ 8/80	6,872,000
Structural Steel Pipe Restraints .....	Chicago Bridge and Iron Company	5/23/80	13,154,000

**ATTACHMENT B (Cont'd)**  
**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**  
**NUCLEAR PROJECT NO. 3**

**Awarded Project Contracts**  
**(As of July 1, 1981)**

<u>Item</u>	<u>Contractor</u>	<u>Contract Award Date(1)</u>	<u>Present Contract Amount(2)</u>
Interior and Exterior Non-Nuclear Painting .....	Robert McMullan & Son Inc.	7/10/80	\$ 5,379,000
Construction Support Services .....	Schneider Inc.	7/29/80	10,419,000
Heavy Rigging .....	Lampson Universal Rigging, Inc.	7/11/80	7,755,000
Fire Protection System .....	Grimell Fire Protection Systems Company	11/14/80	5,655,000
RB Mechanical Equipment and Piping Installation .....	Morrison-Knudsen/Energy System Installation/Lord Electric (A Joint Venture)	1/16/81	88,113,000
Miscellaneous Buildings, Architectural Construction .....	Capital Development Co.	6/12/81	20,921,000
One Hundred Fifty-Three (153) contracts each with a value less than \$5,000,000 ...			\$ 151,701,000
<b>TOTAL .....</b>			<b><u><u>\$1,047,362,000</u></u></b>

(1) Notice of Award Date.

(2) Present contract amount includes executed change orders and is on the equitable cost sharing basis. See the Section entitled "Current Estimated Project Costs and Construction Contracts" in this letter.

(3) Contract 3240-226 combined with Contract 3240-251 due to realignment.



## EXHIBIT F

## PROPOSED FORMS OF OPINIONS OF COUNSEL

[LETTERHEAD OF WOOD & DAWSON]  
 [LETTERHEAD OF HOUGHTON CLUCK COUGHLIN & RILEY]

Board of Directors  
 Washington Public Power Supply System  
 Richland, Washington

Dear Sirs:

Washington Public Power Supply System Nuclear Project No. 1 Revenue Bonds,  
 Series 1981D, \$315,000,000

At your request we have examined into the validity of an issue of \$315,000,000 Washington Public Power Supply System Nuclear Project No. 1 Revenue Bonds, Series 1981D, of Washington Public Power Supply System (the "System"), a municipal corporation of the State of Washington. Said bonds are issuable in coupon form, registrable as to principal only, in the denomination of \$5,000 each, and in fully registered form, without coupons, in denominations of \$5,000 and any multiples thereof. The coupon bonds are numbered from 1 upwards and are dated September 1, 1981. The fully registered bonds are numbered from R-1 upwards and, except fully registered bonds initially issued, which are dated September 1, 1981, shall be dated so that no gain or loss of interest shall result from exchanges or transfers thereof as provided therein and in the Bond Resolution hereinafter mentioned. Said bonds mature on July 1 in each of the years and in the amounts and bear interest, payable January 1, 1982, and semiannually thereafter on January 1 and July 1, as follows:

<u>Year</u>	<u>Principal Amount</u>	<u>Interest Rate</u>
2001	\$ 20,000,000	14 $\frac{3}{8}$ %
2003	30,000,000	8 $\frac{1}{4}$
2017	265,000,000	15

Said bonds are subject to redemption prior to maturity upon the terms and conditions set forth therein, and recite that they are issued under and pursuant to Resolution No. 769, adopted by the Board of Directors of the System on September 18, 1975, as amended, and a resolution supplemental thereto, Resolution No. 1183 adopted by said Board on September 4, 1981 (hereinafter referred to collectively as the "Bond Resolution"), and under the authority of and in full compliance with the Constitution and statutes of the State of Washington, including Titles 43 and 54 of the Revised Code of Washington, for the purpose of acquiring, by purchase or condemnation, and constructing a nuclear electric generating plant and associated facilities as a separate utility system of the System constituting and known as the Washington Public Power Supply System Nuclear Project No. 1.

We have examined the Constitution and statutes of the State of Washington, certified copies of proceedings of the Board of Directors of the System authorizing the issuance of said bonds, including the Bond Resolution, other proofs relating to the issuance of said bonds and an executed coupon bond of said series.



In our opinion, the System is a municipal corporation of the State of Washington, duly created and validly existing, the Bond Resolution has been duly adopted and the provisions thereof are valid and binding upon the System, and said bonds have been duly authorized and issued in accordance with the Constitution and statutes of the State of Washington and constitute valid and legally binding obligations of the System payable solely from the funds and revenues as set forth and provided in the Bond Resolution on a parity with the bonds heretofore issued, and any bonds hereafter issued on a parity therewith, pursuant to the Bond Resolution.

In a lawsuit pending in the Superior Court for Grays Harbor County, Washington (*Washington Public Power Supply System v. Date et al.*, No. 70423), the defendants, among other things, question the legal existence of the System and its corporate powers with respect to the construction of nuclear reactors, including the System's Nuclear Project No. 1. We are of the opinion that such claim is without merit.

It is to be understood that the rights of the holders of said bonds under the same and under the Bond Resolution and the enforceability thereof may be subject to judicial discretion, the valid exercise of the sovereign police powers of the State of Washington and of the constitutional powers of the United States of America, and valid bankruptcy, insolvency, reorganization, moratorium and other laws affecting creditors' rights.

It is also our opinion that the interest on said bonds is exempt from taxation by the United States of America under existing laws, regulations and rulings issued by the Internal Revenue Service.

Very truly yours,

PROPOSED FORM OF OPINION OF COUNSEL

[LETTERHEAD OF WOOD & DAWSON]  
[LETTERHEAD OF HOUGHTON CLUCK COUGHLIN & RILEY]

Board of Directors  
Washington Public Power Supply System  
Richland, Washington

Dear Sirs:

Washington Public Power Supply System Nuclear Project No. 1 Revenue Bonds,  
Series 1981D, \$315,000,000

Under date of September . . . , 1981, we rendered an opinion approving the validity of the above bonds (the "Bonds") issued pursuant to resolutions adopted by the Board of Directors of the Washington Public Power Supply System (the "System") on September 18, 1975, and September 4, 1981 (collectively, the "Bond Resolution").

We have examined into the validity of the Project Agreement (Contract No. 14-03-39211), dated February 6, 1973, between the United States of America, Department of Energy, acting by and through the Bonneville Power Administrator ("Bonneville"), and the System, as amended by Amendatory Agreement No. 1 thereto, dated as of May 31, 1974, referred to in the Official Statement of the System dated September 4, 1981, relating to the Bonds. We have examined certified copies of proceedings of the Board of Directors of the System authorizing the execution and delivery of said agreement and said amendatory agreement, and such other documents, proceedings and matters relating to the authorization, execution and delivery of said agreement and said amendatory agreement by each of the parties thereto as we deemed relevant. In our opinion, said agreement, as amended, has been duly authorized, executed and delivered by each of the parties thereto and constitutes a valid and binding agreement enforceable in accordance with its terms.

We have also examined into the validity of ninety-two of the Net Billing Agreements, dated February 6, 1973, each as amended by an Amendatory Agreement No. 1 thereto, dated as of May 31, 1974, referred to in said Official Statement, among Bonneville, the System and certain of the Participants referred to in Exhibit A of said Official Statement, which ninety-two agreements, as amended, provide for the purchase and assignment of an aggregate of not less than 65.50% of the capability of the WPPSS No. 1 Project, as such Project is defined in the Bond Resolution, in any Contract Year (as defined in the Net Billing Agreements) during the period ending June 30, 1986, 65.50% of said capability in the period beginning July 1, 1986, to and including June 30, 1996, and 97.04% of said capability in each twelve month period thereafter. We have examined certified copies of proceedings of the System and of the Participants which are parties to said Net Billing Agreements, authorizing the execution and delivery of said ninety-two Net Billing Agreements and Amendatory Agreements No. 1 thereto, and such other documents, proceedings and matters relating to the authorization, execution and delivery of said ninety-two Net Billing Agreements and amendatory agreements by each of the parties thereto as we deemed relevant. In our opinion each of said ninety-two Net Billing Agreements, as amended, has been duly authorized,

executed and delivered by each of the parties thereto and constitutes a valid and binding agreement, enforceable in accordance with its terms.

We have also examined into the validity of the five Exchange Agreements, dated February 6, 1973, each as amended by an Amendatory Agreement No. 1 thereto, dated as of May 31, 1974, referred to in said Official Statement, among Bonneville, the System and each of The Montana Power Company, Pacific Power & Light Company, Portland General Electric Company, Puget Sound Power & Light Company and The Washington Water Power Company, which five agreements, as amended, provide for the purchase by said companies of an aggregate of 32.470% of the capability of the WPPSS No. 1 Project during the period beginning July 1, 1980, and ending on June 30, 1996, and the exchange thereof with Bonneville for a certain amount of firm power and energy. We have examined certified copies of proceedings of the System and of the companies which are parties to said Exchange Agreements, authorizing the execution and delivery of said Exchange Agreements, and Amendatory Agreements No. 1 thereto, and such other documents, proceedings and matters relating to the authorization, execution and delivery of said Exchange Agreements and amendatory agreements by each of the parties thereto as we deemed relevant. In our opinion, each of said Exchange Agreements, as amended, has been duly authorized, executed and delivered by each of the parties thereto and constitutes a valid and binding agreement, enforceable in accordance with its terms.

