

Washington Public Power Supply System  
A JOINT OPERATING AGENCY

P. O. Box 968 3000 GEO. WASHINGTON WAY RICHLAND, WASHINGTON 99352 PHONE (509) 946-1611

Docket Nos. STN 50-508  
and 50-509

July 12, 1977  
G03-77-744



Director of Nuclear Reactor Regulation  
ATTN: Olan D. Parr, Chief  
Light Water Reactors Branch No. 3  
U. S. Nuclear Regulatory Commission  
Washington D.C. 20555

Subject: WPPSS NUCLEAR PROJECTS NOS. 3 & 5  
FINANCIAL INFORMATION UPDATE

Dear Mr. Parr:

In response to a request to update certain financial information concerning WNP-3/5, directed to WPPSS by your Mr. Daniel T. Swanson, the requested information is provided in the below listed attachments.

Attachment I - Official Statement, \$90,000,000 Washington Public Power Supply System Generating Facilities Revenue Bonds, Series 1977B (Nuclear Projects Nos. 4 and 5).

Attachment II - Proposed Official Statement, \$230,000,000 Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds, Series 1977.

Attachment III - Discussion of WNP-5 cost increases and a discussion of cost differences between WNP-3 and WNP-5.

Attachment IV - Source of Funds for System - Wide Construction Expenditure during Period of Construction of WNP-3 and WNP-5, Applicable to Pacific Power and Light Company.

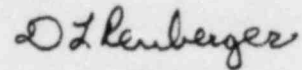
While preparing the Plant Capital Investment Summary for WNP-3 (Attachment III), we determined that the total project cost for WNP-3 was miscalculated in the Testimony of James D. Perko regarding Financial Qualifications which was submitted at the evidentiary hearing on May 24 - 25, 1977 (transcript following page 598). In Mr. Perko's testimony, the total estimated cost for WPPSS' 70% share of WNP-3 was accurately stated to be \$970 million. However, the total project cost for WNP-3 was erroneously stated to be \$1,281,657,000. This will advise that the correct total estimated cost for the entire project is \$1,385,716,000. Mr. Perko's testimony will be corrected on the record by affidavit when the Applicant submits its reply proposed findings of fact later this week.

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PDR FOIA  
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Olan D. Parr  
Page two

We trust the attached information satisfies your request, and assume the Staff will submit an affidavit updating its financial qualifications conclusions by July 21, 1977, in order to promptly close the hearing record.

Very truly yours,



D. L. Renberger  
Assistant Director -  
Generation and Technology

DLR/RCD:gs

Attachments

STATE OF WASHINGTON )  
                                  ) ss  
COUNTY OF BENTON )

D. L. RENBERGER, Being first duly sworn, deposes and says: That he is the Assistant Director, Generation and Technology, for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that he is authorized to submit the foregoing on behalf of said applicant; that he has read the foregoing and knows the contents thereof; and believes the same to be true to the best of his knowledge.

DATED July 12, 1977

D L Renberger  
D. L. RENBERGER

On this day personally appeared before me D. L. RENBERGER to me known to be the individual who executed the foregoing instrument and acknowledged that he signed the same as his free act and deed for the uses and purposes therein mentioned.

GIVEN under my hand and seal this 12th day of July, 1977.

Reba B Helgeson  
Notary Public in and for the State of  
Washington  
Residing at Richland

COMPARISON OF WNP-3 AND WNP-5  
CAPITAL COST ESTIMATES OF MAY, 1977

<u>DIRECT COSTS</u>	<u>ACCOUNT TITLE</u>	<u>WNP-3</u>	<u>WNP-5</u>	<u>VARIANCE</u>
20	Land and land rights .....	\$ 2,076	\$ 2,076	\$ -0-
	<u>PHYSICAL PLANT</u>			
21	Structures and site facilities .....	165,416	165,416	-0-
22	Reactor plant equipment .....	166,958	176,807	9,849
23	Turbine plant equipment .....	131,240	133,285	2,045
24	Electric plant equipment .....	49,153	49,153	-0-
25	Misc. plant equipment .....	29,122	29,122	-0-
	Subtotal .....	543,965	555,859	11,894
	Spare parts allowance .....	3,435	3,435	-0-
	Contingency allowance .....	74,033	74,743	710
	Subtotal .....	\$ 621,433	\$ 634,037	\$12,604
	<u>INDIRECT COSTS</u>			
91	Construction facilities, equipment, and services .....	\$ 14,894	\$ 14,895	\$ 1
92	Engineering and const. mg't. services ...	72,246	74,430	2,184
93	Other costs .....	207,109	410,147	203,038
94	Interest during construction .....	270,714	500,346	229,632
	Subtotal .....	564,963	999,818	434,855
	Start of construction cost .....	3,266	9,018	5,752
	Escalation during construction .....	196,338	266,753	70,415
	 TOTAL PLANT CAPITAL INVESTMENT ..	<u>\$1,386,000</u>	<u>\$1,909,626</u>	<u>\$523,626</u>

WNP-3 vs. WNP-5

SUMMARY VARIANCE EXPLANATION

(May, 1977 Estimates)

	<u>(Thousands)</u> <u>VARIANCE</u>
1. WNP-5 construction will follow WNP-3 by approximately 18 months. As a result, escalation will be greater on WNP-5 than WNP-3.	90,000
2. Nuclear Fuel costs for the initial core are much higher for WNP-5 than WNP-3 as a result of a) contractual uranium prices being nearly five times higher for WNP-5 (contract for WNP-3 ore was placed in late 1973; WNP-5 contracts placed in mid-1975 and late 1976) and b) additional escalation will be incurred by WNP-5 due to the 18 month schedule separation.	40,000
3. The reload uranium contracts for WNP-5 require payments prior to Commercial Operation and, therefore, are included in the capital cost estimate. The reload uranium contract for WNP-3 requires no such payment.	70,000 <sup>1/</sup>
4. WNP-3 is a "net-billed" <sup>2/</sup> plant as described in Attachment II. WNP-5 is financed jointly with WNP-4 and all obligations are the sole responsibility of the "Participants" as described in Attachment I. Due to the different financial arrangements for WNP-3 and WNP-5 and pursuant to "Resolution No. 890", certain "other" costs (reference Attachment III, Page 5, Item IV.c) are authorized to be included in the capital cost of WNP-5 (and WNP-4). Such costs are defined as annual operating costs for WNP-3 as opposed to cost of construction for WNP-5.	90,000

<sup>1/</sup> Includes sufficient uranium for approximately four reloads.

<sup>2/</sup> "Net-billed" arrangements provide security for financing WNP-3. This security has the ultimate guarantee of the Bonneville Power Administration. However, the same security arrangements were not available for WNP-4 and WNP-5.

(Thousands)  
VARIANCE

5. Estimated cost of Capitalized Interest: During Construction is substantially higher on WNP-5 than WNP-3 as a result of a) higher total construction and fuel costs b) interest on "other" capitalized costs on WNP-5 that are not defined as cost of construction for WNP-3 c) assumed interest rate for WNP-5 (7.75%) is higher than that assumed for the "net-billed", WNP-3, plant (7.25%) and d) WNP-5 interest is capitalized through the current Commercial Operation date and beyond (a portion of the interest is capitalized during the "ramp-up" period up to July 1, 1988). WNP-3 interest is only capitalized to September 1, 1982.

230,000TOTAL VARIANCE BETWEEN WNP-3  
AND WNP-5 (5 vs. 3)520,000

ATTACHMENT IV

Applicant PACIFIC POWER & LIGHT COMPANY Nuclear Plant WNP Nos. 3 & 5

Source of Funds for System-Wide Construction Expenditures During Period  
of Construction of Subject Nuclear Power Plant  
(millions of dollars)

	Construction Years of Subject Nuclear Power Plant									
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
<u>Security issues and other funds</u>										
Common stock	-	\$ 120	\$ 140	\$ 80	\$ 70	\$ 100	\$ 140	\$ 205	\$ 250	\$ 260
Preferred stock	\$ 40	-	50	40	20	30	40	50	65	70
Long-term debt	95	140	200	180	160	155	207	299	396	397
Notes payable	(17)	17	(7)	-	(18)	-	-	-	-	-
Contributions from parent-net	-	-	-	-	-	-	-	-	-	-
Other funds	119	8	-	-	-	-	-	-	67	10
Total	<u>237</u>	<u>285</u>	<u>383</u>	<u>300</u>	<u>232</u>	<u>285</u>	<u>387</u>	<u>554</u>	<u>778</u>	<u>737</u>
<u>Internal funds</u>										
Net income	82	97	123	145	162	174	188	224	252	277
Less:										
Preferred dividends	13	16	19	23	26	29	32	36	42	48
Common dividends	51	57	68	80	89	95	110	125	140	150
Retained earnings	18	24	36	42	47	50	52	63	70	79
Deferred taxes	3	2	2	2	3	3	3	13	15	18
Investment tax credit (deferred)	2	9	1	3	10	12	15	20	27	26
Depreciation & amortization	40	46	48	52	62	70	85	105	140	160
Less: AFDC	23	22	43	55	53	65	80	95	120	145
Total	<u>40</u>	<u>59</u>	<u>44</u>	<u>44</u>	<u>69</u>	<u>70</u>	<u>75</u>	<u>106</u>	<u>132</u>	<u>138</u>
TOTAL FUNDS	<u>\$ 277</u>	<u>\$ 344</u>	<u>\$ 427</u>	<u>\$ 344</u>	<u>\$ 301</u>	<u>\$ 355</u>	<u>\$ 462</u>	<u>\$ 660</u>	<u>\$ 910</u>	<u>\$ 875</u>
<u>Construction Expenditures *</u>										
Nuclear power plants	\$ 54	\$ 166	\$ 171	\$ 178	\$ 185	\$ 175	\$ 190	\$ 375	\$ 473	\$ 473
Other	223	156	265	188	126	183	293	290	435	399
Total Construction Exp's	<u>\$ 277</u>	<u>\$ 322</u>	<u>\$ 436</u>	<u>\$ 366</u>	<u>\$ 311</u>	<u>\$ 358</u>	<u>\$ 483</u>	<u>\$ 665</u>	<u>\$ 908</u>	<u>\$ 872</u>
Subject nuclear plants	<u>\$ 11.5</u>	<u>\$ 15.4</u>	<u>\$ 22.4</u>	<u>\$ 28.8</u>	<u>\$ 43.7</u>	<u>\$ 44.9</u>	<u>\$ 36.7</u>	<u>\$ 19.7</u>	<u>\$ 8.8</u>	<u>\$ .5</u>

\*Exclusive of AFDC (allowance for funds used during construction)

ATTACHMENT III

DISCUSSIONS OF WNP-5 COST INCREASES  
AND WNP-3 AND WNP-5 COST DIFFERENCES.

- Page 1 - February, 1976 "Plant Capital Investment Summary" (PCIS) for WNP-5 (previously submitted to the NRC).
- Page 2 - May, 1977 PCIS for WNP-5.
- Page 3 - A summary account comparison of the WNP-5 estimate of February, 1976 with the WNP-5 estimate of May, 1977.
- Page 4 & 5 - Compare the major assumptions used as the basis for preparation of the WNP-5 February, 1976 and May, 1977 estimates.
- Page 6 - Compares the various cost elements included in four summary accounts in the February, 1976 WNP-5 PCIS with the cost elements included in the same accounts in the May, 1977 PCIS.
- Page 7 - A summary explanation of the total cost variance between the WNP-5 February, 1976 and May, 1977 estimates.
- Page 8 - May, 1977 PCIS for WNP-3.
- Page 9 - A summary account comparison of the WNP-3 and WNP-5 estimates of May, 1977.
- Page 10 & 11 - A summary explanation of the total cost variance between the WNP-3 and WNP-5 estimates of May, 1977.



SUMMARY

BASIC DATA

Name of plant	<u>WNP-5</u>	Cost basis at start of construction	_____
Net capacity	<u>1,240</u> MW(e)		
Reactor type	<u>PWR (CE)</u>		
Location	<u>Satsop, Washington</u>	Type of Cooling	_____
<u>Design &amp; construction period</u>		Run of river	_____
Month, year NSSS order placed	<u>7-74</u>	Natural draft	_____
Month, year of commercial operation	<u>9-83</u>	cooling towers	<u>X</u>
Length of work week	<u>40</u> hours	Mechanical draft	_____
Interest rate, interest		cooling towers	_____
during construction	<u>7.5</u> simple <del>interest</del>	Other (describe)	_____

COST SUMMARY

<u>Account Number</u>	<u>Account Title</u>	<u>Total Cost</u> (thousand dollars)
<u>DIRECT COSTS</u>		
20	Land and land rights.....	\$ <u>- 0 -</u>
<u>PHYSICAL PLANT</u>		
21	Structures and site facilities.....	<u>153,572</u>
22	Reactor plant equipment.....	<u>140,151</u>
23	Turbine plant equipment.....	<u>129,762</u>
24	Electric plant equipment.....	<u>42,516</u>
25	Misc. plant equipment.....	<u>21,220</u>
	Subtotal.....	\$ <u>487,221</u>
	Spare parts allowance.....	<u>2,412</u>
	Contingency allowance.....	<u>51,831</u>
	Subtotal.....	\$ <u>541,464</u>
<u>INDIRECT COSTS</u>		
91	Construction facilities, equipment, and services.....	\$ <u>5,898</u>
92	Engineering and const. mg't. services...	<u>31,450</u>
93	Other costs.....	<u>79,481 (1)</u>
94	Interest during construction.....	<u>299,948</u>
	Subtotal.....	\$ <u>416,777</u>
	Start of construction cost.....	\$ <u>2,878</u>
	Escalation during construction ( _____ % yr.)	<u>227,600 (2)</u>
	Total plant capital investment (\$ _____ /KW)	\$ <u>1,188,719</u>

(1) Excludes all Nuclear Fuel costs.

(2) Labor escalation @ 8%, compounded; material escalation @ 6%, compounded.

SUMMARY

*Includes Transmission, GPP & fuel*

BASIC DATA

Name of plant	<u>WNP-5</u>	Cost basis at start of construction
Net capacity	<u>1,240</u> MW(e)	
Reactor type	<u>PWR (CE)</u>	
Location	<u>Satsop, Washington</u>	Type of Cooling
<u>Design &amp; construction period</u>		Run of river _____
Month, year NSSS order placed	<u>7-74</u>	Natural draft _____
Month, year of commercial operation	<u>3-85</u>	cooling towers _____ X
Length of work week	<u>40</u> hours	Mechanical draft _____
Interest rate, interest during construction	<u>7.75</u> simple <del>2x or 3x compounded</del>	cooling towers _____
		Other (describe) _____

COST SUMMARY

<u>Account Number</u>	<u>Account Title</u>	<u>Total Cost</u> (thousand dollars)
<u>DIRECT COSTS</u>		
20	Land and land rights.....	\$ <u>2,076</u>
<u>PHYSICAL PLANT</u>		
21	Structures and site facilities.....	<u>165,416</u>
22	Reactor plant equipment.....	<u>176,807</u>
23	Turbine plant equipment.....	<u>133,285</u>
24	Electric plant equipment.....	<u>49,153</u>
25	Misc. plant equipment.....	<u>29,122</u>
	Subtotal.....	\$ <u>555,859</u>
	Spare parts allowance.....	<u>3,435</u>
	Contingency allowance.....	<u>74,743</u>
	Subtotal.....	\$ <u>634,037</u>
<u>INDIRECT COSTS</u>		
91	Construction facilities, equipment, and services.....	\$ <u>14,895</u>
92	Engineering and const. mg't. services...	<u>74,430</u>
93	Other costs.....	<u>410,147 (1)</u>
94	Interest during construction.....	<u>500,346</u>
	Subtotal.....	\$ <u>999,818</u>
	Start of construction cost.....	\$ <u>9,018</u>
	Escalation during construction ( _____ % yr.)	<u>266,753 (2)</u>
	Total plant capital investment (\$ _____ /KW)\$	<u>1,909,626</u>

- (1) Includes \$105,831 and \$72,150 for initial core and reload nuclear fuel requirements, respectively.
- (2) Labor escalation @ 8%, compounded; material escalation @ 6%, compounded.

WASHINGTON PUBLIC POWER SUPPLY SYSTEM  
UNIT NO. 5  
TOTAL ESTIMATED COST COMPARISON  

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(Thousands)

ACCOUNT NUMBER	ACCOUNT TITLE	ESTIMATE OF FEBRUARY 1976	ESTIMATE OF MAY 1977	VARIANCE
<u>DIRECT COSTS</u>				
20	Land and land rights .....	\$ -0-	\$ 2,076	\$ 2,076
<u>PHYSICAL PLANT</u>				
21	Structures and site facilities .....	153,572	165,416	11,844
22	Reactor plant equipment .....	140,151	176,807	36,656
23	Turbine plant equipment .....	129,762	133,285	3,523
24	Electric plant equipment .....	42,516	49,153	6,637
25	Misc. plant equipment .....	21,220	29,122	7,902
	Subtotal .....	487,221	555,859	68,638
	Spare parts allowance .....	2,412	3,435	1,023
	Contingency allowance .....	51,831	74,743	22,912
	Subtotal .....	541,464	634,037	92,573
<u>INDIRECT COSTS</u>				
91	Construction facilities, equipment, and services .....	\$ 5,898	\$ 14,895	\$ 8,997
92	Engineering and const. mg't. services .....	31,450	74,430	42,980
93	Other costs .....	79,481	410,147	330,666
94	Interest during construction .....	299,948	500,346	200,398
	Subtotal .....	416,777	999,818	583,041
	Start of construction cost .....	2,878	9,018	6,140
	Escalation during construction .....	227,600	266,753	39,153
	TOTAL PLANT CAPITAL INVESTMENT .....	<u>\$1,188,719</u>	<u>\$1,909,626</u>	<u>\$720,907</u>

BASIS FOR WNP-5 COST ESTIMATES  
FEBRUARY, 1976 vs. MAY, 1977

I. PROJECT SCHEDULE:

<u>MILESTONES</u>	<u>ESTIMATE OF FEB., 1976</u>	<u>ESTIMATE OF MAY, 1977</u>	<u>VARIANCE</u>
Limited Work Authorization Issued	12/75	4/77	16 mos.
Construction Permit Issued	3/76 →	9/77	18 mos.
Fuel Load	3/83	9/84	18 mos.
Commercial Operation	9/83 →	3/85	18 mos.

Note: Both cost estimates assumed major construction on WNP-5 would follow WNP-3 by 18 months.

II. EQUITABLE COST SHARING:

The 1976 cost estimates were based on WNP-3 assuming all common costs, as if WNP-5 were not to be built; and WNP-5 assumed only the "incremental" costs required to add it to the total (dual-unit) project.

N.B.

The 1977 cost estimates were developed on an "equitable" cost sharing basis which takes into consideration that both WNP-3 and WNP-5 benefit from the economies of dual-unit construction and, therefore, share certain costs on the basis of the proportion of respective benefit.

III. BASE DATES FOR PREPARATION OF THE ESTIMATES:

<u>ESTIMATE OF FEB., 1976</u>	<u>ESTIMATE OF MAY, 1977</u>
JUNE, 1975	JUNE, 1976

IV. SPECIAL FINANCING CONSIDERATIONS:

a) When the Feb., 1976 estimate was developed, Participants', Ownership, Assignment and Short Term Sales Agreements and the Bond Resolution were not finalized and approved.

b) Changes in assumed interest and reinvestment rates:

	<u>ESTIMATE OF FEB., 1976</u>	<u>ESTIMATE OF MAY, 1977</u>
Interest	7.50	7.75
Reinvestment	7.00	5.75

c) Other capitalized costs as defined in Board of Directors Resolution No. 890, adopted February 23, 1977, a portion of which were allocated to WNP-5 in the May, 1977 estimate but not included in the February, 1976 estimate are as follows:

- a) Reserve & Contingency Fund
- b) Revenue Fund Working Capital
- c) Bond Fund Reserve Account
- d) Ramp Up Costs
- e) Energy and Uranium Bearing Lands Acquisition Programs

COMPARISON OF ASSUMED ACCOUNT DEFINITIONS  
OF  
WPPSS UNIT NO. 5 FEBRUARY, 1976 AND MAY, 1977 "PLANT CAPITAL INVESTMENT SUMMARY"  
(Thousands)

ACCT. NO./TITLE	FEBRUARY, 1976		MAY, 1977	
	ITEM(S) INCLUDED	COST	ITEM(S) INCLUDED	COST
- Contingency Allowance	Direct Cost Contingency	51,831	Direct Cost Contingency	39,743
			Total Project Contingency	<u>35,000</u>
	TOTAL	<u>51,831</u>	TOTAL	<u>74,743</u>
93 Other Costs	Owners Cost	49,710	Owners Cost	79,199
	Sales Tax (Incl. Fuel Tax)	28,771	Sales Tax (Excl. Fuel Tax)	47,259
	Performance Bonds	1,000	Performance Bonds	1,000
			Nuclear Fuel (Incl. Sales Tax)	177,981
			Reserve & Contingency Fund	5,556
			Working Capital	3,333
			Reserve Account	72,815
			Bond Discount & Financing Cost	19,670
			Energy & Uranium Programs	<u>3,334</u>
	TOTAL	<u>79,481</u>	TOTAL	<u>410,147</u>
94 Interest During Construction	Net IDC (Including Interest on Fuel)	277,035	Net IDC (Including Nuclear Fuel & Start-Up Interest)	500,346
	Financing Cost	<u>22,913</u>		
	TOTAL	<u>299,948</u>	TOTAL	<u>500,346</u>
- Start of Construction Cost	Start-Up Costs	2,878	Start-Up Costs	3,266
			Ramp-Up Costs	<u>5,752</u>
	TOTAL	<u>2,878</u>	TOTAL	<u>9,018</u>

WNP-5

SUMMARY VARIANCE EXPLANATION

(From Feb., 1976 Estimate to May, 1977 Estimate)

	(Thousands) <u>VARIANCE</u>
1. Cumulative Project Schedule Delay of 18 months (excluding Fuel and IDC increases).	90,000
2. Change in estimating basis from "incremental" to "equitable" cost sharing.	70,000
3. Physical Plant, Construction Plant, Sales Tax, AE/CM Services and Owners estimated costs increased as a result of design changes and/or additions, correcting previous estimating errors/omissions, availability of additional information for better definition of work and actual prices escalated at a higher rate than projected.	55,000
4. Addition of a total project "Potential Exposure" allowance for contingencies not quantified by Ebasco, i.e., contractor claims, schedule acceleration, etc.	35,000
5. Certain costs included in the May, 1977 estimate but previously not included in the Feb., 1976 Estimate, i.e., Nuclear Fuel, Reserve and Contingency Fund, Working Capital, Reserve Account, Energy and Uranium Programs and Ramp-Up Costs.	270,000
6. Interest During Construction increased as a result of the 18 month schedule delay, substantial increases in the estimated direct and indirect costs, inclusion of interest during the "Ramp-Up" period and a change to more conservative assumed interest and reinvestment rates.	<u>200,000</u>
TOTAL VARIANCE FROM FEB., 1976 TO MAY, 1977	<u>720,000</u>

SUMMARY

*Includes transmission, GPP & fuel*

BASIC DATA

Name of plant	<u>WNP-3</u>	Cost basis at start of construction
Net capacity	<u>1,240</u> MW(e)	
Reactor type	<u>PWR (CE)</u>	
Location	<u>Satsop, Washington</u>	Type of Cooling
<u>Design &amp; construction period</u>		Run of river
Month, year NSSS order placed	<u>7-73</u>	Natural draft
Month, year of commercial operation	<u>9-83</u>	cooling towers
Length of work week	<u>40</u> hours	Mechanical draft
Interest rate, interest		cooling towers
during construction	<u>7.25</u> simple <del>xxx</del>	Other (describe)

COST SUMMARY

<u>Account Number</u>	<u>Account Title</u>	<u>Total Cost</u> (thousand dollars)
<u>DIRECT COSTS</u>		
20	Land and land rights.....	\$ 2,076
<u>PHYSICAL PLANT</u>		
21	Structures and site facilities.....	165,416
22	Reactor plant equipment.....	166,958
23	Turbine plant equipment.....	131,240
24	Electric plant equipment.....	49,153
25	Misc. plant equipment.....	29,122
	Subtotal.....	\$ 543,965
	Spare parts allowance.....	3,435
	Contingency allowance.....	74,033
	Subtotal.....	\$ 621,433
<u>INDIRECT COSTS</u>		
91	Construction facilities, equipment, and services.....	\$ 14,894
92	Engineering and const. mg't. services...	72,246
93	Other costs.....	207,109 (1)
94	Interest during construction.....	270,714
	Subtotal.....	\$ 564,963
	Start of construction cost.....	\$ 3,266
	Escalation during construction ( _____ % yr.)	196,338 (2)
	Total plant capital investment (\$ _____ /KW)	\$ 1,386,000

(1) Includes \$63,537 for initial core nuclear fuel requirements.

(2) Labor escalation @ 8%, compounded; material escalation @ 6%, compounded.



PROPOSED OFFICIAL STATEMENT DATED JUNE 30, 1977

Ratings: { Moody's: .....  
Standard & Poor's: .....  
(See "Ratings" herein)

**\$230,000,000**

**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**

**Nuclear Project No. 3 Revenue Bonds, Series 1977**

Dated: July 1, 1977

Due: July 1, as shown below

Interest is payable January 1 and July 1, commencing January 1, 1978. Seattle-First National Bank, Seattle, Washington, is Bond Fund Trustee.

The 1977 Bonds maturing on July 1, 2009, and on July 1, 2018, are subject to redemption by operation of the Bond Retirement Account at 100% plus accrued interest to satisfy sinking fund installments, on any interest payment date on or after January 1, 2001, and January 1, 2010, respectively.

The 1977 Bonds may be redeemed prior to maturity, at the option of the Supply System, on or after July 1, 1987, as a whole at any time, or in part in inverse order of maturities and by lot within a maturity on any interest payment date, at prices ranging from 103% for the period July 1, 1987, to and including June 30, 1990, to 100% after June 30, 2000, plus accrued interest to the date fixed for redemption in each case, as further described herein. The 1977 Bonds may also be redeemed under special circumstances as further described herein.

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

The 1977 Bonds and the interest thereon are payable solely from the revenues derived by the Supply System through the ownership and operation by it of the Supply System's Ownership Share of the Project, including all payments to be made to the Supply System pursuant to the Net Billing Agreements and Power Sales Agreement, and Bond proceeds.