It is to be understood that the obligations of the parties to the Project Agreement, the Net Billing Agreements and the Exchange Agreements, each as amended, and the enforceability thereof may be subject to judicial discretion, the valid exercise of the sovereign police powers of the State of Washington and of the constitutional powers of the United States of America, and valid bankruptcy, insolvency, reorganization, moratorium and other laws affecting creditors' rights.

In rendering this opinion, we have relied upon the opinion of counsel for each of the Participants and aforesaid companies that the Net Billing Agreement or Exchange Agreement, as amended, to which such Participant or company is a party has been duly executed and delivered by said Participant or company and is not in conflict with, or in violation of, and will not be a breach of, or constitute a default under, the terms and conditions of any other agreement or commitment by which such Participant or company is bound.

Very truly yours,

## PROPOSED FORM OF OPINION OF COUNSEL

[LETTERHEAD OF WOOD & DAWSON]  
 [LETTERHEAD OF HOUGHTON CLUCK COUGHLIN & RILEY]

Board of Directors  
 Washington Public Power Supply System  
 Richland, Washington

Dear Sirs:

**Washington Public Power Supply System Nuclear Project No. 2 Revenue Bonds,  
 Series 1981A, \$210,000,000**

At your request, we have examined into the validity of \$210,000,000 Washington Public Power Supply System Nuclear Project No. 2 Revenue Bonds, Series 1981A, of Washington Public Power Supply System (the "System"), a municipal corporation of the State of Washington. Said bonds are issuable in coupon form, registrable as to principal only, in the denomination of \$5,000 each, and in fully registered form, without coupons, in denominations of \$5,000 and any multiples thereof. The coupon bonds are numbered from 1 upwards and are dated September 1, 1981. The fully registered bonds are numbered from R-1 upwards, and, except fully registered bonds initially issued, which are dated September 1, 1981, shall be dated so that no gain or loss of interest shall result from exchanges or transfers thereof as provided therein and in the Bond Resolution hereinafter mentioned. Said bonds mature on July 1 in each of the years and in the amounts and bear interest, payable January 1, 1982, and semiannually thereafter on January 1 and July 1, as follows:

<u>Year</u>	<u>Principal Amount</u>	<u>Interest Rate</u>
2001	\$ 30,000,000	14¾%
2003	100,000,000	8¾
2006	30,000,000	14½
2012	50,000,000	13¾

Said bonds are subject to redemption prior to maturity upon the terms and conditions set forth therein, and recite that they are issued under and pursuant to Resolution No. 640, adopted by the Board of Directors of the System on June 26, 1973, and a resolution supplemental thereto, Resolution No. 1184, adopted by said Board on September 4, 1981 (hereinafter referred to collectively as the "Bond Resolution"), and under the authority of and in full compliance with the Constitution and statutes of the State of Washington, including Titles 43 and 54 of the Revised Code of Washington, for the purpose of acquiring, by purchase or condemnation, and constructing a nuclear electric generating plant and associated facilities as a separate utility system constituting and known as the Washington Public Power Supply System Nuclear Project No. 2.

We have examined the Constitution and statutes of the State of Washington, certified copies of proceedings of the Board of Directors of the System authorizing the issuance of said bonds, including the Bond Resolution, other proofs relating to the issuance of said bonds and an executed coupon bond of said series.

In our opinion, the System is a municipal corporation of the State of Washington, duly created and validly existing; the Bond Resolution has been duly adopted and the provisions thereof are valid and binding upon the System; and said bonds have been duly authorized and issued in accordance with the Constitution and statutes of the State of Washington and constitute valid and legally binding obligations of the System payable solely from the funds and revenues as set forth and provided in the Bond Resolution on a parity with the System's presently outstanding Washington Public Power Supply System Nuclear Project No. 2 Revenue Bonds, Series 1973, Series 1974, Series 1974A, Series 1975A, Series 1976, Series 1976A, Series 1978, Series 1979, Series 1979A and Series 1980 and any bonds hereafter issued on a parity therewith pursuant to the Bond Resolution.

In a lawsuit pending in the Superior Court for Grays Harbor County, Washington (*Washington Public Power Supply System v. Date et al.*, No. 70423), the defendants, among other things, question the legal existence of the System and its corporate powers with respect to the construction of nuclear reactors, including the System's Nuclear Project No. 2. We are of the opinion that such claim is without merit.

It is to be understood that the rights of the holders of said bonds under the same and under the Bond Resolution and the enforceability thereof may be subject to judicial discretion, the valid exercise of the sovereign police powers of the State of Washington and of the constitutional powers of the United States of America, and valid bankruptcy, insolvency, reorganization, moratorium and other laws affecting creditors' rights.

It is also our opinion that the interest on said bonds is exempt from taxation by the United States of America under existing laws, regulations and rulings issued by the Internal Revenue Service.

Very truly yours,

PROPOSED FORM OF OPINION OF COUNSEL

[LETTERHEAD OF WOOD & DAWSON]  
[LETTERHEAD OF HOUGHTON CLUCK COUGHLIN & RILEY]

Board of Directors  
Washington Public Power Supply System  
Richland, Washington

Dear Sirs:)

Washington Public Power Supply System Nuclear Project No. 2 Revenue Bonds,  
Series 1981A, \$210,000,000

Under the date of September . . . , 1981, we rendered an opinion approving the validity of the bonds referred to above (the "Bonds") issued pursuant to resolutions adopted by the Board of Directors of the Washington Public Power Supply System (the "System") on June 26, 1973, and September 4, 1981 (collectively, the "Bond Resolution").

We have examined into the validity of the Project Agreement (Contract No. 14-03-19121) between the United States of America, Department of Energy, acting by and through the Bonneville Power Administrator, and the System, referred to in the Official Statement of the System dated September 4, 1981, relating to the Bonds. With respect to the authorization, execution and delivery of said agreement, we have examined certified copies of proceedings of the Board of Directors of the System authorizing the execution and delivery of said agreement, and such other documents, proceedings and matters relating to the authorization, execution and delivery of said agreement by each of the parties thereto as we deemed relevant. In our opinion said agreement has been duly authorized, executed and delivered by each of the parties thereto and constitutes a valid and binding agreement enforceable in accordance with its terms.

We have also examined into the validity of eighty-four of the Net Billing Agreements, referred to in said Official Statement, among the United States of America, Department of Energy, acting by and through the Bonneville Power Administrator, the System, and certain of the Participants referred to in Exhibit A of said Official Statement, which eighty-four agreements provide for the purchase and assignment of an aggregate of 97.638% of the capability of the Project, as such Project is defined in the Bond Resolution, and include all such Net Billing Agreements providing for the purchase and assignment by any Participant of more than 0.701% of the capability of the Project. With respect to the authorization, execution and delivery of said eighty-four Net Billing Agreements, we have examined certified copies of proceedings of the System and of the Participants which are parties thereto authorizing the execution and delivery of said eighty-four Net Billing Agreements, and such other documents, proceedings and matters relating to the authorization, execution and delivery of said eighty-four Net Billing Agreements by each of the parties thereto as we deemed relevant. In our opinion, each of said eighty-four Net Billing Agreements has been duly authorized, executed and delivered by each of the parties thereto and constitutes a valid and binding agreement enforceable in accordance with its terms.

It is to be understood that the obligations of each of the parties to the Project Agreement and the Net Billing Agreements and the enforceability thereof may be subject to judicial discretion, the valid exercise of the sovereign police powers of the State of Washington and of the constitutional powers of the United States of America, and to valid bankruptcy, insolvency, reorganization, moratorium and other laws affecting creditors' rights.

In rendering this opinion, we have relied upon the opinion of counsel for each of the Participants that the Net Billing Agreement to which such Participant is a party has been duly executed and delivered by said Participant and is not in conflict with, or in violation of, and will not be a breach of, or constitute a default under, the terms and conditions of any other agreement or commitment by which such Participant is bound.

Very truly yours,

## PROPOSED FORM OF OPINION OF COUNSEL

[LETTERHEAD OF WOOD & DAWSON]  
 [LETTERHEAD OF HOUGHTON CLUCK COUGHLIN & RILEY]

Board of Directors  
 Washington Public Power Supply System  
 Richland, Washington

Dear Sirs:

Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds,  
 Series 1981B, \$225,000,000

At your request we have examined into the validity of an issue of \$225,000,000 Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds, Series 1981B, of Washington Public Power Supply System (the "System"), a municipal corporation of the State of Washington. Said bonds are issuable in coupon form, registrable as to principal only, in the denomination of \$5,000 each, and in fully registered form, without coupons, in denominations of \$5,000 and any multiples thereof. The coupon bonds are numbered from 1 upwards and are dated September 1, 1981. The fully registered bonds are numbered from R-1 upwards and, except fully registered bonds initially issued, which are dated September 1, 1981, shall be dated so that no gain or loss of interest shall result from exchanges or transfers thereof as provided therein and in the Bond Resolution hereinafter mentioned. Said bonds mature on July 1 in each of the years and in the amounts and bear interest, payable January 1, 1982, and semi-annually thereafter on January 1 and July 1, as follows:

<u>Year</u>	<u>Principal Amount</u>	<u>Interest Rate</u>
2003	\$ 20,000,000	8¼ %
2006	20,000,000	14½
2018	185,000,000	15

Said bonds are subject to redemption prior to maturity upon the terms and conditions set forth therein, and recite that they are issued under and pursuant to Resolution No. 775, adopted by the Board of Directors of the System on the third day of December 1975, and a resolution supplemental thereto, Resolution No. 1185, adopted by said Board on September 4, 1981 (hereinafter referred to collectively as the "Bond Resolution"), and under the authority of and in full compliance with the Constitution and statutes of the State of Washington, including Titles 43 and 54 of the Revised Code of Washington, for the purpose of constructing, and acquiring as a separate utility system of the System an undivided ownership interest in, a nuclear electric generating plant and associated facilities constituting and known as the Washington Public Power Supply System Nuclear Project No. 3.



We have examined the Constitution and statutes of the State of Washington, and certified copies of proceedings of the Board of Directors of the System authorizing the issuance of said bonds, including the Bond Resolution, other proofs relating to the issuance of said bonds and an executed coupon bond of said series.

In our opinion, the System is a municipal corporation of the State of Washington, duly created and validly existing; the Bond Resolution has been duly adopted and the provisions thereof are valid and binding upon the System; and said bonds have been duly authorized and issued in accordance with the Constitution and statutes of the State of Washington and constitute valid and legally binding obligations of the System payable solely from the funds and revenues as set forth and provided in the Bond Resolution on a parity with the System's presently outstanding Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds, Series 1975, Series 1976, Series 1977, Series 1978 and Series 1981A and any bonds hereafter issued on a parity therewith pursuant to the Bond Resolution.

In a lawsuit pending in the Superior Court for Grays Harbor County, Washington (*Washington Public Power Supply System v. Date et al.*, No. 70423), the defendants, among other things, question the legal existence of the System. We are of the opinion that such claim is without merit.

It is to be understood that the rights of the holders of said bonds under the same and under the Bond Resolution and the enforceability thereof under the same may be subject to judicial discretion, the valid exercise of the sovereign police powers of the State of Washington and of the constitutional powers of the United States of America, and valid bankruptcy, insolvency, reorganization, moratorium and other laws affecting creditors' rights.

It is also our opinion that the interest on said bonds is exempt from taxation by the United States of America under existing laws, regulations and rulings issued by the Internal Revenue Service.

Very truly yours,

PROPOSED FORM OF OPINION OF COUNSEL

[LETTERHEAD OF WOOD & DAWSON]  
[LETTERHEAD OF HOUGHTON CLUCK COUGHLIN & RILEY]

Board of Directors  
Washington Public Power Supply System  
Richland, Washington

Dear Sirs:

Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds,  
Series 1981B, \$225,000,000

Under date of September ..., 1981, we rendered an opinion approving the validity of the bonds referred to above (the "Bonds") issued pursuant to resolutions adopted by the Board of Directors of the Washington Public Power Supply System (the "System") on December 3, 1975 and September 4, 1981 (collectively, the "Bond Resolution").

We have examined into the validity of eighty-eight of the Net Billing Agreements referred to in the Official Statement of the System dated September 4, 1981 relating to the Bonds, among the United States of America, Department of Energy, acting by and through the Bonneville Power Administrator, the System and certain of the Participants referred to in Exhibit A of said Official Statement, which eighty-eight agreements provide for the purchase and assignment of an aggregate of not less than 95.525% of the System's Ownership Share of the Project Capability (as defined in the Net Billing Agreements) of the WPPSS No. 3 Project (as defined in the Bond Resolution) in any Contract Year (as defined in the Net Billing Agreements). With respect to the authorization, execution and delivery of said eighty-eight Net Billing Agreements, we have examined certified copies of proceedings of the System and of the Participants which are parties thereto authorizing the execution and delivery of said eighty-eight Net Billing Agreements, and such other documents, proceedings and matters relating to the authorization, execution and delivery of said eighty-eight Net Billing Agreements by each of the parties thereto as we deemed relevant. In our opinion, each of said eighty-eight Net Billing Agreements has been duly authorized, executed and delivered by each of the parties thereto and constitutes a valid and binding agreement enforceable in accordance with its terms.

We have also examined into the validity of the Ownership Agreement referred to in said Official Statement, among the System and Pacific Power & Light Company, Portland General Electric Company, Puget Sound Power & Light Company and The Washington Water Power Company. With respect to the authorization, execution and delivery of said Ownership Agreement, we have examined certified copies of proceedings of the System and of the Companies which are parties thereto authorizing the execution and delivery of said Ownership Agreement, and such other documents, proceedings and matters relating to the authorization, execution and delivery of said Ownership Agreement by each of the parties thereto as we deemed relevant. In our opinion, said Ownership Agreement has been duly

authorized, executed and delivered by each of the parties thereto and constitutes a valid and binding agreement enforceable in accordance with its terms.

We have also examined into the validity of the Project Agreement (Contract No. 14-03-39100) referred to in said Official Statement, between the United States of America, Department of Energy, acting by and through the Bonneville Power Administrator, and the System. With respect to the authorization, execution and delivery of said Project Agreement, we have examined certified copies of proceedings of the Board of Directors of the System authorizing the execution and delivery of said Project Agreement, and such other documents, proceedings and matters relating to the authorization, execution and delivery of said Project Agreement by each of the parties thereto as we deemed relevant. In our opinion, said Project Agreement has been duly authorized, executed and delivered by each of the parties thereto and constitutes a valid and binding agreement enforceable in accordance with its terms.

It is to be understood that the obligations of each of the parties to the Net Billing Agreements, Ownership Agreement and Project Agreement and the enforceability thereof under the same may be subject to judicial discretion, the valid exercise of the sovereign police powers of the State of Washington and of the constitutional powers of the United States of America, and valid bankruptcy, insolvency, reorganization, moratorium and other laws affecting creditors' rights.

In rendering this opinion, we have relied upon the opinion of counsel for each of the Participants and aforesaid Companies that the Net Billing Agreement or Ownership Agreement to which such Participant or Company is a party has been duly executed and delivered by said Participant or Company and is not in conflict with, or in violation of, and will not be a breach of, or constitute a default under, the terms and conditions of any other agreement or commitment by which such Participant or Company is bound.

Very truly yours,

Project No. 1  
Project No. 2  
Project No. 3

[FORM OF PROPOSED ORIGINAL ISSUE DISCOUNT OPINION OF WOOD & DAWSON]

Dear Sirs:

Washington Public Power Supply System,  
Nuclear Project No. 1 Revenue Bonds, Series 1981D, \$315,000,000  
Nuclear Project No. 2 Revenue Bonds, Series 1981A, \$210,000,000  
Nuclear Project No. 3 Revenue Bonds, Series 1981B, \$225,000,000

In connection with the delivery today of \$315,000,000 principal amount of Nuclear Project No. 1 Revenue Bonds, Series 1981D, \$210,000,000 principal amount of Nuclear Project No. 2 Revenue Bonds, Series 1981A, and \$225,000,000 principal amount of Nuclear Project No. 3 Revenue Bonds, Series 1981B (collectively, the "Projects Nos. 1, 2 and 3 Bonds"), of Washington Public Power Supply System (the "Supply System"), you have requested our opinion as to the Federal income tax treatment of the amount of original issue discount reflected in the initial public offering price of the Projects Nos. 1, 2 and 3 Bonds maturing on July 1, 2003 (the "Bonds"). The Bonds are being sold to the underwriters pursuant to a Contract of Purchase for the Projects Nos. 1, 2 and 3 Bonds dated, and accepted by the Supply System on, September 4, 1981 (the "Contract"), which separately states a purchase price for the Bonds of each series of 56.96% of the principal amount thereof and obligates the underwriters to make an initial public offering of the Bonds of such series at a yield of 14.25% as stated in the official statement dated September 4, 1981, relating to the Bonds, which the underwriters have informed us results in an initial offering price of 59.957% of the principal amount of the Bonds.