The United States of America, Department of the Interior, acting by and through the Bonneville Power Administrator ("Bonneville"), has purchased the Supply System's Ownership Share of the capability of the Project from 103 of its statutory preference customers (the "Participants"), less that portion of the Supply System's Ownership Share of the Project output which will be sold to certain industrial customers of Bonneville from the date of commercial operation through June 30, 1984, pursuant to the Power Sales Agreement. Such Participants, in turn, have purchased such capability from the Supply System, pursuant to the Net Billing Agreements. Bonneville is obligated to pay the Participants, and the Participants are obligated to pay the Supply System, in the manner and from the sources described herein, the total annual costs of the Supply System's Ownership Share of the Project, including debt service on the Bonds, whether or not the Project is completed, operable or operating and notwithstanding the suspension, reduction or curtailment of the Project output.

**AMOUNTS, MATURITIES, COUPONS AND YIELDS OR PRICES**

Amount	Due	Coupon	Price or Yield	Amount	Due	Coupon	Price or Yield
\$2,620,000	1985			\$3,655,000	1993		
2,725,000	1986			3,830,000	1994		
2,825,000	1987			4,030,000	1995		
2,945,000	1988			4,240,000	1996		
3,065,000	1989			4,460,000	1997		
3,200,000	1990			4,700,000	1998		
3,335,000	1991			4,950,000	1999		
3,490,000	1992			5,235,000	2000		

\$63,535,000 ..... % Term Bonds Due July 1, 2009, Price ..... %  
\$107,160,000 ..... % Term Bonds Due July 1, 2018, Price ..... %

**SEALED BIDS WILL BE RECEIVED AT THE SUPPLY SYSTEM'S OFFICE AT SUITE 415,  
SEA-TAC OFFICE CENTER, 18000 PACIFIC HIGHWAY SOUTH, SEATTLE,  
WASHINGTON, UNTIL 8:30 A.M., SEATTLE TIME, JULY 12, 1977.**

The 1977 Bonds are offered when, as and if issued and received by us and are subject to the approval of legality by Wood Dawson Love & O'Brien, New York, Bond Counsel to the Supply System, and Houghton Cluck Coughlin & Riley, Seattle, Washington, Soecial Counsel to the Supply System. It is expected that the 1977 Bonds in definitive form will be ready for delivery on or about July 28, 1977.

July .., 1977

This is a Proposed Official Statement, subject to correction and change, and is not yet finally adopted. The Supply System has authorized the distribution of this Proposed Official Statement to prospective purchasers and others. Upon the sale of the Series 1977 Bonds, it will complete, adopt, and deliver an Official Statement substantially in this form.

# WASHINGTON PUBLIC POWER SUPPLY SYSTEM

Principal Office—Richland, Washington

<u>Members</u>	<u>Representatives to the Board of Directors</u>
Public Utility District No. 1 of Benton County .....	John Goldsbury
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 .....	D. E. Hughes*
Public Utility District No. 1 of Douglas County .....	Howard Prey
Public Utility District No. 1 of Ferry County .....	Clair R. Hilderbrandt
Public Utility District No. 1 of Franklin County .....	Glenn C. Walkley*
Public Utility District No. 2 of Grant County .....	C. K. Jolly
Public Utility District No. 1 of Grays Harbor County .....	John J. Welch
Public Utility District No. 1 of Kittitas County .....	Harold W. Jenkins
Public Utility District No. 1 of Klickitat County .....	Gerald C. Fenton
Public Utility District No. 1 of Lewis County .....	T. R. Teitzel
Public Utility District No. 3 of Mason County .....	Edwin W. Taylor
Public Utility District No. 1 of Okanogan County .....	Stanton Cain
Public Utility District No. 2 of Pacific County .....	John Dunsmoor
City of Richland .....	Lane Bray
City of Seattle .....	Gordon Vickery*
Public Utility District No. 1 of Skamania County .....	Rolf E. Jemtegaard
Public Utility District No. 1 of Snohomish County .....	W. G. Hulbert, Jr.*
City of Tacoma .....	J. D. Cockrell*
Public Utility District No. 1 of Wahkiakum County .....	Charles F. Emerick

\* Executive Committee Member.

## OFFICERS

John Goldsbury	President
John J. Welch	Vice President
Edwin W. Taylor	Secretary

## ADMINISTRATIVE STAFF

Managing Director .....	N. O. Strand
Executive Assistant .....	P. C. Otness
Asst. Director—Projects .....	F. D. McElwee
Asst. Director—Generation & Technology ...	D. L. Renberger
Asst. Director—Finance and Administration —Treasurer .....	J. D. Perko
Manager, Planning and Analysis .....	H. R. Kosmata
Auditor .....	C. W. Godfrey
Chief Counsel .....	R. Q. Quigley

### FINANCIAL CONSULTANT

Blyth Eastman Dillon & Co. Incorporated

### BOND COUNSEL

Wood Dawson Love & O'Brien

### SPECIAL COUNSEL

Houghton Cluck Coughlin & Riley

### CONSULTING ENGINEER

R. W. Beck and Associates

### CONSTRUCTION ENGINEER

Ebasco Services Incorporated

### NUCLEAR FUEL CONSULTANT

The S. M. Stoller Corporation

The information contained in this Official Statement has been obtained from the Supply System and other sources deemed reliable. No representation or warranty is made, however, as to the accuracy or completeness of such information, and nothing contained herein is, or shall be, relied upon as a promise or representation of the Underwriters. This Official Statement, which includes the cover page and exhibits, does not constitute an offer to sell the 1977 Bonds in any state to any person to whom it is unlawful to make such offer in such state. No dealer, salesman or other person has been authorized to give any information or to make any representations, other than those contained in this Official Statement in connection with the offering of the 1977 Bonds, and if given or made, such information or representation must not be relied upon.

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## SUMMARY STATEMENT

(Subject in All Respects to More Complete Information Contained in This Official Statement)

### Purpose of Issue

The purpose of the \$230,000,000 Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds, Series 1977, is to finance a portion of the Supply System's share of the cost of constructing and acquiring the Project. The Supply System has issued \$250,000,000 of permanent financing for the Project. The Supply System has entered into an agreement with four investor-owned utilities which provides that the Project will be owned 70% by the Supply System and 30% by the utilities. It is estimated that the additional permanent financing required for the Supply System's share of the Project will be \$464,000,000.

The Supply System's share of the Project will be financed and accounted for as a system separate from all other current or planned Supply System projects. The Project 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, 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 the Project.

### The Supply System

The Supply System, organized in 1957, is a municipal corporation and a joint operating agency of the State of Washington. Its members are 19 operating public utility districts and the Cities of 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 888,000 kilowatts capacity and has under construction nuclear projects of approximately 6,000,000 kilowatts capacity.

### Security for the Bonds

The 1977 Bonds and the interest thereon are payable solely from the revenues derived by the Supply System through the ownership and operation of its share of the Project, including all payments to be made to the Supply System pursuant to the Net Billing Agreements and Power Sales Agreement, and Bond proceeds. Interest on the 1977 Bonds will be capitalized from Bond proceeds until September 1, 1982.

The United States of America, Department of the Interior, acting by and through the Bonneville Power Administrator ("Bonneville"), has purchased the Supply System's Ownership Share of the Project capability from 103 of its statutory preference customers (the "Participants"), less a portion of the Supply System's share of the Project output which will be sold to 15 industrial customers of Bonneville from the date of commercial operation through June 30, 1984 pursuant to a Power Sales Agreement. Such Participants, in turn, have purchased such capability from the Supply System, pursuant to the Net Billing Agreements. Bonneville is obligated to pay the Participants, and the Participants are obligated to pay the Supply System, in the manner and from the sources described herein, the total annual costs of the Supply System's Ownership Share of the Project (including debt service on the Bonds), less any amounts payable pursuant to the Power Sales Agreement, whether or not the Project is completed, operable or operating and notwithstanding the suspension, reduction or curtailment of the Project output.

The Net Billing Agreements provide that payments are to commence on the date when the Project is ready to be operated on a commercial basis, or January 1, 1981, whichever is earlier; provided, that such payments prior to the earlier of the date the Project is ready to be operated on a commercial basis or Sep-

tember 1, 1981, are limited to such amounts as Bonneville and the Supply System agree may be included in the Annual Budgets.

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. 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.

#### **Contracts, Schedule, Permits and Licenses**

The Supply System has employed Ebasco Services Incorporated as Construction Engineer for the Project. The Supply System has entered into 74 equipment and construction contracts as of June 1, 1977, including contracts for the nuclear steam supply system with Combustion Engineering, Inc., and for the turbine-generator and accessories with the Westinghouse Electric Corporation. The total contract amount of all these contracts was \$267,954,000 as of that date. The present schedule contemplates commercial operation in September 1983 based on receipt of a construction permit in August 1977.

The Supply System has obtained all of its uranium requirements for the initial nuclear fuel core under present ERDA regulations. The Supply System has under contract 14 years of uranium requirements for fuel reloads based on annual refueling.

The State of Washington has entered into a site certification agreement with the Supply System approving the site, which agreement includes the National Pollutant Discharge Elimination System Permit, and on April 8, 1977 the NRC issued a limited work authorization. In addition, the Supply System has applied for a construction permit from the NRC and expects a decision in late summer or early fall of 1977. The Atomic Safety and Licensing Board held final safety hearings relating to the issuance of the construction permit in May of this year.

**OFFICIAL STATEMENT**  
**OF**  
**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**

**A Municipal Corporation and a Joint Operating Agency of the State of Washington**

*relating to its*

**\$230,000,000**

**Washington Public Power Supply System Nuclear Project No. 3  
Revenue Bonds, Series 1977**

July . . . 1977

The purpose of this Official Statement, which includes the cover page hereof and the exhibits hereto, is to set forth information concerning Washington Public Power Supply System (the "Supply System"), its Washington Public Power Supply System Nuclear Project No. 3 (the "Project") and its \$230,000,000 Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds, Series 1977 (the "1977 Bonds"), in connection with the sale by the Supply System of such Bonds and for the information of all who may become holders of such Bonds. The 1977 Bonds are to be issued pursuant to the Revised Code of Washington, Chapter 43.52, as amended (the "Act"), Resolution No. 775 (the "Resolution") adopted December 3, 1975, by the Board of Directors of the Supply System and a resolution supplemental to the Resolution, Resolution No. . . . . (the "Supplemental Resolution") adopted July . . . 1977. The Supply System has heretofore issued, pursuant to the Resolution, \$250,000,000 principal amount of bonds for the Project, which bonds together with the 1977 Bonds and all additional series of bonds which may be hereafter issued pursuant to the Resolution to pay the Supply System's ownership share of the cost of acquiring and constructing the Project are herein called collectively the "Bonds".

The Project will be 70% owned by the Supply System, such share being hereinafter referred to as the Supply System's "Ownership Share" of the Project, 10% by Pacific Power & Light Company, 10% by Portland General Electric Company, 5% by Puget Sound Power & Light Company and 5% by The Washington Water Power Company (the "Companies").

**SECURITY FOR THE BONDS**

The principal of and interest on the Bonds are payable solely from the Bond Fund created by the Resolution. The moneys pledged to such Fund are limited to the income, revenues, receipts and profits derived by the Supply System through the ownership and operation by it of its Ownership Share of the Project, including the revenues derived by the Supply System from the Net Billing Agreements and the Power Sales Agreement described below, and Bond proceeds. Interest on the Bonds will be capitalized from Bond proceeds to September 1, 1982.

The United States of America, Department of the Interior, acting by and through the Bonneville Power Administrator ("Bonneville"), has purchased the Supply System's Ownership Share of the Project capability from the Participants who, in turn, have purchased such capability from the Supply System, all under the Net Billing Agreements. Bonneville is obligated to pay the Participants, and the Participants are obligated to pay the Supply System, in the manner and from the sources described below, the total annual costs of the Supply System's Ownership Share of the Project, including debt service on the Bonds, whether or not the Project is completed, operable or operating and notwithstanding the suspension, reduction or curtailment of the Project output.

The Supply System and Bonneville have also entered into a Power Sales Agreement with 15 industrial customers of Bonneville for the sale of a portion of the energy from the Supply System's Ownership Share of the Project, if such energy is not required to meet Bonneville's contractual obligations to supply firm power, from the date of commercial operation through June 30, 1984.

The Participants are 103 municipal corporations 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 Project capability purchased by each Participant, such Participant will pay the Supply System its pro rata share of the Supply System's Ownership Share of the costs for the Project less amounts payable by the 15 industrial customers of Bonneville under the Power Sales Agreement. Bonneville will pay for the 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. This crediting procedure is called "net billing".

Prior to each Contract Year the Supply System will adopt an Annual Budget covering all the Supply System's Ownership Share of the costs for the Project, including debt service on the Bonds. Thereafter a Billing Statement will be prepared for each Participant which will show the Participant's pro rata share of the Annual Budget less amounts payable by the 15 industrial customers of Bonneville under the Power Sales Agreement and from other sources. The Annual Budget and Billing Statements may be amended during a Contract Year if necessary. Payments by the 15 industrial customers of Bonneville will vary with the amount of energy delivered pursuant to the Power Sales Agreement, and amounts payable by the Participants pursuant to the Net Billing Agreements will be increased to the extent that payments are not made by industrial customers under the Power Sales Agreement.

Each Participant is a party to at least one other agreement with Bonneville providing for net billing, such as the net billing agreements relating to the Supply System's Nuclear Projects Nos. 1 and 2. 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 as shown on its Billing Statement 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 amount shown on the Participant's Billing Statement have been made to the Participant. The credits received by the Participant from Bonneville in each month under all net billing agreements will be allocated pro rata. 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 credit it received from Bonneville in the preceding month. The effect of this payment procedure will be that monies due Bonneville from the Participants, up to the Participants' total obligations to the Supply System as shown on their billing statements for all net billed projects, will be paid to the Supply System and will 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 obligation to the Supply System 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 Project



capability 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. Such mandatory assignments to any Participant may not exceed 25% of that Participant's share of 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 the Net Billing Agreement, each other Participant's share of the Project capability will be automatically increased for the remaining term of the Net Billing Agreements pro rata with that of other nondefaulting Participants up to an additional accumulated maximum of 25% of its original share of 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 Bonneville's billings to the Participant for power and certain services.