Based on published rulings of the Internal Revenue Service, we are of the opinion with respect to the Bonds that the amount of original issue discount (i.e. the difference between the initial public offering price to the public as stated in the Contract and the principal amount of the Bonds, but not in excess of the difference between the price paid for the Bonds by the underwriters and the principal amount of the Bonds) is tax-exempt interest to a taxpayer who has purchased in the original offering at the initial public offering price and who holds a Bond to maturity and such bondholder would not under present Federal income tax law realize taxable capital gain upon payment of the Bond upon maturity.

The holder of a Bond under present Federal income tax law is deemed to have accrued tax-exempt income with respect to the original issue discount on a straight line amortization basis from the date of the original issue to the date of maturity. Thus, a holder of a Bond who purchased it in the original offering at the initial public offering price and who later disposes of such Bond prior to maturity (including by redemption at the option of the Supply System) would be deemed to have accrued tax-exempt income based upon the amortization factor described above and the time he has held such Bond from its original sale. If the amount the holder realizes on disposition of such Bond does not exceed the initial public offering price plus the amount of original issue discount amortized to the date of disposition, the holder would not realize taxable gain on such disposition; if the disposition price were in excess of this amount the holder would recognize taxable gain only to the extent of such excess.

Very truly yours,

**EXHIBIT G**  
**SUPPLY SYSTEM'S NET BILLED PROJECTS**  
**NET BILLING REQUIREMENTS**  
(\$000)

<u>Year Ending June 30</u>	<u>Debt Service On Financing Issued to Date(1)</u>	<u>Estimated Debt Service for Future Financing(2)</u>	<u>Estimated Operating Costs Excluding Debt Service(3)</u>	<u>Estimated Amounts Paid Prior to Commercial Operation Dates(4)</u>	<u>Total Annual Costs</u>	<u>Less Estimated Payments by Companies(5)</u>	<u>Amounts to be Net Billed</u>
1982 .....	\$227,892	\$182,932	\$ 0	\$ 13,482	\$ 424,306	\$ 31,593	\$ 392,713
1983 .....	285,679	315,339	0	29,745	630,763	46,758	584,005
1984 .....	301,893	386,204	38,963	12,841	739,901	62,655	677,246
1985 .....	306,230	439,820	114,323	9,656	870,029	70,800	799,229
1986 .....	312,501	458,845	132,782	4,893	909,021	75,756	833,265
1987 .....	314,115	467,489	203,017	0	984,621	81,059	903,562
1988 .....	313,790	467,814	431,966	0	1,213,570	86,733	1,126,837
1989 .....	313,467	468,137	479,432	0	1,261,036	92,804	1,168,232
1990 .....	314,682	466,922	535,826	0	1,317,430	99,301	1,218,129
1991 .....	314,329	467,275	595,156	0	1,376,760	167,629	1,209,131
1992 .....	313,969	467,635	656,637	0	1,438,241	174,846	1,263,395
1993 .....	314,116	467,488	723,564	0	1,505,168	182,681	1,322,487
1994 .....	313,741	467,863	792,847	0	1,574,451	191,405	1,383,046
1995 .....	313,361	468,243	867,127	0	1,648,731	202,074	1,446,657
1996 .....	313,443	468,161	953,420	0	1,735,024	214,483	1,520,541
1997 .....	312,721	468,883	1,048,946	0	1,830,550	0	1,830,550

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- (1) Actual debt service on outstanding Project No. 1 Bonds; outstanding Project No. 2 Bonds; and on outstanding Project No. 3 Bonds.
  - (2) Debt service for future Net Billed Bonds, including this issue, based on the 1982 project construction budgets.
  - (3) Operating costs for the Net Billed Projects including taxes and net payments to the Reserve and Contingency Fund costs are estimated by the Supply System in detail through 1994 and escalated at rates based on Supply System estimates. Plants are assumed to operate at a 60% plant factor the first year of commercial operation, 65% the second year and 70% thereafter.
  - (4) Includes funding of working capital, Reserve and Contingency Funds, Reserve Account in Bond Funds and debt service on outstanding Hanford Project Bonds from July 1981 to June 1985.
  - (5) For the years through 1996, payments made by the Companies pursuant to the Exchange Agreements reduce the net billing requirements of Project No. 1. Payments for the years 1982 through 1985 are based on rate increases estimated by Bonneville and increased each year thereafter at an average rate of 7.0%. Companies' payment for that period may differ from those shown as they are subject to the rate schedules finally adopted by Bonneville and may be increased up to approximately \$2,000,000 per year pursuant to a letter agreement dated May 8, 1974. Companies' payments for the period July 1990 through June 1996 are estimated based on the provision of the Project No. 1 Exchange Agreements. Companies' payments for that period may be increased up to approximately \$700,000 per year pursuant to a letter agreement dated May 8, 1974.

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EXHIBIT H

Coopers  
& Lybrand.

certified public accountants

Administrator  
Bonneville Power Administration  
United States Department of Energy

We have examined the statement of assets and liabilities of the Federal Columbia River Power System (FCRPS) as of September 30, 1980 and 1979, and the related statements of revenues and expenses, changes in federal investment and source and use of funds for the fiscal years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Recorded revenues are based upon rates for service established in accordance with the Bonneville Project Act and related legislation which are intended to provide for the full recovery of all FCRPS costs and repayment to the U.S. Treasury of its investment in power facilities and assigned irrigation costs within repayment periods established pursuant to such statutory requirements. As discussed in Note 1 to the financial statements, revenues needed to recover the costs of generating facilities are based on required repayment periods which are shorter than the periods over which such facilities are depreciated and, prior to September 30, 1979, the periods over which required net billed projects payments were recovered in revenues differed from the periods in which such payments were included in operating expenses. As indicated in Note 1, under the caption, Thermal Plant Net Billing Advances and Amortization, the amortization to operations of certain previously deferred net billed project payments and the expensing of similar payments currently incurred was commenced in December 1979 in order to match such costs and their recovery in rates and, as indicated in Note 5, other deferred net billing advances were written off in July 1980 to operations. Under generally accepted accounting principles, revenues based upon cost recovery and the related costs should be included in the determination of net revenues in the same accounting period. Accordingly, the financial statements are not intended to present financial position and results of operations in conformity with generally accepted accounting principles. The financial statements are, however, appropriately presented in accordance with accounting principles required by or appropriate to applicable legislation and executive directives of other government agencies, as described in Note 1.

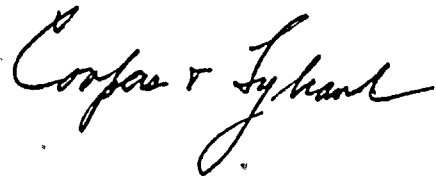
As described in Note 3, the allocation of certain utility plant cost and operation and maintenance expenses relating to multi-

purpose projects between power and nonpower purposes is subject to adjustment, and the amount of adjustments, if any, that may be necessary when allocations become firm is not determinable at this time.

As described in Note 1 under the caption, Regulatory Authorities, power rate increases which were placed into effect on an interim basis and wheeling rate increases which have been collected under a temporary rate order are subject to refund with interest in the event of regulatory disapproval.

In our opinion, subject to the effects, if any, on the financial statements of the resolution of the cost allocations and rate proceedings discussed in the two preceding paragraphs, the financial statements referred to above present fairly the assets and liabilities of the Federal Columbia River Power System at September 30, 1980 and 1979, and its revenues and expenses, changes in federal investment and source and use of funds for the fiscal years then ended, in conformity with accounting principles described in Note 1 applied on a consistent basis.

Supplemental Schedule A showing the amount and allocation of plant investment as of September 30, 1980 was subjected to the audit procedures applied in the examination of the basic financial statements and in our opinion, subject to the effects, if any, on Schedule A of the ultimate resolution of the cost allocations referred to above, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.



Portland, Oregon  
December 17, 1980



FEDERAL COLUMBIA RIVER POWER SYSTEM  
STATEMENT OF REVENUES AND EXPENSES  
for the fiscal years ended September 30, 1980 and 1979

	Fiscal Year	
	1980	1979
	(Thousands of Dollars)	
OPERATING REVENUES (Note 1):		
Sales of electric power:		
Publicly owned utilities	\$258,087	\$146,796
Privately owned utilities	75,567	48,131
Federal agencies	8,045	4,840
Aluminum industry	116,647	53,168
Other industry	<u>12,374</u>	<u>4,584</u>
	470,720	257,519
Other operating revenues:		
Wheeling	27,801	27,843
Other	<u>13,945</u>	<u>11,197</u>
	41,746	39,040
Total operating revenues	<u>512,466</u>	<u>296,559</u>
OPERATING EXPENSES:		
Operation	104,444	76,547
Maintenance	49,610	46,601
Purchase and exchange power (Notes 1 and 5)	138,533	25,195
Write-off of Trojan Nuclear Project net billing advances (Note 5)	44,210	
Depreciation	<u>51,380</u>	<u>50,164</u>
Total operating expenses	388,177	198,507
Net operating revenues	<u>124,289</u>	<u>98,052</u>
INTEREST EXPENSE (Notes 2, 4 and 7):		
Interest on Federal investment:		
On appropriated funds	190,464	173,337
On Transmission System Act borrowings	35,235	24,635
Allowance for funds used during construction	<u>(41,920)</u>	<u>(29,971)</u>
Net interest expense	183,779	168,001
NET REVENUES (EXPENSE)	<u>\$ (59,490)</u>	<u>\$ (69,949)</u>

The accompanying notes are an integral part of the financial statements.

FEDERAL COLUMBIA RIVER POWER SYSTEM  
STATEMENT OF ASSETS AND LIABILITIES  
at September 30, 1980 and 1979

ASSETS	September 30,	
	1980	1979
	(Thousands of Dollars)	
UTILITY PLANT (Notes 2 and 3):		
Completed plant (Schedule A)	\$5,844,826	\$5,599,965
Accumulated depreciation	(510,817)	(469,567)
	5,334,009	5,130,398
Construction work in progress (Schedule A)	1,000,164	884,655
Net utility plant	6,334,173	6,015,053
CURRENT ASSETS:		
Unexpended funds (Note 4)	73,951	75,306
Accounts receivable	16,277	8,119
Accrued unbilled revenues	26,506	20,668
Materials and supplies, at average cost	26,168	26,465
Total current assets	142,902	130,558
OTHER ASSETS AND DEFERRED CHARGES:		
Trust funds (Note 6)	12,957	8,700
Net billing advances, less amortization (Note 5)	207,953	246,861
Investment in Teton Dam (Note 9)	13,774	13,741
Other	38,606	11,968
Total other assets and deferred charges	273,290	281,270
	\$6,750,365	\$6,426,881
LIABILITIES AND FEDERAL INVESTMENT		
FEDERAL INVESTMENT:		
Net investment of U.S. Government in power facilities (Note 7)	\$6,462,386	\$6,075,711
Accumulated net revenues	182,639	242,129
Irrigation assistance (Schedule A and Note 8) \$646 million and \$627 million, respectively		
Total federal investment	6,645,025	6,317,863
COMMITMENTS AND CONTINGENCIES:		
(Notes 1, 2, 3, 5, 8, 9 and 10)		
CURRENT LIABILITIES:		
Accounts payable	78,984	86,121
Employees accrued leave	8,621	8,311
Total current liabilities	87,605	94,432
DEFERRED CREDITS:		
Trust fund advances (Note 6)	12,957	8,700
Other	4,778	5,886
Total deferred credits	17,735	14,586
	\$6,750,365	\$6,426,881

The accompanying notes are an integral  
part of the financial statements.

FEDERAL COLUMBIA RIVER POWER SYSTEM  
STATEMENT OF CHANGES IN FEDERAL INVESTMENT  
for the fiscal years ended September 30, 1980 and 1979

	Balance October 1, 1978	Additions (Reductions)	Balance September 30, 1979 (Thousands of Dollars)	Additions (Reductions)	Balance September 30, 1980
Congressional appropriations	\$6,461,889	\$260,772	\$6,722,661	\$281,290	\$7,003,951
U. S. Treasury transfers to Continuing Fund	7,005		7,005		7,005
Transfers from (to) other federal agencies, net	48,885	(4,258)	44,627	(791)	43,836
Federal Columbia River Transmission System Act borrowings (Note 2)	300,000	110,000	410,000	115,000	525,000
Interest on federal investment:					
On appropriated funds	1,785,341	74,753	1,860,094	176,643	2,036,737
On Transmission System Act borrowings	6,210	24,635	30,845	35,235	66,080
Unpaid annual expense (Note 7)		98,584	98,584	13,821	112,405
Less:					
Interest payments	(1,791,551)	(99,388)	(1,890,939)	(211,878)	(2,102,817)
Funds returned to U.S. Treasury	(1,182,537)	(24,606)	(1,207,143)	(22,668)	(1,229,811)
Net investment of U.S. government	5,635,242	440,492	6,075,734	386,652	6,462,386
Accumulated net revenues	312,078	(69,949)	242,129	(59,490)	182,639
Total federal investment	<u>\$5,947,320</u>	<u>\$370,543</u>	<u>\$6,317,863</u>	<u>\$327,162</u>	<u>\$6,645,025</u>

The accompanying notes are an integral part of the financial statements.

FEDERAL COLUMBIA RIVER POWER SYSTEM  
STATEMENT OF SOURCE AND USE OF FUNDS  
for the fiscal years ended September 30, 1980 and 1979

	Fiscal Year	
	1980	1979
	(Thousands of Dollars)	
SOURCE OF FUNDS:		
Operations:		
Net revenues (expense)	\$ (59,490)	\$ (69,949)
Charges not requiring funds:		
Depreciation	51,380	50,164
Amortization of net billing advances	8,994	3,503
Write-off of Trojan Nuclear Project net billing advances	<u>44,210</u>	<u>          </u>
Funds provided from (used in) operations	45,094	(16,282)
Increase in net investment of U.S. Government	386,652	440,492
Decrease (increase) in current assets:		
Unexpended funds	1,355	3,675
Receivables	(13,996)	4,543
Materials and supplies	297	(484)
Increase (decrease) in current liabilities	<u>(6,827)</u>	<u>15,552</u>
Total funds provided	<u>\$412,575</u>	<u>\$447,496</u>
USE OF FUNDS:		
Investment in utility plant, net	\$370,500	\$348,000
Increase in net billing advances (see Note 1 under caption Thermal Plant Net Billing Advances and Amortization)	14,296	96,919
Other, net	<u>27,779</u>	<u>2,382</u>
Total funds used	<u>\$412,575</u>	<u>\$447,496</u>

The accompanying notes are an integral part of the financial statements.

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS

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1. Basis of Preparation of Financial Statements and Summary of Significant Accounting Policies:

General

The Federal Columbia River Power System (FCRPS) includes the accounts of the Bonneville Power Administration (BPA), which purchases, transmits and markets power, and the accounts representing the Pacific Northwest generating facilities of the Corps of Engineers (Corps) and the Water and Power Resources Service (Service) for which BPA is the power marketing agency. Each entity is separately managed and financed, but the facilities are operated as an integrated power system with the financial results combined under the FCRPS title. Costs of multipurpose Corps and Service projects are assigned to the individual purposes through a cost allocation process. The portion of total project costs allocated to power is included in these statements as Utility Plant. Schedule A lists the projects included in FCRPS and the allocation of plant investment to the various purposes. Properties and income are exempt from taxation.

Accounts are kept in accordance with standards and principles prescribed by the Comptroller General of the United States and the uniform system of accounts prescribed for electric utilities by the Federal Energy Regulatory Commission (FERC). FCRPS accounting policies described herein also reflect requirements of specific legislation and executive directives issued by the involved government departments (BPA is a unit of the Department of Energy; the Service is a part of the Department of Interior and the Corps of the Department of Defense).

Revenues

Operating revenues are recorded on the basis of service rendered.

Rates established under requirements of the Bonneville Project Act and related legislation are intended to provide sufficient cash to meet all required payments for system costs (including operating expenses, payment to the U.S. Treasury for debt service on borrowings and for its investment in power facilities and interest thereon, and costs of net billed thermal projects and assigned irrigation costs - see Notes 5, 7 and 8). The rates are also required to be low enough to encourage widespread use of electric energy at the lowest possible cost to consumers consistent with sound business principles.

If revenues in any year are not sufficient to meet all required payments, the priority for use of revenues is: net billing

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

1. Basis of Preparation of Financial Statements and Summary of Significant Accounting Policies, Continued:

Revenues, Continued

credits; additional payments required for net billed thermal projects and BPA operating expenses; debt service on Federal Columbia River Transmission System Act borrowings from the U.S. Treasury; Corps and Service operating expenses; interest on unpaid annual expense and on the Federal investment in power facilities financed through appropriations; amortization of unpaid annual expense (see Note 7); amortization of the Federal investment in power facilities financed through appropriations; irrigation repayment assistance. Presently no irrigation repayment assistance is required until 1997. If insufficient cash is available to meet all payment obligations, the priority order for the application of revenues will be used in reverse order to determine what payments will be deferred. There is no fixed annual requirement for payment of the power investment or assigned irrigation costs, the only requirement being that repayments be completed within prescribed periods. Payments to repay an investment bearing a higher rate of interest may be scheduled ahead of other investments bearing a lower rate to the extent that this is possible while still complying with prescribed repayment periods.

The rates are intended to provide for recovery of the capital investment in transmission facilities within their average estimated useful service lives and within 50 years for power generating facilities. As set forth below, these assets are being depreciated in the accounts on a compound interest method over their estimated useful lives, which currently average approximately 35 years for transmission facilities and 85 years for generating facilities. Thus, annual depreciation charges are not matched with the recovery of the related capital costs and will, in the case of generating facilities, continue beyond the period within which such costs will have been recovered through revenues.