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 the Participant and an accumulated balance in favor of the 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 the Participant by Bonneville, "subject to the availability of appropriations for such purposes". At the time the Net Billing Agreements were entered into, all of Bonneville's revenues were paid into the United States Treasury, and Bonneville was required to obtain appropriations from Congress for all its cash needs. Since that time, the Federal Columbia River Transmission System Act (the "Transmission Act") was enacted (see "Bonneville Power Administration"). The Transmission Act establishes the Bonneville Power Administration Fund (the "Fund") into which all revenues received by Bonneville are to be deposited. Bonneville may make expenditures from its revenues in 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. Although Bonneville is still required to submit an annual budget including such expenditures to Congress for review, Bonneville's expenditures from its revenues in the Fund do not require formal approval by Congress except that Congress may take action to impose specific directives or limitations on such expenditures.

Subject to the power of Congress to take such action, Bonneville is obligated to pay from its revenues in the Fund any cash payments required under the Net Billing Agreements prior to any payments by Bonneville to the Treasury for repayment of (i) the Federal investment in the Federal Columbia River Power System, (ii) Corps of Engineers and Bureau of Reclamation costs connected with such system and (iii) bonds issued pursuant to the Transmission Act.

Bonneville has stated 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 the Participants not paid through net billing credits on a parity with other Bonneville operating expenses. Bonneville is obligated by law to charge rates for electric power and transmission of electric power which will recover the cost of producing and transmitting electric power, including all payments under the Net Billing Agreements.

For a discussion of Bonneville revenues available for net billing and cash payments, as described above, see "Bonneville Revenues and Expenses" under the caption "Bonneville Power Administration" and Exhibit VI. Bonneville currently estimates that after all net billed projects begin commercial operation, the net billing obligations of Bonneville to the participants in such projects will exceed Bonneville revenue from such participants which is subject to net billing. For example, current projections indicate that in the year ending September 30, 1984 the net billing obligations of Bonneville to the participants in net billed projects will exceed estimated net billing credits by \$37.4 million. If necessary, Bonneville is obligated to pay such deficits under the assignment and net billing procedure or by cash payments from the Fund in the manner described above.

Each Participant is obligated to pay the Supply System the amount set forth in its Billing Statement by the end of each Contract Year, whether or not it has received equivalent net billing credits 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. 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.

The Net Billing Agreements provide that payments will commence on the date when the Project is ready to be operated on a commercial basis, or January 1, 1981, whichever is earlier; provided, that such payments prior to the date the Project 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.

The Resolution provides for a Reserve Account in the Bond Fund equal to one-half of the maximum annual interest on each series of Bonds. Bonneville and the Supply System have agreed that the amount required for the Reserve Account plus \$3,000,000 for working capital will be provided through payments under the Net Billing Agreements prior to September 1, 1982. If for any reason these amounts are not so provided, they will be provided from Bond proceeds.

The revenues of the Supply System derived or to be derived from the Supply System's Nuclear Projects Nos. 1, 2, 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 Bonds.

### 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 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, as well as make surveys, plans, 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 privately-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 (7) members of the Board, administers the business of the Supply System between regular quarterly meetings of the Board. The Executive Committee meets twice each month.

The Supply System presently employs approximately 660 persons, including 265 persons in executive, finance and administrative functions, 157 persons in plant operations and 238 in the technical area. This technical staff, with electrical, mechanical, civil, nuclear engineering and other technical disciplines, has over 3,800 man-years of technical experience and over 2,800 man-years of nuclear experience.

The Supply System has been experiencing, 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 periods for the larger and more complex new generating units, (c) fuel availability, (d) compliance with changing environmental, safety and licensing requirements, (e) litigation and proposed legislation designed to delay or prevent construction of nuclear generating and other facilities, (f) increased financing requirements resulting from the foregoing and (g) uncertainties associated with the development of a national energy policy.

### THE PROJECT

The following is a general description of the Project; for additional information, reference is made to the reports of R. W. Beck and Associates (the "Consulting Engineer") and Ebasco Services Incorporated (the "Construction Engineer"), appended hereto as Exhibits II and III, respectively.

### **Ownership Agreement and Project Agreement**

Pursuant to the Revised Code of Washington, Chapter 54.44, the Supply System and the Companies have entered in an agreement (the "Ownership Agreement") under which each party will be responsible for providing its ownership share of the costs of construction and operation and will be entitled to its ownership share of the Project's capability. Under the Ownership Agreement, the Companies have designated the Supply System to act as their agent to construct, operate and maintain the Project. The Supply System and Bonneville have entered into an agreement (the "Project Agreement") with respect to the Project construction, operation, maintenance and budgets.

The Ownership Agreement provides that if any party is unable to proceed due to inability to finance or obtain necessary legal authorizations, all or any of the other parties may, under certain conditions, proceed with the Project without the disabled party by making appropriate adjustments in their ownership shares (see "End of Project" under the caption "The Ownership Agreement"). Under the Project Agreement any election by the Supply System to proceed is subject to the prior concurrence of Bonneville, and under the Net Billing Agreements the capability of any additional ownership share so acquired by the Supply System would be purchased by the Participants and assigned to Bonneville. The failure of the Supply System to elect to proceed, or Bonneville's disapproval of any election to proceed, will not affect Bonneville's or any Participant's obligations to make payments and credits under the Net Billing Agreements. The Supply System and the Companies have made all payments to date required under the Ownership Agreement.

### **Location of the Project**

The Project 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 site is to consist of approximately 2,300 acres, of which approximately 800 acres will be devoted to the core area upon which the Project and Supply System's Nuclear 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 75% 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 the Project and is acquiring areas for a barge slip and water intake facilities and a lease of a portion of the bed of the Chehalis River for the water discharge facilities.

### **Description of the Project**

The Project will consist of a pressurized water nuclear steam supply system, turbine generator, associated auxiliary equipment and facilities together with the necessary transformation, switching and transmission facilities to interconnect the Project with the facilities of the Federal Columbia River Power System. The nuclear steam supply system, the turbine generator and all associated equipment are sized to give the Project a net generating capability of 1,240,000 kilowatts.

The main plant structures include the reactor containment and shield structure, the reactor auxiliary building, the fuel handling building, the control room area, 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 the Project from diesel generators, sized to sustain all essential plant loads without the need for outside power sources.

### **Project Permits, Licenses, Contracts and Schedule**

The State of Washington has entered into a site certification agreement with the Supply System approving the site and has issued the National Pollutant Discharge Elimination System Permit. On April

8, 1977 a limited work authorization was issued by the Nuclear Regulatory Commission ("NRC"). In addition, the Supply System has applied for a construction permit from the NRC and expects a decision in late summer or early fall of 1977. The Atomic Safety and Licensing Board held final safety hearings relating to the issuance of the construction permit in May of this year.

The Supply System has entered into 74 equipment and construction contracts as of June 1, 1977, including contracts for the nuclear steam supply system with Combustion Engineering, Inc. and for the turbine-generator and accessories with the Westinghouse Electric Corporation. The total contract amount of all these contracts was \$267,954,000 as of that date. Commercial operation is presently scheduled for September 1983 based on receipt of a construction permit by August 1977. Preliminary site work began in April 1977 after receipt of the limited work authorization; however, on-site construction and installation of nuclear components cannot proceed without a construction permit issued by the NRC. Any significant delay in obtaining the construction permit will delay the Project schedule and increase the Project cost.

### **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 the United States Energy Research and Development Administration ("ERDA") for enrichment services, and with Combustion Engineering, Inc. for fabrication services.

For reload fuel, the Supply System has contracts with Exxon Nuclear Company, Incorporated, for uranium concentrates estimated to be sufficient for 14 years of operation, based on annual refueling, with ERDA for enrichment services through 2010, and with Exxon Nuclear Company, Incorporated, for fuel fabrication services estimated to be sufficient for 14 years of operation, based on annual refueling. The Supply System has contracted for all conversion services required for operation of the Project through 1988 with the Kerr McGee Corporation and anticipates no difficulty in obtaining such services thereafter.

At the present time, no operating facilities for the reprocessing of spent fuel are available and none are expected to be available in the near future. In the absence of such facilities, the Supply System is providing on-site spent fuel storage capacity for the Project sufficient to accommodate storage of the discharges of all spent fuel until some time after 1990. By then it is expected that definitive guidelines will be available to determine whether fuel would be reprocessed, consigned to an offsite storage facility or disposed of in some other manner.

The Supply System has employed The S. M. Stoller Corporation as nuclear fuel consultant.

### **Project Financing Requirements**

The total financing requirements for the Supply System's Ownership Share of the Project are presently estimated to be \$944,000,000 and are shown in the following tabulation. Based on present estimates of actual needs by the Construction Engineer and the Supply System, the proceeds from the 1977 Bonds will be sufficient to continue construction of the Project until February, 1980. In addition to the 1977 Bonds and the \$250,000,000 principal amount of Bonds previously issued, additional Bonds necessary to complete the financing of the Supply System's Ownership Share of the Project in the estimated aggregate principal amount of \$464,000,000 are planned to be issued during construction of the Project. It is expected that the next series of Bonds will be issued in 1978. The amount of financing has been estimated on the basis of actual interest rates for previous financings, an annual 6.00% interest rate for the 1977 Bonds and an annual 7.5% interest rate for the balance of the Bonds.

## ESTIMATED PROJECT FINANCING REQUIRED

(\$000)

	<u>Total Project Costs</u>	<u>Supply System 70% Share of Project Costs</u>
Land and Land Rights(1) .....	\$ 2,422	\$ 1,696
Structures and Improvements(2) .....	165,416	115,791
Reactor Plant Equipment(2) .....	166,958	116,871
Turbogenerator Units(2) .....	131,240	91,868
Accessory Electric Equipment(2) .....	42,634	29,844
Miscellaneous Power Plant Equipment(2) .....	29,122	20,385
Station Equipment(2) .....	6,519	4,563
Other Tangible Property(2) .....	14,894	10,426
Project Construction Costs .....	\$ 559,205	\$ 391,444
Escalation(2) .....	196,338	137,437
Contingencies(2) .....	39,033	27,323
Sales Tax (1)(3) .....	42,759	29,932
Nuclear Fuel(1)(4) .....	65,810	46,067
Owner's Contingencies(1) .....	35,000	24,500
Architect-Engineer(2) .....	41,278	28,894
Construction Manager(2) .....	30,968	21,677
Owner's Direct Cost(1) .....	83,500	58,450
Performance Bonds(1) .....	1,000	700
Total Construction and Nuclear Fuel Costs .....	\$1,094,891	\$ 766,424
Bond Discount and Other Financing Expenses(5) .....		10,815
Capitalized Interest During Construction(6) .....		255,983
Gross Requirements .....		\$1,033,222
Less: Estimated Income from Temporary Investments(7) .....		(89,222)
Net Requirements .....		\$ 944,000

(1)—Estimated by Supply System.

(2)—Estimated by Ebasco. Takes into consideration that the Project and Nuclear Project No. 5 will benefit from the economy of dual-unit construction.

(3)—Excludes sales tax on nuclear fuel.

(4)—Includes sales tax.

(5)—Includes actual expense of previous financing and estimated costs of issuance of the 1977 Bonds and additional Bonds.

(6)—Based on actual interest rates for previous financings, an assumed 6.0% for the 1977 Bonds, and an assumed 7.5% for additional Bonds capitalized to September 1, 1982. Does not include interest for the period from September 1, 1982 to September 1, 1983 (see the caption "Financing Program").

(7)—Includes actual income to June 1, 1977 from temporary investment of proceeds from previous financings and estimated future income from temporary investment of proceeds from additional Bonds at an annual rate of 5.75%.

Construction cost estimates are based on a scheduled date of commercial operation of September, 1983.

In addition to the foregoing amounts obtained through issuance of Bonds, funds to make the payments required by the Resolution to the Reserve Account in the Bond Fund, to provide working capital and to provide an initial Reserve and Contingency Fund are expected to be obtained under the Net Billing Agreements during the period beginning January 1, 1981 and extending to the date of commercial operation, as follows:

Reserve Account in Bond Fund .....	\$33,236,000
Working Capital .....	3,000,000*
Reserve and Contingency Fund .....	3,000,000
<u>Total .....</u>	<u>\$39,236,000</u>

\* The amount of working capital may be increased by agreement between the Supply System and Bonneville.

If for any reason the amounts for the Reserve Account and working capital are not provided by September 1, 1982 and for the Reserve and Contingency Fund are not provided by the date of commercial operation under the Net Billing Agreements, the Resolution provides that such amounts shall be provided through the issuance of additional Bonds.

#### Estimated Project Annual Costs

Estimates of the annual costs of the Supply System's Ownership Share of the Project's operations are given in the following table. The net annual costs shown below are estimated to be approximately \$121,637,000 for the generation of 5.7 billion kilowatt-hours annually as the Supply System's share of Project output, or 21.3 mills per kilowatt-hour.

<u>Item</u>	<u>Expense</u>
Interest and Amortization(1) .....	\$ 72,823,000
Payments to Reserve and Contingency Fund .....	7,282,000
Insurance(2) .....	2,038,000
Administrative and General(2) .....	3,918,000
Operation and Maintenance(2) .....	7,954,000
Fuel(3) .....	34,656,000
Taxes(4) .....	1,140,000
Subtotal .....	\$129,811,000
Less: Surplus from Prior Years' Payment to Reserve and Contingency Fund(5) .....	(5,638,000)
Less: Interest Earnings(6) .....	(2,536,000)
Total Annual Cost .....	\$121,637,000
Cost per Kilowatt-hour (5.7 billion kWh)(7) .....	21.3 Mills

(1)—Based on level debt service, 36-year amortization, and the following interest rates: Outstanding Bonds at actual interest rates, 1977 Bonds at 6.0%, and additional Bonds at 7.5%. Maturities of the Bonds may not be scheduled to yield level debt service throughout the period and variations in annual costs will result to the extent actual debt service varies from assumed level debt service.

(2)—Based on 1976-1977 costs of labor, materials and insurance escalated at 6.0% per year to 1985-1986 levels. These costs are characteristic of a mature plant; costs during initial years of operation are expected to be higher. Excludes potential insurance assessments described under the caption "Nuclear Insurance".

(3)—Based on five-year, escalated, levelized fuel costs including contingencies, beginning in 1983.

(4)—Taxes are calculated at 0.2 mills per kilowatt-hour.

(5)—Computed as follows:

Payments to Reserve and Contingency Fund .....	\$7,282,000
Less: Estimated amount required for renewals, replacements and additions ..	1,644,000
Net Surplus .....	\$5,638,000

The Net Surplus may be used for purposes other than reduction in power costs in accordance with the Resolution.

(6)—Computed on the basis of 7% annual interest earnings on the balance of funds in the Reserve Account in the Bond Fund and the Reserve and Contingency Fund.

(7)—Does not reflect certain Project costs and the cost of interest on the Bonds from September 1, 1982 to September 1, 1983 (see the caption "Financing Program").

## THE SUPPLY SYSTEM'S OTHER GENERATING PROJECTS

The Supply System is operating a hydro-electric project and a steam electric generating project and, in addition to the Project, has under construction four nuclear electric generating projects.

The Supply System owns and operates the Packwood Lake Hydroelectric Project with a nameplate rating of 27,500 kVA. The Supply System sold \$13,700,000 Packwood Lake Hydroelectric Project Revenue Bonds, of which \$12,605,000 were outstanding as of June 1, 1977.

The Supply System owns and operates an 860,000 kilowatt electric generating plant and associated facilities located on the Hanford Reservation of the Energy Research and Development Administration ("ERDA"). This project, known as the Hanford Project, was constructed pursuant to agreements between the Supply System, Bonneville, 76 Pacific Northwest utility participants, and the Atomic Energy Commission. Under these agreements, Bonneville acquired the capability of the Hanford Project in exchange for power from the Bonneville system. In 1963, the Supply System issued \$122,000,000 Hanford Project Electric Revenue Bonds, of which \$56,710,000 were outstanding as of June 1, 1977. By-product steam is provided for the Hanford Project from the New Production Reactor ("NPR") owned and operated by ERDA for national defense purposes. On March 26, 1977, the Supply System and ERDA entered into agreements to provide for the operation of the Hanford Project in conjunction with the NPR through June 30, 1983.

The Supply System has under construction a 1,250,000 kilowatt nuclear generating plant, known as Washington Public Power Supply System Nuclear Project No. 1, and has issued an aggregate of \$535,000,000 principal amount of revenue bonds in order to pay a portion of the costs of acquiring and constructing this project. This project is located on the Hanford Reservation, is presently scheduled to begin commercial operation in September 1981 and is in the initial stages of construction. A plumbers and steamfitters strike settled in November 1976 has delayed certain construction on Project No. 1 by at least four months. Actions have been taken to improve construction progress; however, unless these are successful, the commercial operation date will be delayed by approximately four months. Based on the Supply System's approved budget, the estimated additional financing requirements for the project are approximately \$671,000,000 for a total of \$1,206,000,000. The Supply System has identified on a preliminary basis additional project costs of approximately \$76,000,000, including the costs of a possible four month delay, which would increase future financing requirements. The present commercial operation date of September 1, 1981 is optimistic in that it assumes that certain piping and electrical operations will be completed more quickly than industry averages would indicate. Use of industry averages for scheduling purposes would require a further schedule delay of up to eight months with additional increases in the project's cost.

The Supply System has under construction a 1,100,000 kilowatt nuclear generating plant, known as Washington Public Power Supply System Nuclear Project No. 2, and has issued an aggregate of \$800,000,000 principal amount of revenue bonds in order to pay a portion of the costs of acquiring and constructing this project. This project is located on the Hanford Reservation. The scheduled commercial operation date of June 1980 has been extended to September 1980 because of the effect of the plumbers and steamfitters strike. This project was approximately 42% complete as of June 10, 1977. The Supply System's estimated additional financing requirements for this project are approximately \$165,000,000 for a total of \$965,000,000. However, the Supply System has identified on a preliminary basis additional project costs of approximately \$60,000,000, including the costs of the three month schedule delay mentioned above, which would increase future financing requirements.

The capability of the Supply System's Nuclear Projects Nos. 1 and 2, in addition to the Supply System's share of the Project, have been acquired by Bonneville under net billing agreements and exchange agreements with respect to each such project.

The Supply System has also begun construction on Nuclear Projects Nos. 4 and 5. The NRC has issued limited work authorizations for both projects. Nuclear Project No. 4 will be a duplicate of the

Supply System's Nuclear Project No. 1 located on the Hanford Reservation and is scheduled for commercial operation in March 1983. The potential delays discussed above with respect to Nuclear Project No. 1 could have a corresponding effect on Nuclear Project No. 4. Nuclear Project No. 5 will be a duplicate of the Project located at the Satsop site near Aberdeen in Grays Harbor County, Washington, and is scheduled for commercial operation in March 1985. Nuclear Project No. 5 is jointly owned, with the Supply System owning a 90% share and the Pacific Power & Light Company owning a 10% share. The Supply System has issued \$235,000,000 of long term revenue bonds to pay a portion of the costs of constructing these projects. These bonds are secured by agreements with 88 public agencies and electric cooperatives. Bonneville is not purchasing any capability from Nuclear Projects Nos. 4 and 5.

Fifteen labor agreements with crafts working on the Supply System's projects, including the Project, will expire within the next few months. It is premature for the Supply System to predict the outcome of negotiations for new contracts.

All projects, including the Project, heretofore undertaken by the Supply System, except Nuclear Projects Nos. 4 and 5, have been or are being financed as separate systems. The obligations issued with respect to each such project are payable solely from the revenues of that project. The ownership share of the Supply System in Nuclear Projects Nos. 4 and 5 is being financed as one system.

### FINANCING PROGRAM

After the issuance of the 1977 Bonds, the Project will require additional financing of approximately \$464,000,000. The Supply System has previously obtained \$250,000,000 of long-term financing for its ownership share of the Project. The Supply System has previously obtained \$535,000,000 of long-term financing for Project No. 1 and \$800,000,000 of long-term financing for Project No. 2. On the basis of the estimated cost to the Supply System for Nuclear Projects Nos. 1 and 2, it is estimated that the Supply System will require additional long-term financing for these projects of approximately \$836,000,000.

The Supply System's ownership share of Nuclear Projects Nos. 4 and 5 will require additional long-term financing of approximately \$3,199,000,000 including capitalized nuclear fuel. The Supply System has previously obtained \$235,000,000 of long-term financing for these projects.

After the sale of the 1977 Bonds, the Supply System expects that its next bond sale will be in the late summer of 1977 to obtain additional financing for Nuclear Projects Nos. 4 and 5, and that the next financing for Nuclear Projects Nos. 1, 2 or 3 will occur in the fall of 1977. In calendar year 1977 the remaining financing for Nuclear Projects Nos. 1 through 5, excluding the 1977 Bonds, will be approximately \$400,000,000.

The foregoing financing program could be affected by the following circumstances. As a result of the drought in the Pacific Northwest and delays in the commercial operation dates for net billed projects, Bonneville's revenues are being adversely affected. Furthermore, increased costs of the construction of such projects have increased Bonneville's expenditure requirements. As a result, Bonneville is exploring with the Supply System various alternatives which will assure the availability of adequate revenues to meet Bonneville's debt service requirements on the net billed projects prior to their dates of commercial operation and have sufficient funds remaining to pay its other obligations. These alternatives include deferring payments to the Federal Treasury to repay its investment in the Federal Columbia River Power System, increasing the amount of projected borrowings from the Federal Treasury pursuant to the Federal Columbia River Transmission System Act, obtaining additional legislation to expand Bonneville's authority with reference to the purposes for which Bonneville may borrow from the Treasury, imposing a surcharge on Bonneville's existing rates, seeking additional appropriations from Congress and financing



by the Supply System of debt service on net billed projects payable under net billing agreements prior to the dates of commercial operation. The need to implement any one or a combination of the foregoing will be affected by Bonneville's revenues, which in turn are directly related to hydro conditions in the Pacific Northwest, the Bonneville rate level, and the costs and feasibility of the various alternatives. The ultimate determination will be based upon the lowest cost to the Bonneville customers.

In the event the Supply System determines to expand its financing program to include all or a portion of the debt service payable under the net billing agreements prior to the dates of commercial operation, such financing would be accomplished through the issuance of subordinated bonds; however, Bonneville's obligations under the net billing agreements to pay debt service on such bonds would be on a parity with its obligation under such agreements to pay other annual project costs, including debt service on the senior lien bonds. It is currently estimated that the total amount of such debt service requirements to currently projected commercial operation for each of the net billed projects is \$89,353,000 for Project No. 1, \$203,554,000 for Project No. 2 and \$73,574,000 for the Project.

### **NUCLEAR REGULATORY COMMISSION RECENT DEVELOPMENTS**

The U.S. Geological Survey ("USGS") has prepared a report dated April 1, 1977, relating to seismology in the State of Washington and an earthquake which occurred in the North Cascades region of the Pacific Northwest in 1872. After receipt of this report the NRC requested the Supply System to evaluate the USGS report as well as other information with regard to the seismic design for Nuclear Projects Nos. 1, 2 and 4. The Supply System has expanded the scope of ongoing investigations and plans to submit the requested evaluations over a period of several months. It is possible that further developments in this regard could affect the schedule or costs or both, for Projects Nos. 1, 2 and 4. This seismology matter was reviewed in the NRC licensing proceedings involving the limited work authorization for the Project and Nuclear Project No. 5 and has been resolved so that it is not expected to further affect the licensing proceedings for such projects.

On July 21, 1976, the United States Court of Appeals for the District of Columbia Circuit held that a rule adopted by the NRC to account in individual NRC licensing proceedings for the environmental impacts of spent fuel reprocessing and radioactive waste management was defective under the National Environmental Policy Act. This decision has been appealed to the United States Supreme Court and Certiorari has been granted. On March 14, 1977, the NRC adopted an interim rule as a substitute for the rule held defective, and it has resumed the issuance of licenses and permits, subject to the outcome of the Supreme Court appeal and rulemaking proceedings. All licenses, permits and authorizations issued under the interim rule will be conditioned upon compliance with the revised permanent rule. The resolution of the issues in these proceedings is not currently affecting the schedule for NRC action on pending requests for construction permits for Projects Nos. 3, 4 and 5.

### **NUCLEAR INSURANCE**

The Supply System will be required to obtain liability insurance and a Government indemnity agreement for each of its projects prior to the time NRC operating licenses are issued to insure against its maximum liability under the Price-Anderson Act (currently \$560,000,000) for any public liability claims arising from a nuclear incident. Recent amendments to such Act provide that licensees of operating reactors may, commencing August 1, 1977, be assessed \$5,000,000 per reactor per nuclear incident at any commercial power reactor in the United States as a retrospective premium with a limit of \$10,000,000 per reactor per year. Any such assessments allocable to the Supply System's Ownership Share of the Project, once it became subject to this retrospective premium 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, \$7,000,000 of which would be allocable to the Supply System's Ownership Share of the Project.

On March 31, 1977 the United States District Court for the Western District of North Carolina held unconstitutional the provisions of the Price-Anderson Act limiting liability of the owners of nuclear plants. That decision is being appealed to the United States Supreme Court. If the ruling were upheld and if additional insurance or other means for sharing liability were not established, the Supply System could be exposed to its pro rata share (based on its ownership interest) of uninsured damages in excess of \$560,000,000 with respect to an incident involving any unit in which it has an ownership interest.

Nuclear property insurance for the Project will be purchased from the nuclear insurance pools, Nuclear Energy Liability—Property Insurance Association and Mutual Atomic Energy Reinsurance Pool. Combined policy limits of the NEL-PIA and MAERP policies are available currently up to a maximum of \$220,000,000. Nuclear property insurance is "all risk" (fire and extended perils) coverage without the standard nuclear exclusion which appears in conventional property insurance policies. It has been the general policy and practice of both the insurance pools and the utility industry that adjacent nuclear units are covered under a single policy and a single policy limit (at a premium which reflects some discount for the second and following units). The Supply System anticipates that the property insurance coverage for the Project and Project No. 5 will be under a single policy and that the same will be true for Projects Nos. 1 and 4, and it is possible that the same policy may cover Projects Nos. 1, 2 and 4. Also, it may be noted that nuclear property insurance is customarily the only property insurance available for adjacent nuclear unit construction sites from the time nuclear fuel is first to be brought on any one of the sites for storage (such usually occurs many months prior to initial fuel loading and reactor operation). Thus if the sites of Projects Nos. 1, 2 and 4 were treated as a single site for nuclear property insurance purposes, then a single nuclear property insurance policy and single policy limit would be applicable to all three sites from the time fuel is to be brought upon the Project No. 2 site for storage.

#### BONNEVILLE POWER ADMINISTRATION

The Bonneville Power Administration, a bureau of the U.S. Department of the Interior, 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 29 Federal hydroelectric projects in the Pacific Northwest with an installed capacity of 12,475,000 kilowatts and a firm energy capability of 7,604,000 average kilowatts. These projects, authorized new projects and potential additions to existing projects will have the potential of an installed capacity of approximately 27,513,000 kilowatts.

Bonneville's transmission facilities include over 12,100 miles of 115 kV to 500 kV ac and 800 kV dc transmission lines. These transmission facilities, together with hydroelectric projects mentioned above and the resources acquired from non-Federal sources, comprise the Federal Columbia River Power System (the "Federal System"). More than 80 percent of the 500 kV and 230 kV transmission system 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 11 non-Federal projects to various private and public utilities in the Pacific Northwest.

Bonneville sells electric power at wholesale to 148 utility, industrial and government customers in the States of Washington, Oregon, Idaho and Montana west of the Continental Divide, plus small adjacent portions of California, Montana, Nevada, Utah and Wyoming. Of the 148 customers, Bonneville serves either all or the major share of the electric load of 115 public and cooperative utility customers and 15 industrial customers. In 1976 the Federal System produced approximately 50% of the region's energy requirements. In addition Bonneville sells surplus power under contract to 14 customers in California and Canada.

#### Acquisition of Project Capability and Power Supply

While the Federal System has a potential installed generating capacity of more than twice the existing installed capacity, the firm energy capability of the hydro system is not expected to substantially increase. As part of the Hydro Thermal Power Program, Bonneville has purchased through net billing agreements

and exchange agreements the Supply System's Ownership Share of the capability of the Project, as well as the capability of its Nuclear Projects Nos. 1 and 2 and the City of Eugene, Oregon's 30 percent ownership share of the Trojan Project (the "net billed projects") and may purchase 10 percent of the capability of the first unit of Portland General Electric Company's Pebble Springs nuclear generating project. Bonneville plans to blend the energy from the Project and the other net billed projects with the resources of the Federal System for sale at wholesale to its customers. The net billed projects are expected to represent 24.7% of the estimated energy capability of the Federal System in the year ending June 30, 1986, the first year the net billed projects are expected to reach their full forecasted generating capability. However, the City of Eugene, Oregon, has notified Bonneville that, pursuant to the net billing agreement between Bonneville and Eugene, after July 1, 1984, Eugene will withdraw from Bonneville for use in its system increasing increments of the capability of its ownership share of the Trojan Project.

Bonneville has acquired the capability of the Supply System's Hanford Project in exchange for firm power from its system. Bonneville has also entered into certain arrangements to increase the capacity of the Federal hydroelectric projects. Acting jointly with the U. S. Army Corps of Engineers as the United States Entity, pursuant to a treaty between the United States and Canada, it has entered into certain agreements under which the Federal System obtained certain rights to 15,500,000 acre-feet of hydro storage on the Columbia River and its tributaries in Canada, which, together with the Libby Project authorized by treaty, has enabled the Federal Government and Northwest utilities to install 2.8 million kW of additional capacity at hydroelectric projects on the main stem of the Columbia River downstream from such storage.

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

Under the Bonneville Project Act and the Transmission Act Bonneville markets at wholesale the electric energy from Federal hydroelectric projects and the net billed projects, constructs, operates, and maintains transmission lines and substations, interconnects the Federal hydroelectric projects and non-Federally owned power systems and projects, and is directed to set rates to recover its costs of producing and transmitting electric energy.

Under the provisions of the Transmission Act, Bonneville's receipts from the sale and transmission of electric power are deposited in the Bonneville Power Administration Fund ("Fund"), established in the Federal Treasury. Such receipts are to be used to pay Bonneville's expenses, including the cost of power purchased from the Project and other net billed projects, operation and maintenance of the Federal System, and repayment to the Federal Treasury for the investment in multipurpose Federal projects. In addition, the Transmission Act provides that Bonneville may sell up to \$1.25 billion in revenue bonds to the Treasury, at an interest rate comparable to the rates prevailing in the market for similar bonds, for the purpose of providing funds for construction of transmission facilities. Bonneville and the Treasury have taken the initial steps necessary to obtain \$250,000,000 under this authority. Although Bonneville is still required to submit an annual budget to Congress for review, Bonneville's expenditures from its revenues in the Fund do not require formal approval by Congress, except that Congress may take action to impose specific directives or limitations on such expenditures.

Bonneville's purchase of the Supply System's share of the Project's capability and the capability of the other net billed projects was authorized and approved by Congress in the Public Works Appropriations Acts of 1970 and 1971.

#### **Proposed Transfer of Bonneville to Department of Energy**

Under the proposed Department of Energy Organization Act now pending before Congress, Bonneville would be transferred from the Department of the Interior to the proposed Department of Energy. This transfer would not affect the validity or the force of the Net Billing Agreements or the arrangement described under the caption "Security for the Bonds" for payment of the Supply System's Ownership Share of the Project's annual costs.

The transfer of Bonneville to the Department of Energy would include all Bonneville facilities, functions, obligations, and authorities, including the authority contained in the Bonneville Project Act of 1937 as amended and the Transmission Act. The proposed legislation provides that Bonneville and other

Federal power marketing agencies shall be preserved as separate and distinct organizational entities within the Department and shall each be headed by an Administrator appointed by the Secretary of the Department. The functions and authorities transferred to the Department shall be exercised by the Secretary acting by and through such Administrators.

### **Bonneville Contracts**

Each of the Participants is a preference customer of Bonneville and has, with other public bodies and cooperatives, a statutory preference and priority upon power from the Federal System. Each Participant is a party to at least one power sales contract requiring payment to Bonneville for the purchase or exchange 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 7 years' prior notice of insufficiency of supply. Bonneville has given its preference customers notice that an insufficiency in power supply will occur after July 1, 1983. The 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.

In the past Bonneville has executed new preference customer power sales contracts prior to the termination of existing preference customer power sales contracts. However, Bonneville does not expect to execute new preference customer power sales contracts until after it has completed an environmental impact statement entitled "The Role of BPA in the Pacific Northwest Power Supply System, Including Its Participation in the Hydro-Thermal Power Program: A Program Environmental Statement and Planning Report" ("Role EIS") and has given consideration to the material presented in the final Role EIS and its other legal obligations. In addition, from time to time, Bonneville receives applications for purchase of power from agencies which may also have a statutory preference and priority on power from the Federal System. These applications for power and resultant power sales contracts, and the terms of preference customers' future power sales contracts, could affect future allocations of power from the Federal System. If Bonneville does not execute new power sales contracts with the Participants or if the Participants' new power sales contracts provide for a limited or reduced level of power sales, a reduction in the net billing credits available to such Participant for use in offsetting its payments to the Supply System may occur. Any deficits in net billing credits would be satisfied in the manner described under the caption "Security for the Bonds". For further information with respect to the Role EIS and litigation relating thereto see the caption "Power Supply in the Pacific Northwest and the Hydro Thermal Power Program".

Bonneville delivers power to 15 industrial customers, most of which use large amounts of electric power to produce metals or chemicals, pursuant to power sales contracts for 20-year terms. Such power sales contracts provide for the delivery of power subject to greater interruption than the firm power furnished preference customers. These contracts terminate between 1981 and 1991. As indicated above, Bonneville has notified its preference customers that its resources will be insufficient to meet such customers' requirements for firm energy after July 1, 1983. Bonneville anticipates that the preference rights of public agencies and cooperative utilities to its power resources will preclude execution of new power sales contracts with industrial customers with provisions similar to those in existing contracts.

On January 26, 1977, the City Council of Portland, Oregon passed a resolution authorizing the City Attorney to take legal action to challenge Bonneville's method of marketing electric power to Bonneville's existing customers. While no action has been filed to date, the objective of such action would be to acquire for the citizens of Portland a portion of the low-cost Bonneville resources. The resolution further provides that in the event the authorized suit does not accomplish its objective of challenging the preference and priority of preference customers to Bonneville's resources under the Bonneville Project Act, but does succeed in setting aside Bonneville's existing power sales contracts, the City of Portland would create a municipal utility system to serve the residents of the City of Portland. It is not known when such a suit

will be filed, or, if filed and Portland did prevail, whether the power supply of the Bonneville preference customers would be affected. Bonneville's revenues would not be affected if Portland prevailed in its suit.

In addition to sales to preference customers and industries, Bonneville delivers smaller amounts of power to investor-owned utilities and federal and state agencies in the Pacific Northwest, and any surpluses to entities outside the Northwest. A large portion of this surplus power is sold to entities in California.

### Bonneville Revenues and Expenses

Bonneville's revenues for the year ended June 30, 1976 totaled more than \$292 million, about \$58 million, or almost 12 percent, more than the preceding year's revenues. The principal factors in the increase were: (1) the average 27 percent wholesale power rate increase which became effective December 20, 1974 and (2) increased firm power sales to preference customers and availability of nonfirm energy for sale as the result of greater than average streamflows on the Columbia River and its tributaries.

The following table sets forth a summary of certain Bonneville revenues and expenses for the years ending June 30:

	1972	1973	1974	1975	1976
<b>REVENUES: (1)</b>					
Preference Customers .....	\$ 69,391,748	\$ 74,669,546	\$ 83,034,059	\$ 99,126,685(2)	\$126,772,146(2)
Industrial Customers .....	45,733,067	44,014,159	46,161,233	62,708,155(3)	78,903,039(2)
Other Power Revenues(4) .....	42,426,037	40,230,234	32,078,941	51,081,347(5)	65,370,024(5)
Transmission Service and Other Revenues .....	15,405,121	15,579,527	20,779,097	21,501,446	21,176,651
Total(6) .....	172,949,973	174,493,466	182,053,330	234,417,633	292,221,860
<b>EXPENSES: (1)</b>					
Operation and Maintenance Expenses(7) .....	31,328,206	33,927,636	38,513,323	46,669,527	50,439,514
Cost of Purchase and Exchange Power .....	32,794,242	43,254,905	45,243,408	19,347,378(8)	7,691,582(9)
Total .....	64,122,448	82,182,541	83,756,731	66,016,905	58,131,096
Balance of Bonneville Revenues(10) ..	\$108,827,525	\$ 92,310,925	\$ 98,296,599	\$168,400,728	\$234,090,764

- (1) Revenues and expenses for years 1972 through 1976 summarized from financial data audited by the General Accounting Office and certified by the Comptroller General.
- (2) Revenues reflect a wholesale power rate increase of approximately 27% effective December 20, 1974.
- (3) Increase due to operation of aluminum potlines previously shut down, increased availability of interruptible power, and a wholesale power rate increase of approximately 27% effective December 20, 1974.
- (4) Includes revenues from privately owned utilities and Federal agencies.
- (5) Increase primarily due to high availability of power in excess of the needs of preference customers and a wholesale power rate increase of approximately 27% effective December 20, 1974.
- (6) Does not include approximately \$3,594,000 annual revenues received by the Bureau of Reclamation and the U.S. Corps of Engineers used to repay costs of their generating projects.
- (7) Such expenses represent only those of the transmission system.
- (8) Reflects reduced costs to the Federal System for the Hanford Project and expiration of the agreement to purchase capacity of the coal-fired Centralia thermal project.
- (9) Reflects reduced costs to the Federal System for the Hanford Project.
- (10) Balance of revenues were applied as payments to the Treasury for Corps of Engineers and Bureau of Reclamation operation and maintenance costs, annual interest expenses of the Federal System and amortization of the power facilities financed from appropriated funds, and, in 1976, costs of Bonneville's transmission construction program.

Bonneville's projected revenues through September 30, 1995 are shown in Exhibit VI. The table in Exhibit VI reflects two projected rate increases before 1984 which are estimated to increase Bonneville's revenues by 92 percent above revenues forecast at current rates. Larger rate increases to recover additional cost escalation since September 1976 for the Supply System's Ownership Share of the capability of the Project, and the capability of the Supply System's Nuclear Projects Nos. 1 and 2, would be made in amounts sufficient to satisfy Bonneville's revenue requirements. Exhibit VI includes the estimates of the annual costs of the Supply System's Ownership Share of the Project and Nuclear Projects Nos. 1 and 2 prepared by the Supply System and shown on Exhibit V. These projections could be affected by the possible purchase by Bonneville of additional power from non-Federal sources, as discussed under the caption "Proposed Regional Power Program" under the caption "Power Supply in the Pacific Northwest and the Hydro Thermal Power Program." A program for Bonneville to purchase additional power from non-Federal sources would not affect the arrangement for payment of the Supply System's Ownership Share of the Project's annual costs described under the caption "Security for the Bonds". Such Bonneville power purchases would increase Bonneville's power costs, require rate increases above current estimates and increase Bonneville's revenues available for net billing. The impact of such purchases on the foregoing projections must await the analysis of the proposed regional power program.

Current projections, based upon the rate increases referred to above and load forecasts made in 1976, indicate that in the year ending September 30, 1984 Bonneville's revenue from the participants in the net billed projects which is subject to net billing will be \$362 million. Current estimates indicate that the annual cost in such year of Bonneville's share of the output of such net billed projects will be \$401 million resulting in a net billing deficiency of \$39 million. Any difference between the portion of such participants' payments to Bonneville subject to net billing and the annual costs for such participants' shares of such projects will be paid either (i) through assignments of portions of such participants' shares to other Bonneville customers, thereby utilizing their net billing capability or (ii) by Bonneville, in cash, from the Bonneville Power Administration Fund. The total amount Bonneville estimates will be available in the year ending September 30, 1984 for net billing or cash payment is \$839.3 million. In accordance with the Transmission Act, any payments from the Fund for annual costs of such projects are treated as operation and maintenance expenses of Bonneville and take priority over Bonneville's obligation to pay amortization and interest on the investment in the Federal System and related operation and maintenance expenses of the Corps of Engineers and the Bureau of Reclamation.

The total investment in Federal hydroelectric projects and the Bonneville transmission system was \$7.2 billion as of June 30, 1976, of which 75 percent, or \$5.3 billion, was allocated to electric power. The entire cost of Bonneville's transmission system is included in this sum. The investment in multi-purpose Corps of Engineers and Bureau of Reclamation projects is divided 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.

#### **Pacific Northwest Drought**

Unusually low precipitation during the winter and spring of 1977 has resulted in the lowest streamflows on the Columbia River and its tributaries ever recorded. As a consequence of these low streamflows, nonfirm energy has not been available for sale by Bonneville. In addition, Bonneville has exercised contractual rights to reduce deliveries of power to its direct-service industrial customers by 25% to assure its ability to meet its firm power obligations in the region. As a result, Bonneville estimates its revenues from nonfirm energy sales and the delivery of firm energy to its direct service industrial customers during the fiscal year ending September 30, 1977 may be as much as \$89 million below the forecast made in advance of the fiscal year.

Current studies, based on historical records of river flows in the Columbia River basin, indicate that Federal reservoirs on the Columbia River and its tributaries will contain adequate hydro storage at the August 1, 1977 start of the 1977-78 operating year to enable Bonneville to meet its estimated

firm obligations with a 99% operating confidence. If conditions similar to those encountered this year occur next year Bonneville would have to purchase power from non-Federal sources to serve its firm energy obligations.

### **Bonneville Rates**

Bonneville's rates are developed by Bonneville, submitted to the Department of the Interior for review and approval, and then submitted to the Federal Power Commission for confirmation and approval. The rates must be designed to be consistent with sound business principles and recover the cost to Bonneville of producing and transmitting electrical energy to customers, which includes the repayment of capital investment in the Federal System with interest within a reasonable period of years. Under the proposed Department of Energy Organization Act the functions and duties of the Federal Power Commission would be transferred to the Department of Energy.

On December 20, 1974, Bonneville instituted wholesale power rate increases averaging approximately 27 percent to be effective for the 5-year period ending December 20, 1979. The existing power sales contracts contain provisions for a rate review once each 5 years. Bonneville has proposed that this rate review period be shortened after the rate review on December 20, 1979, to provide annual rate review periods beginning July 1, 1981. Bonneville has stated that its current projection indicates that a wholesale power rate increase which would increase revenues by approximately 60 percent will be necessary on December 20, 1979. In addition, Bonneville estimates that a wholesale power rate increase which would increase revenues by approximately 20 percent will be necessary on July 1, 1981. Such rate increases are due in substantial part to the added costs of thermal power acquired from net billed projects based on September 1976 estimates of annual costs of such projects. Larger rate increases to recover additional cost escalation since September 1976 for the Supply System's Ownership Share of the capability of the Project, and the capability of Nuclear Projects Nos. 1 and 2 would be made in amounts sufficient to satisfy Bonneville's revenue requirements. In addition to the wholesale power rate increases, Bonneville has received from the Federal Power Commission interim approval of its proposed transmission rate increase. Such rate increase, effective June 13, 1977, is expected to produce an increase in annual transmission and miscellaneous revenues of about 22 percent.

In 1976 the average cost per kWh paid to Bonneville by its preference utility customers for firm power was .375 cents. Bonneville has calculated that the average cost per kWh in 1976 paid by all customers of these utilities was 1.003 cents, with residential customers paying 1.146 cents per kWh. The average Bonneville rate per kWh for Bonneville preference customers, after giving effect to the foregoing rate increases, is estimated to be between .6 and .8 cents per kWh. This rate is substantially less than comparable 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 Loads and Resources**

Bonneville annually submits to the Pacific Northwest Utilities Conference Committee ("PNUCC") its estimated requirements and resources. These loads and resources are then combined with the loads and resources of other utilities to develop long-range planning studies. The most recent analysis by the PNUCC Loads and Resources Subcommittee of the West Group Area of power loads and resources entitled "Long Range Projection of Loads and Resources for Thermal Planning" ("Blue Book"), dated April 20, 1977, was made for the years 1977-1978 through 1996-1997. This analysis was prepared using the "probable energy date" concept for determining the dates on which new thermal generating plants could reasonably be expected to be in continuous operation. 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. The Milestones are significant events in the critical path from the conception of a thermal project to the time it is placed in commercial operation. Each Milestone is assigned a standardized time interval from its occurrence to the most probable date that the project will provide the planned

level of capacity and energy. Each plant sponsor will continue to maintain its own scheduled commercial operation date, which may not be the same as the probable energy date schedule used for area resource planning. The area studies are used to determine area resource needs, including reserve margins. The estimated resources of the Federal System are adjusted to reflect the reserve requirements, which is the basis for calculating a surplus or deficit.

An analysis of the most recent forecast of the Federal System's loads and resources is shown in the following tables:

**Federal System Loads and Resources(1)**

**Peak Capability—Kilowatts (000)(2)**

<u>Year Ending June 30</u>	<u>Estimated Requirements(3)</u>	<u>Estimated Resources(4)</u>	<u>Surplus(5)</u>	<u>Percent Surplus(5)</u>
1978 .....	15,794	15,023	(771)	(4.88)
1979 .....	16,808	17,508	700	4.16
1980 .....	17,718	17,913	195	1.10
1981 .....	18,237	18,794	507	2.77
1982 .....	18,613	19,661	1048	5.63
1983 .....	19,269	19,552	283	1.47
1984 .....	18,625	19,965	1340	7.19
1985 .....	18,994	20,713	1719	9.05
1986 .....	19,023	20,562	1539	8.09
1987 .....	19,133	20,721	1588	8.30
1988 .....	18,820	20,631	1811	9.62

**Energy Capability—Average Kilowatts (000)(2)**

<u>Year Ending June 30</u>	<u>Estimated Requirements(3)(6)</u>	<u>Estimated Resources(4)</u>	<u>Surplus(5)</u>	<u>Percent Surplus(5)</u>
1978 .....	9,407	8,594	(813)	(8.64)
1979 .....	9,771	8,668	(1103)	(11.29)
1980 .....	10,322	8,717	(1605)	(15.55)
1981 .....	10,941	9,291	(1650)	(15.08)
1982 .....	11,083	9,858	(1225)	(11.05)
1983 .....	11,219	10,058	(1161)	(10.35)
1984 .....	10,980	9,792	(1188)	(10.82)
1985 .....	11,092	10,202	(890)	(8.02)
1986 .....	11,210	10,262	(948)	(8.46)
1987 .....	11,318	10,083	(1235)	(10.91)
1988 .....	11,441	9,845	(1596)	(13.95)

- (1) From the Blue Book dated April 20, 1977.
- (2) Computed under PNUCC planning guidelines.
- (3) Estimated requirements include current levels of service to industries and does not take into account expiration of 12 industries' power sales contracts between 1981 and 1988.
- (4) After deducting reserves under PNUCC planning guidelines.
- (5) Parentheses denote negative values.
- (6) Because Bonneville has given preference customers notice that after June 30, 1983, it will have insufficient firm energy resources to meet such customers' firm energy requirements, Bonneville's obligation to such customers after that date will be limited to an allocation. Increases in the Federal System's energy requirements after that date include increases in preference customers' system energy requirements served by their forecasted allocations, not such customers' total system energy requirements.



Net Federal System resources noted on the preceding table reflect the installation schedules for hydro projects as determined by the constructing agencies—the Bureau of Reclamation and the Corps of Engineers—and probable energy dates for the capability of net billed projects. Total estimated requirements consist of direct service loads, exports, line losses, and contractual obligations to public agencies and private utilities.

The most recent PNUCC forecast, using estimates jointly developed by Bonneville and its preference customers in the fall of 1976, projects an average compounded energy load growth rate for Bonneville's preference customers of 4.79% for the years ending June 30, 1978 through 1988. This compares to a historical rate for such customers of 4.39% for the ten-year period between 1966 and 1976. Bonneville's preference customers' energy load growth rate was 10.5% in the year ended June 30, 1973, 1.3% in the year ended June 30, 1974, .89% in the year ended June 30, 1975 and 7.1% in the year ended June 30, 1976. The actual energy consumption for these customers for the 11 months beginning July 1, 1976 was 4.4% greater than consumption in the comparable period of 1975-1976. The decreased rate of energy load growth in the years ended June 30, 1974 and 1975 can be attributed to two factors. First, because of an extremely dry summer and fall in 1973, Federal reservoirs were far below normal operation levels, and Bonneville and the region's utilities and states immediately implemented a voluntary conservation program, which has been credited with an overall reduction in the rate of regional energy load growth. Second, regional economic conditions, which reflect national economic conditions, caused a substantial reduction in the electric loads of the region's industries, primarily forest products, metals and aerospace. With the improvement in the national and regional economy, these industry electric loads increased during late 1975 and early 1976 and resulted in an energy load growth rate of 7.1% in the year ending June 30, 1976 over the previous year.

#### **POWER SUPPLY IN THE PACIFIC NORTHWEST AND THE HYDRO THERMAL POWER PROGRAM**

The power supply facilities in the Pacific Northwest have been operated with a high degree of cooperation for many years. The Northwest Power Pool, a voluntary organization of public, private and Federal power suppliers, was established in 1942 to coordinate power operations in the Pacific Northwest and is still functioning on an effective basis.

As the complexities of the coordination of power supply planning and operation increased, other groups were formed. The Pacific Northwest Utilities Conference Committee ("PNUCC"), consisting of essentially all electrical 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 further the coordination of the publicly owned utilities in their efforts and contributions to improving the region's electrical power supply.

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

In October 1968, a Ten-year Hydro Thermal Power Program, commonly called Phase 1 of the Hydro Thermal Power Program, was adopted. This program was a plan 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 hydro-electric power supply base to a mixed base of hydro and thermal generating resources. This program included eight large thermal plants scheduled for commercial operation at various times through the early 1980's. These thermal plants are expected to have a generating capability of approximately 8,400,000 kilowatts and they include the Supply System's Nuclear Projects Nos. 1, 2 and 3. Under

Phase 1 Bonneville undertook to provide for additional power supply to its preference customers and industrial loads by acquiring the output of certain publicly owned generating facilities by purchase under the "net billing" concept. The large thermal generating plants included in Phase 1 of the Hydro Thermal Power Program, including the Project and the Supply System's Nuclear Projects Nos. 1 and 2, are tabulated below.

<u>Principal Sponsor</u>	<u>Project</u>	<u>Location</u>	<u>Type</u>	<u>Rated Capacity (MW)</u>	<u>Probable Energy Date(1)</u>
Pacific Power & Light Co. and The Washington Water Power Company	Centralia	Centralia, Wa.	Coal-fired	1,400	In operation.
Portland General Electric Company	Trojan	St. Helens, Ore.	Nuclear	1,130	In operation.
Pacific Power & Light Co.	Jim Bridger No. 2	Rock Springs, Wy.	Coal-fired	500	In operation.
	Jim Bridger No. 3	Rock Springs, Wy.	Coal-fired	500	In operation.
Washington Public Power Supply System	WPPSS No. 2	Hanford, Wa.	Nuclear	1,100	Sept. 1980
Washington Public Power Supply System	WPPSS No. 1	Hanford, Wa.	Nuclear	1,250	Oct. 1981
Washington Public Power Supply System	WPPSS No. 3	Satsop, Wa.	Nuclear	1,240	May 1984
Portland General Electric Company	Pebble Springs No. 1	Arlington, Ore.	Nuclear	1,260	July 1985

(1) 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. The Milestones are significant events in the critical path from the conception of a thermal project to the time it is placed in commercial operation. Each Milestone is assigned a standardized time interval from its occurrence to the most probable date that the project will provide the planned level of capacity and energy.

Early in the 1970's it became apparent that Phase 1 of the Ten-year Hydro Thermal Power Program would not provide adequate generating resources to supply the region's growing demand for electrical power beyond the early 1980's. The cooperation that was established during the development of the Ten-year Hydro Thermal Power Program was continued and additional generating projects were identified. This cooperative planning and scheduling of resources has resulted in construction and planning of generating facilities by individual utilities and utility groups on a coordinated basis to meet the growing loads of the Pacific Northwest. As part of this power supply program the preference customers are undertaking to provide their own additional generating resources directly. This cooperative planning and scheduling has been identified as Phase 2 of the Hydro Thermal Power Program.

The present schedule of new thermal generating plants 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(1)</u>
Montana Power Company .	Colstrip No. 1	Colstrip, Montana	Coal-fired	165(2)	In operation.
Montana Power Company .	Colstrip No. 2	Colstrip, Montana	Coal-fired	165(2)	In operation.
Pacific Power & Light Co.	Jim Bridger No. 4	Rock Springs, Wy.	Coal-fired	500(2)	Dec. 1979
Portland General Electric Company .....	Carty Coal No. 1	Boardman, Ore.	Coal-fired	477(2)	Nov. 1980
Montana Power Company .	Colstrip No. 3	Colstrip, Montana	Coal-fired	490(2)	Feb. 1981
Montana Power Company .	Colstrip No. 4	Colstrip, Montana	Coal-fired	490(2)	Dec. 1981
Washington Public Power Supply System .....	WPPSS No. 4	Hanford, Wa.	Nuclear	1,250	April 1983
Puget Sound Power & Light Company .....	Skagit No. 1	Sedro Woolley, Wa.	Nuclear	1,288	Aug. 1984
Washington Public Power Supply System .....	WPPSS No. 5	Satsop, Wa.	Nuclear	1,240	Nov. 1985
Puget Sound Power & Light Company .....	Skagit No. 2	Sedro Woolley, Wa.	Nuclear	1,288	Aug. 1986
Portland General Electric Company .....	Pebble Springs No. 2	Arlington, Ore.	Nuclear	1,260	July 1988

(1) 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. The Milestones are significant events in the critical path from the conception of a thermal project to the time it is placed in commercial operation. Each Milestone is assigned a standardized time interval from its occurrence to the most probable date that the project will provide the planned level of capacity and energy.

(2) Rated capacity of unit available for use in West Group area of the Pacific Northwest.

The specific contractual role of each of the major segments of the utility industry has changed in part from Phase 1 of the Hydro Thermal Power Program. Under Phase 1 Bonneville has undertaken to provide for additional power supply to its preference customers and industrial loads by acquiring the output of certain publicly owned generating facilities under the "net billing" concept. Under Phase 2, (i) Bonneville's preference customers are planning to supply directly their own increasing needs in excess of power supplied by Bonneville through the development of additional large-scale generating projects and (ii) Bonneville had expected to sign new power sales contracts with its industrial customers to provide continued sales of power until December 31, 1994. However, as indicated in "Bonneville Contracts" under the caption "Bonneville Power Administration", Bonneville anticipates that the preference rights of public agencies and cooperative utilities to its power resources will preclude execution of new industrial power sales contracts. These developments have created uncertainties in the power supply arrangements for Bonneville's industrial customers at the expiration of their existing contracts.

The region's utilities, Bonneville and its industrial customers are currently discussing possible arrangements necessary to assure the region's power supply. See the caption, "Proposed Regional Power Program".

Bonneville's alternatives with respect to the sale of power and services to its customers are being considered in its Role EIS, which will also review the services Bonneville may perform for preference customers in the planning, acquisition and disposition of power and energy from large scale generating plants. Bonneville expects that its Role EIS will be completed in the spring of 1978.

Bonneville's participation in regional power planning and operations, its participation in Phase 2 of the Hydro Thermal Power Program and the adequacy of its environmental impact statements insofar as they relate to Phase 2 are the subject of two lawsuits, both in the United States District Court for the District of Oregon. On August 27, 1975, the District Court rendered a decision adverse to Bonneville in one of the lawsuits. The decision has been appealed to the U.S. Court of Appeals for the Ninth Circuit. Bonneville is preparing the Role EIS so that it will be sufficient to enable Bonneville to proceed with its program regardless of the result of the current appeal. In the opinion of Bond Counsel and Special Counsel to the Supply System and General Counsel to Bonneville, the relief prayed for in the one suit and the judgment entered in the other will not affect the validity of, or Bonneville's obligations under, the Net Billing Agreements and the Project Agreement.

### Proposed Regional Power Program

The region's utilities, states and Bonneville's industrial customers are currently developing a program to provide a continuing power supply to the region. The proposed program presently includes enactment of federal legislation providing for a method of allocating Bonneville power; the creation of a regional organization for load forecasting and the designation of energy resources to be acquired by Bonneville to meet the loads of the region; the purchase of power from such resources by Bonneville; a conservation program; and pooling and sale of power by Bonneville to the region's utilities and Bonneville's industrial customers. Bonneville would offer, under the proposal, new power sales contracts with terms of 35 years to all preference customers, Bonneville's direct-service industrial customers, and the region's investor-owned utilities. The PNUCC is currently considering requesting that the legislation be introduced in the United States Congress this year.

There is no assurance that the legislation will be passed by Congress or that the program as currently constituted will remain as drafted through the legislative process. An explicit assessment of the impact of this proposed program on Bonneville and the Participants is not available at this time and cannot be completed until the program is finalized. The analyses of Bonneville's revenues, costs, and resources contained herein do not consider the concepts described above.

### Regional Power Requirements and Resources

The load-resources analysis for the West Group area of the Pacific Northwest is developed by the PNUCC on an area-wide basis from composite data submitted for all regional utilities. An analysis of the most recent forecast, dated April 20, 1977, of the West Group area's loads and resources is shown in the following tables:

#### LOADS AND RESOURCES(1)

##### West Group Area

Peak Capability—Kilowatts (000)

<u>Year Ending June 30</u>	<u>Estimated Requirements</u>	<u>Estimated Resources(2)</u>	<u>Surplus or Deficits(3)</u>	<u>Percent Surplus or Deficits(3)</u>
1978 .....	26,157	27,441	1,284	4.9
1979 .....	27,350	30,460	3,110	11.4
1980 .....	28,832	31,013	2,181	7.6
1981 .....	30,071	32,493	2,422	8.1
1982 .....	30,938	34,357	3,419	11.1
1983 .....	32,272	33,977	1,705	5.3
1984 .....	33,378	35,161	1,783	5.3
1985 .....	34,750	37,118	2,368	6.8
1986 .....	36,198	38,814	2,616	7.2
1987 .....	37,117	39,952	2,835	7.6
1988 .....	37,960	39,512	1,552	4.1

Energy Capability—Average Kilowatts (000)

Year Ending June 30	Estimated Requirements	Estimated Resources(2)	Surplus or Deficits(3)	Percent Surplus or Deficits(3)
1978 .....	16,286	15,419	(867)	(5.3)
1979 .....	16,972	15,756	(1216)	(7.2)
1980 .....	17,960	15,929	(2031)	(11.3)
1981 .....	18,820	16,936	(1884)	(10.0)
1982 .....	19,440	18,175	(1265)	(6.5)
1983 .....	20,105	18,837	(1268)	(6.3)
1984 .....	20,762	19,110	(1652)	(8.0)
1985 .....	21,600	20,485	(1115)	(5.2)
1986 .....	22,482	22,051	(431)	(1.9)
1987 .....	23,386	23,091	(295)	(1.3)
1988 .....	24,333	23,135	(1198)	(4.9)

(1) From the Blue Book dated April 20, 1977.

(2) After deducting reserves under PNUCC planning guidelines. Reserves in each year 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. Resources forecast under these guidelines include the Supply System's Nuclear Projects Nos. 3, 4 and 5, Portland General Electric Company's Pebble Springs No. 1, and Puget Sound Power & Light Company's Skagit Nuclear Units Nos. 1 and 2, which are not yet licensed for construction.

(3) After supplying all area interruptible loads (including Bonneville's industrial interruptible loads) which range from 1,006 to 1,195 megawatts on peak and 975 to 1,159 average megawatts of energy including associated line losses. Parentheses denote negative values.

If current drought conditions continue, the deficits of energy shown in the foregoing table will have to be made up from purchases from outside the region, operation of high cost thermal plants within the region, or from curtailment of electric loads within the region. Accordingly, both short range and long range conservation efforts are under way. The governors of the Pacific Northwest states together with Bonneville and other utilities in the region have asked all citizens to voluntarily reduce electric energy consumption by 10%. The proposed regional power program described above includes a strong conservation element designed to conserve energy in the long term. The effect of these efforts on electric energy requirements, however, cannot be foreseen at this time, as the shift from other forms of energy to electric energy may affect the results of electric energy conservation.

### THE PARTICIPANTS AND THE COMPANIES

Of the 110 preference customers of Bonneville, 103 are Participants, of which 28 are municipalities, 28 are districts and 47 are cooperatives. The Participants have contracted to purchase 100% of the Supply System's Ownership Share of the Project's capability, less any amounts of energy sold to certain industries pursuant to the Power Sales Agreement. The Companies (Pacific Power & Light Company, Portland General Electric Company, Puget Sound Power & Light Company and The Washington Water Power Company) own 30% of the Project pursuant to the Ownership Agreements.

The net billing arrangements between the Supply System, the Participants and Bonneville for the Supply System's Ownership Share of the Project 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 1976, the Participants served approximately 1,108,000 power customers with total sales of energy of approximately 39.6 billion kilowatt-hours. Operating revenues of the Participants totaled \$406,312,026. Of that amount, districts' revenues were \$176,813,363, municipals' revenues were \$160,687,450 and the cooperatives' revenues were \$68,793,213. The centerfold map shows the areas served by the Participants.

Exhibit I attached shows the number of customers and gross revenues in 1976 for each Participant and Company and indicates its Participant's or ownership share of the Project capability. Table I attached to Exhibit II hereto is a summary of financial and statistical data by class of utility.

### THE NET BILLING AGREEMENTS

Each of the Participants has executed a Net Billing Agreement with the Supply System and Bonneville. Many of the provisions of the Net Billing Agreements have been summarized under the caption "Security for the Bonds" above. A summary of certain additional provisions of the Net Billing Agreements follows. The full text of the form of Agreements may be obtained from the Supply System.

The capitalization of any word or words which is 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 Agreement, Ownership Agreement and Resolution which follow.)

#### Term

Each Agreement became effective upon execution and delivery and will continue in effect until terminated by the Supply System (see the subcaption "Termination").

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

#### Ownership and Operation

The Supply System will perform its duties, exercise its rights under the Ownership Agreement and use its best efforts to construct, operate and maintain the Project and finance its interest therein, in accordance with Prudent Utility Practice.

#### Sale, Purchase and Assignment

The Supply System sells and each Participant purchases its Participant's Share and in turn assigns its Participant's Share to Bonneville.

In each Contract Year, the Participant's Share is the percentage of the Supply System's Ownership Share of Project Capability specified for such year in Exhibit A to the Net Billing Agreements. Such

Shares for the Contract Year beginning July 1, 1982, are shown in Exhibit I attached hereto. During the period through June 30, 1984, the amount of power made available to each Participant from the Supply System's Ownership Share of Project Capability is reduced by sales of output under the Power Sales Agreement. Two or more 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 Participant to the Supply System to exceed 86.95% of Bonneville's estimate of its billings to the Participant.

The provisions of the Net Billing Agreements with respect to payments are summarized under the caption "Security for the 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 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 power and energy delivered to it. The amount of such delivery will be limited to the amount of the Participant's Share for which payment by Bonneville cannot be made. The Participant's obligation to assign its Participant's Share to Bonneville and Bonneville's obligation to make payments to the Participant will then be appropriately modified.

#### **Termination**

If the Supply System is unable to participate in ownership, construction, or operation of the Project due to licensing, financing, construction or operating conditions which are beyond its control, or if the Supply System is in default under the Ownership Agreement and has been requested by Bonneville to give notice of termination, or if the owners of the Project invoke the procedure to end the Project set forth in the Ownership Agreement, the Supply System shall give notice of termination of the Net Billing Agreements effective on the date of such notice. The Supply System shall then terminate its activities relating to construction and operation of the Project and shall undertake the salvage, discontinuance, decommissioning and disposition or sale of its ownership interest in the Project, all in accordance with the Ownership Agreement. After such termination, the Supply System will make monthly accounting statements to Bonneville and each 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 the Project assets. Such monthly accounting statements will continue at least until all 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 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 Participant's Share of the amount which the Supply System is required to pay into the various funds provided in the Bond Resolution for debt service and all other purposes.

#### **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 Project Bonds.

#### **Applicability of Other Instruments**

The Net Billing Agreements are made subject to the terms and provisions of the Ownership Agreement, the Bond Resolution and all licenses, permits and regulatory approvals necessary for the ownership, construction and operation of the Project.

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

The Net Billing Agreements contain certain provisions required by Statute or Executive Order and 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 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 the Net Billing Agreements, by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

## **THE PROJECT AGREEMENT**

The Supply System and Bonneville have entered into the Project Agreement. That Agreement, among other things, contains provisions with respect to financing, construction, operation and maintenance of the Project, and the making of any replacements, repairs or capital additions thereto, and budgeting under the Net Billing Agreements. A summary of some of the provisions of the Project Agreement follows. A copy of the Project Agreement may be obtained from the Supply System.

### **Term**

The Agreement became effective upon its execution and delivery and will terminate when the Net Billing Agreements terminate.

### **Design, Construction, Operation and Maintenance of the Project**

The Supply System agrees among other things (i) to perform its duties and exercise its rights under the Ownership Agreement and the Project Agreement in accordance with Prudent Utility Practice; and (ii) to keep Bonneville informed of all significant matters with respect to construction or operation of the Project, 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.

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

### **Financing**

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

All Project Bond Resolutions are subject to approval by Bonneville, and Bonneville has approved the Resolution and the Supplemental Resolution.

### **Representation by Bonneville on the Committee Established Pursuant to the Ownership Agreement**

The Supply System will appoint a member designated by Bonneville to the Committee established pursuant to the Ownership Agreement, who shall have the right to vote the lesser of 50% of the Supply System's Ownership Share or the sum of the Participant's Shares assigned to Bonneville under the Net Billing Agreements at the beginning of the Contract Year.

The Supply System will not proceed with the following elective items under the Ownership Agreement without the concurrence of Bonneville's representative on the Committee: (i) notice to repair the



Project if the cost of repair is in excess of 20% of the depreciated value of the Project, (ii) renewals and replacements not necessary to assure design capability and additions not required by governmental agencies, (iii) construction of the