Regulatory Authorities

Effective January 1, 1979, the Secretary of Energy delegated authority to the Assistant Secretary for Resource Applications to develop, acting by and through the Administrator, and to confirm, approve and place in effect on an interim basis, power and transmission rates. At the same time, the Federal Energy Regulatory Commission (FERC) was given authority to confirm and approve on a final basis, or to disapprove but not to modify, such rates. Refunds with interest are authorized if rates finally approved are lower than rates approved on an interim basis.

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

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1. Basis of Preparation of Financial Statements and Summary of Significant Accounting Policies, Continued:

Regulatory Authorities, Continued

On December 20, 1979, increased power rates were placed into effect on an interim basis. Revenues applicable to these rate increases, which were the first power rate increases since December 20, 1974, totaled approximately \$195.8 million at September 30, 1980. Wheeling rates charged for transmission of nonfederal power were increased approximately 22% on July 1, 1977 under a temporary rate order. Revenues applicable to these wheeling rate increases totaled approximately \$21.3 million at September 30, 1980 (including \$6.0 million in 1980 and \$8.8 million in 1979).

In November and December 1980, FERC remanded the increased power and wheeling rates without prejudice for further development of the records in order to establish their conformity with applicable statutory standards.

Utility Plant and Depreciation

Utility plant is stated at original cost. Cost includes direct labor and materials, payments to contractors, indirect charges for engineering, supervision and similar overhead items, and an allowance for funds used during construction. The cost of additions, renewals and betterments is capitalized. Repairs and minor replacements are charged to operating expenses. With minor exceptions, the cost of utility plant retired, together with removal costs and less salvage, is charged to accumulated depreciation when it is removed from service.

Depreciation of utility plant is computed based on the estimated service lives of the various classes of property using the compound interest method (rates from 2-1/2% to 3-1/4%). Service lives currently average approximately 35 years for transmission plant and 85 years for generating plant.

Depreciation provisions recorded in the accounts, expressed as a percent of the average cost of plant in service, approximated 1.9% in 1980 and 2.0% in 1979 for transmission plant and 0.4% in each such year for generating plant. The compound interest method adopted pursuant to executive directives of government agencies results in increasing depreciation charges in the later years of service lives.

Effective October 1, 1979, BPA revised its procedures for allocation of general and administrative costs to more accurately reflect the relative magnitude of its programs. This change decreased general and administrative costs capitalized as utility plant by approximately \$8.7 million in 1980.

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

1. Basis of Preparation of Financial Statements and Summary of Significant Accounting Policies, Continued:

Allowance for Funds Used During Construction

The practice of capitalizing an allowance for funds used during construction is followed. Rates used are based upon interest rates stipulated for certain generating projects (2-1/2% to 3-1/4%) and rates approximating the cost of borrowings from the U.S. Treasury for other construction (8% to 10% during the two years ended September 30, 1980).

Thermal Plant Net Billing Advances and Amortization

Net billing agreements provide that BPA make payments and/or grant billing credits prior to a nuclear project's date of commercial operation. Additionally, certain payments made by BPA with respect to the operating Trojan Nuclear Project (principally related to fuel purchases, working capital and additions to debt service reserves) were deferred (see Note 5). Deferred payments and billing credits, less amortization, are included as deferred charges under the caption "net billing advances" in the accompanying statement of assets and liabilities.

Payments and billing credits totaling \$212.5 million made prior to December 20, 1979 for Washington Public Power Supply System nuclear plants under construction have been deferred and, commencing December 20, 1979, are being amortized ratably over 35 years. The increased power rates effective December 20, 1979 provide for recovery of the deferred amount. Similar payments and billing credits made since December 20, 1979 totaling \$88.9 million have been charged directly to Purchase and Exchange Power expense since their recovery is also provided for in the increased power rates effective on an interim basis at that date.

As discussed in Note 5, effective July 1, 1980 all unamortized net billing advances (and subsequent payments and billing credits) with respect to the operating Trojan Nuclear Project have been charged to expense.

Research and Development

Research and development costs, including depreciation of the cost of facilities constructed for research and development activities, are charged to expense. Costs charged to expense totaled approximately \$10.8 million in 1980 and \$11.0 million in 1979.



FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

1. Basis of Preparation of Financial Statements and Summary of Significant Accounting Policies, Continued:

Retirement Benefits

Substantially all employees engaged in FCRPS activities participate in the Federal government's Civil Service Retirement Fund, a contributory pension plan. Retirement benefit expense is equivalent to 7% of eligible employee compensation.

2. Financing of FCRPS Construction Program:

The Federal Columbia River Transmission System Act (Act), approved October 18, 1974, authorized BPA to use its operating receipts and proceeds from sales of revenue bonds, which the Act authorized it to issue, to finance further construction of the Federal transmission system in the Pacific Northwest. Prior to the enactment of this legislation, the transmission system construction program was financed through the appropriation process. Construction performed by the Corps and the Service continues to be financed through annual Congressional appropriations. In order to assist in financing the construction, acquisition and replacement of the transmission system, the Act authorized BPA to issue to the U.S. Treasury and have outstanding at any time up to \$1.25 billion of bonds, notes or other evidences of indebtedness bearing interest and having terms and conditions comparable to those prevailing in the market for similar utility debt instruments.

Following is a summary of borrowings and repayments under the Act:

<u>Date</u>	<u>Notes</u>		<u>Bonds</u>		
	<u>Borrowings</u>		<u>Borrowings</u>		
	<u>(Repayments)</u>		<u>Millions</u>	<u>Rate</u>	<u>Maturity</u>
	<u>Millions</u>	<u>Rate</u>			
9/30/77	\$125	6.73 %			
9/30/78	(125)				
9/30/78	250	9.125	\$ 50	8.95%	9/30/2013
6/30/79	(75)		75	9.45	6/30/2014
9/30/79	(175)				
9/30/79	235	10.5	50	9.90	9/30/2014
9/30/80	—		<u>115</u>	13.00	9/30/2015
Outstanding at					
9/30/80	<u>\$235</u>		<u>\$290</u>		

BPA's borrowing authority within the aforementioned \$1.25 billion maximum is limited at any one time to its cumulative expenditures for transmission plant (including capitalized interest and any unspent approved construction budget amounts) which have not been

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

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2. Financing of FCRPS Construction Program, Continued:

financed from appropriations. At September 30, 1980, BPA had borrowed substantially all funds available within this limitation other than the approved 1981 construction budget. The \$235 million note outstanding is payable by September 30, 1981.

BPA's construction budget for fiscal year 1981 is \$143 million, for which substantial commitments have been incurred. Fiscal 1981 construction appropriations for power facilities have been authorized by Congress for the Corps and the Service totaling \$126 million and \$18 million, respectively.

3. Cost Allocations:

Allocations of plant cost and operation and maintenance expenses between power and nonpower purposes for six system projects are presently based on tentative allocations. At September 30, 1980, total costs for these six projects approximated \$2.1 billion of which \$1.6 billion was tentatively allocated to power and subject to adjustment. In prior years, adjustments were made to plant cost and to accumulated net revenues (for adjustments relating to operation and maintenance, interest or depreciation) when final allocations were adopted. The amount of adjustments that may be necessary when the allocations for these six projects become final is not determinable at this time.

Under certain circumstances, final cost allocations can be changed, but Congressional approval may be required for any significant change. As set forth above, retrospective adjustments to the financial records are performed when a final cost allocation differs from the tentative cost allocation. If a change in a final cost allocation were made, any related adjustments would most likely be prospective unless the affected project never functioned as intended.

4. Unexpended Funds:

Unexpended funds consist of the unexpended balance of funds appropriated by Congress for construction, operation and maintenance purposes for the Corps and Service, and cash balances of BPA.

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

4. Unexpended Funds, Continued:

Amounts shown in the statement of assets and liabilities comprise:

	September 30, 1980      1979 (Thousands of Dollars)	
Corps and Service unexpended appropriated funds	\$48,400	\$47,999
BPA cash balances with U.S. Treasury	<u>25,551</u>	<u>27,307</u>
	<u>\$73,951</u>	<u>\$75,306</u>

FCRPS receives credit for interest on unexpended appropriated funds by deducting them from the unamortized federal investment in determining the required interest on the federal investment. The Treasury gives BPA credit for its cash balances in determining interest charges. The interest expense on Treasury borrowings reflects reductions of \$5.9 million in 1980 and \$2.8 million in 1979 arising from credits for cash balances.

5. Purchase and Exchange Power Expense and Commitments to Exchange Power and Acquire Project Capability:

Existing net billing and exchange agreements provide that BPA will acquire all or part of the generating capability of the nuclear power plants listed in the table below. BPA is obligated to make payments, exchange power, or apply credits (net billings) to participating customers equal to the customers' portions of the annual project costs, including annual debt service requirements, whether or not the projects are completed, operable, or operated. Annual project budgets have not included provisions for any future costs associated with spent fuel reprocessing, off-site storage of spent fuel or plant decommissioning.

The "Present Termination Commitment" represents the outstanding debt issued to finance the projects (without credit for salvage of assets or unspent construction funds) which would be payable over the varied financing repayment periods if the projects were terminated as of September 30, 1980:

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

5. Purchase and Exchange Power Expense and Commitments to Exchange Power and Acquire Project Capability, Continued:

<u>Project and % Capability Acquired</u>	<u>Projected in Service Date</u>	<u>Capacity in Megawatts</u>	<u>Estimated BPA Portion</u>	
			<u>Present Termination Commitment (Thousands of Dollars)</u>	<u>Additional Estimated Financing Requirements for Projects under Construction</u>
WPPSS* Hanford Project (100%)	Operational	860	\$ 46,045	
Net billed projects:				
Trojan Nuclear Project (30%)	Operational	339	147,660	
WPPSS* Nuclear Project #1 (100%)	February 1986	1,250	1,255,000	\$899,700
WPPSS* Nuclear Project #2 (100%)	September 1983	1,100	1,265,500	701,100
WPPSS* Nuclear Project #3 (70%)	September 1986	868	680,000	1,141,700

\*Washington Public Power Supply System

BPA's commitment period under the net billing agreements extends for the life of the projects, except that the terms of the Trojan Nuclear Project net billing agreements under which Eugene Water & Electric Board (Eugene) assigned its 30% share of the project capability to BPA and other participants, contained a provision allowing Eugene to withdraw the project capability for use in its own system beginning in 1984. Had Eugene exercised its withdrawal rights, settlement for BPA's prepaid Trojan costs would have been negotiated at withdrawal dates and, accordingly, BPA included such prepaid costs as net billing advances in its balance sheet. On July 1, 1980, Eugene's right to withdraw expired, Eugene confirmed that it did not intend to request withdrawal, and the balance of prepaid costs existing at that date (\$44,210,186) was charged to expense. No such withdrawal options exist for the WPPSS projects. See Note 1 for further information concerning net billing advances. Amounts shown therefor in the accompanying statement of assets and liabilities comprise:

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued.

5. Purchase and Exchange Power Expense and Commitments to Exchange Power and Acquire Project Capability, Continued:

	<u>1980</u>	<u>1979</u>
	(Thousands of Dollars)	
Trojan Nuclear Project, net of accumulated amortization of \$14,426 at September 30, 1979		\$ 45,113
Washington Public Power Supply System Nuclear Project No. 2 (under construction), net of accumulated amortization of \$4,554 at September 30, 1980	<u>\$207,953</u>	<u>201,748</u>
	<u>\$207,953</u>	<u>\$246,861</u>

BPA has also entered into agreement with a group of utilities to exchange an agreed amount of power for their rights to a portion of the Canadian Entitlement (one-half of the additional power benefits realized by downstream U.S. projects from three Canadian Treaty dams for a 60-year period). The Canadian Entitlement was purchased for a 30-year period from the completion of each dam (the last dam was placed in service in 1973) by 41 Pacific Northwest utilities. BPA furnishes specified amounts of power to the utilities regardless of entitlement power generated. BPA's minimum average energy commitment to the utilities declines annually from approximately 621 megawatts currently to approximately 100 megawatts in the last year of the exchange agreement (2003).

Following is an analysis of amounts included in purchase and exchange power expense:

	<u>1980</u>	<u>1979</u>
Trojan Nuclear Project:		
Share of annual generation costs	\$ 32,382	\$22,502
WPPSS Nuclear Projects:		
Project No. 1	22,901	
Project No. 2	70,571	
Other purchase and exchange power costs	<u>12,679</u>	<u>2,693</u>
	<u>\$138,533</u>	<u>\$25,195</u>

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

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6. Trust Funds and Trust Fund Advances:

These balance sheet amounts comprise funds received by BPA from customers and others for the purchase of nonfederal power for customers' benefit and for construction to be done for others.

7. Net Investment of U.S. Government:

The Federal investment in each of the generating projects and for each year's investment in the transmission system is being repaid to the U.S. Treasury within 50 and 35 years, respectively, from the time the facility is placed in service. No such repayments are required during the next five years. However, amounts are normally expected to be paid annually for interest on outstanding Federal investment, net of interest capitalized on projects financed through appropriations, and for operating expenses of the Corps and Service funded by annual appropriations. To the extent that funds are not available for payment, such amounts become payable from subsequent years' revenue prior to any payment for amortization of Federal investment. Fiscal 1980 and 1979 revenues were not sufficient to pay all these annual amounts and payments of \$13.8 and \$98.6 million, respectively, of interest on appropriated funds has been deferred.

Interest rates (other than on Transmission System Act borrowings) range from 2-1/2% to 8% (the weighted average rate was approximately 3.3% in 1980 and 1979). The rates have been set either by law, by administrative order pursuant to law, or by administrative policies, and have not necessarily been established to recover the interest costs to the U.S. Treasury to finance the investment. See Note 1 - Revenues and Note 8 for additional information concerning repayment requirements and policies.

8. Repayment Responsibility for Irrigation Costs:

Legislation requires that FCRPS net revenues will be used to repay to the U.S. Treasury that portion of the cost allocated to irrigation of any Pacific Northwest project authorized by Congress and determined by the Secretary, Department of Interior, to be beyond the ability of the irrigation water users to repay. The use of power revenues for such repayment represents a payment for irrigation assistance to the benefiting water users and, while paid by power ratepayers, such costs do not represent a regular operations cost of the power program and are not included therein. The \$646 million in irrigation assistance payments shown as returnable from power revenues in Schedule A will be reflected as reductions of accumulated net revenues at the time future payments are made. The

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

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8. Repayment Responsibility for Irrigation Costs, Continued:

first payment is scheduled to be made in 1997. The \$646 million does not include any portion of \$21 million of costs allocated to irrigation at six Corps projects located within Oregon where completion of irrigation facilities is not yet authorized. If completion is authorized, a determination of water users' repayment ability will probably be made which might result in additional irrigation assistance being payable from accumulated net power revenues.

9. Teton Dam:

On June 5, 1976, before the project had been completed and turned over for the use of FCRPS, a breach occurred in the Teton Dam. The project was extensively damaged, and a vast amount of damage occurred downstream from the resulting flood. The total investment in the project at September 30, 1980 (excluding interest totaling approximately \$1,810,000 subsequent to June 1976 which has been charged to expense) was \$78.0 million. The amount of investment allocated to power was \$13.8 million, and the amount of investment allocated to irrigation but repayable from power revenues was \$49.9 million.

Disposition of the project's costs and final decision as to the repayment obligation are dependent upon Department of the Interior administrative action and/or Congressional action. If repayment is not required, the cost associated with the investment in power facilities (and recovery of the related \$1.8 million interest) will be charged off against the investment of the U.S. Government. Should FCRPS be directed to repay, the costs will be recovered through rates. Until a decision is made, the investment allocated to power is included as a deferred charge in the statement of assets and liabilities and the cost of applicable irrigation assistance is included in the total of other irrigation costs described in Note 8.

FCRPS will not be required to repay the costs of claims of non-federal entities and individuals resulting from failure of Teton Dam. The Congress enacted legislation to pay the costs of these claims and stipulated that all such payments would be nonreimbursable.

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

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10. Litigation:

The Confederated Tribes of the Colville Indians and the Spokane Indian Tribes (the Tribes) have asserted claims in unspecified amounts arising from construction of the Grand Coulee and Chief Joseph Dam projects. In response to a request from Congress, a task force established by the Departments of Interior and Army has studied the claims. No basis for liability has been found but the Office of Management and Budget has suggested the affected federal agencies work with the Tribes to develop a proposal which will encourage their economic development, including a supply of necessary power. It is not currently expected that resolution of this matter will adversely affect FCRPS power revenues.

On November 14, 1977, the City of Portland (the City) filed two lawsuits in the United States District Court for the District of Oregon against the Administrator of BPA and the Secretary of the Department of Energy. In the first suit the City alleges BPA has acted illegally in its sales of power to preference customers, private utilities and direct service industrial customers and that, as a result of such actions, the City has been denied an ability to purchase power from BPA. The City then requests that it be declared a preference customer; that BPA power sales agreements be set aside; that BPA adopt revised allocation procedures; and that BPA sell power to the City of Portland until such reallocation and revised rules are complete. The second suit is based upon BPA's alleged failure to comply with the terms of the National Environmental Policy Act. In this suit the City alleges that all BPA power sales contracts, extensions, renewals and the net billing agreements executed since January 1, 1970, were major Federal actions significantly affecting the quality of human environment in BPA's service area. The suit further alleges that BPA's actions have caused a serious impact on the City by reducing the quality of the environment. The City then asks that all power sales contracts, extensions, renewal agreements and net billing agreements entered into by BPA since January 1, 1970 be declared null and void; that BPA be required to prepare an environmental impact statement (EIS) on each of these agreements and that BPA be enjoined from executing any new power sales agreements or net billing agreements until BPA completes an EIS. In July 1978 three private utilities, Pacific Power & Light Company, Portland General Electric Company and Montana Power Company, who had previously been joined by BPA as defendants, filed cross-claims against BPA. They contend that the BPA preference clause entitles them to power for their domestic and rural customers. Montana Power Company also claims a statutory geographic preference for Federal hydro power produced at Hungry Horse and Libby Dams.



FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

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10. Litigation, Continued:

In the City of Portland's first suit the District Court orally granted a motion by the defendants to dismiss the plaintiffs' claims on the ground that the City had not taken the steps necessary to render their claims ripe for court review. Subsequently the court required further briefing on specific issues relating to the motion. Final briefs have been submitted and the matter is pending. The investor-owned utilities' cross claims are also pending. On December 20, 1979, the City moved to amend its complaint for the purpose of supporting the cross claims of Pacific Power & Light Company and Portland General Electric Company, and on December 27, 1979, BPA petitioned the court to deny the City's motion for the reason that the matter has already been determined. The court has taken no action on either the City's motion or BPA's petition.

In the opinion of the BPA General Counsel the lawsuits originally filed by the City of Portland and counterclaims filed by the private utilities are without merit and furthermore have been rendered moot by enactment of the Pacific Northwest Electric Power Planning and Conservation Act. No estimate of the financial effects on FCRPS in the event of adverse decisions in these cases can be made.

On January 22, 1980, Pacific Power & Light Company filed suit in the United States District Court for Oregon against the Department of Energy and BPA to have the Assistant Secretary's interim rate order of December 3, 1979 declared unlawful and for other relief, including injunctive relief against collection of BPA's new wholesale power rates which were effective December 20, 1979. Portland General Electric Company and the Oregon Public Utility Commission have intervened as plaintiffs in the lawsuit and the Public Power Council has intervened as defendant. Plaintiffs do not contest Bonneville's need for an increase in revenues, but contest the design of Bonneville's rates. On September 30, 1980, the Court entered judgment for the Government and on November 26, 1980, the plaintiffs filed a Notice of Appeal to the Ninth Circuit Court of Appeals. It is the opinion of BPA General Counsel that the holding of the District Court will be sustained.

Montana Power Company and the Idaho Power Company filed suit in the United States District Court for the District of Montana (venue has been changed to the District of Oregon) seeking an injunction against collection of the interim rates approved by the order of December 3, 1979 and for other relief. The contentions of plaintiffs in Montana are nearly identical to those raised by plaintiffs before the District Court in Oregon, except that plaintiffs in Montana do not concede that interim rates may be imposed based upon the imperative need for additional revenue and seek to have all rates reduced to the level prevailing before the order. It is

FEDERAL COLUMBIA RIVER POWER SYSTEM  
NOTES TO FINANCIAL STATEMENTS, Continued

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10. Litigation, Continued:

the opinion of BPA General Counsel that in the event that this litigation proceeds further, the contentions of the plaintiffs are without merit, particularly in view of the result in the Pacific Power & Light Company case.

Certain other claims, suits and complaints have been filed or are pending against entities of FCRPS, including litigation relating to the installation of additional generating capacity at Bonneville and Libby dams, acquiring land rights needed to raise the Chief Joseph dam reservoir level and construction of certain transmission lines. In the opinion of counsel and management, these actions are either without merit, involve amounts which are not significant to FCRPS' financial position or results of operations or primarily affect the overall cost of construction projects which will be capitalized and recovered through future power rates.

11. Regional Power Bill:

The Pacific Northwest Electric Power Planning and Conservation Act became effective December 5, 1980. Under the Act:

- . BPA assumes a utility function in its region. The BPA Administrator may acquire power resources, but BPA cannot own or construct any generating resources.
- . Resource acquisition priorities are: conservation, renewable resources, resources using waste heat or having high fuel conversion efficiency, other resources.
- . All obligations assumed by BPA under the Act are to be secured solely by BPA revenues.
- . The BPA borrowing limit (see Note 2) is increased from \$1.25 billion to \$2.5 billion effective in fiscal 1982. The entire increase is for a revolving fund for conservation and renewable resource loans and grants.
- . BPA ratemaking remains subject to confirmation and approval by FERC and FERC may approve revised rates on an interim basis.

FEDERAL COLUMBIA RIVER POWER SYSTEM  
SCHEDULE OF AMOUNT AND ALLOCATION OF PLANT INVESTMENT  
as of September 30, 1980 (Thousands of Dollars)

Schedule A

Project	Total	Commercial Power			Irrigation			Nonreimbursable					Percent of Total Returnable from Commercial Power Revenues
		Completed Plant	Construc- tion Work in Progress	Total Commercial Power	Returnable from Commercial Power Revenues	Return- able from Other Sources	Total Irriga- tion	Naviga- tion	Flood Control	Fish and Recrea- tion Wildlife	Other		
Projects in service:													
Transmission facilities (BPA)	\$2,144,773	\$1,853,400	\$ 291,373	\$2,144,773								100.0%	
Albeni Falls (CE)	33,757	32,147		32,147				\$ 135	\$ 174		\$ 1,301	95.2%	
Boise (Service)	73,998	5,387	2,157	7,544	\$ 11,754	\$ 38,596	\$ 50,350		16,056		\$ 48	26.1%	
Bonneville (CE)	620,993	89,612	492,217	581,829				35,509			1,150	93.7%	
Chief Joseph (CE)	443,666	438,718		438,718	732		732				1,014	99.0%	
Columbia Basin (Service)	1,437,460	664,686	160,640	825,326	477,315	83,092	560,407	1,000	47,902	\$ 2,298	527	90.6%	
Cougar (CE)	60,440	18,415	3	18,418		3,066	3,066	546	38,202		208	30.5%	
Detroit-Big Cliff (CE)	66,914	40,604	25	40,629		4,790	4,790	221	20,984		290	60.7%	
Dworshak (CE)	341,565	288,953	30	288,983				9,149	32,982		10,451	84.6%	
Green Peter-Foster (CE)	90,247	49,819	45	49,864		5,813	5,813	365	30,288		1,856	55.3%	
Hills Creek (CE)	48,973	17,449		17,449		4,321	4,321	626	26,305		272	35.6%	
Hungry Horse (Service)	101,641	76,975	11	76,986					24,655			75.7%	
Ice Harbor (CE)	183,419	131,714	3,205	134,919				45,991		2,509		73.6%	
John Day (CE) (a)	526,899	385,415	380	385,795				88,382	14,880		11,432	73.2%	
Libby (CE) (a)	579,421	418,319	37,941	456,260					86,343		3,987	78.7%	
Little Goose (CE) (a)	238,295	178,140	3,163	181,303				50,341			4,047	76.1%	
Lookout Point-Dexter (CE)	97,566	46,433	67	46,500		1,372	1,372	733	48,356		511	47.7%	
Lost Creek (CE) (a)	148,544	26,962		26,962		1,985	1,985		52,882	24,285	28,699	18.2%	
Lower Granite (CE) (a)	388,457	311,310	3,171	314,481				54,189			11,948	81.0%	
Lower Monumental (CE) (a)	259,840	204,874	3,194	208,068				48,533			2,822	80.1%	
McNary (CE)	335,800	268,235	2,384	270,619				62,891			2,290	80.6%	
Minidoka-Palisades (Service)	188,433	14,057	17	14,074	10,268	98,360	108,628		60,267	110	5,354	12.9%	
The Dalles (CE)	324,142	278,598	131	278,729				43,309			2,082	86.0%	
Yakima (Service)	69,467	4,604	10	4,614	7,714	55,038	62,752		711	1,152	238	17.7%	
Irrigation assistance at 12 projects having no power generation	113,716				78,121	35,595	113,716					68.7%	
Plant investment	8,918,426	5,844,826	1,000,164	6,844,990	585,904	332,028	917,932	441,920	500,987	27,845	91,691	83.3%	
Repayment obligation retained by Columbia Basin Project	2,211	1,352		1,352(b)	859		859					100.0%	
Other repayment obligations	9,297				9,297		9,297					100.0%	
Investment in Teton Project (d)	78,023		13,774	13,774	49,862	67	49,929		12,033		2,287	81.6%	
	\$9,007,957	\$5,846,178	\$1,013,938	\$6,860,116	\$645,922	\$332,095	\$978,017	\$441,920	\$513,020	\$27,845	\$93,978	\$93,061(c)	83.3%

BPA - Bonneville Power Administration

CE - Corps of Engineers

Service - Water and Power Resources Service

(a) Projects in service that have tentative cost allocations at September 30, 1980.

(b) Joint facilities transferred to Bureau of Sport Fisheries and Wildlife. This portion is included in other assets and deferred charges in the accompanying statement of assets and liabilities.

(c) Included in this amount are nonreimbursable road costs amounting to \$83.7 million.

(d) Commercial power portion of Teton is included in other assets and deferred charges in the accompanying statement of assets and liabilities. Amounts exclude interest totaling approximately \$1,810,000 subsequent to June 1976 which has been charged to expense.

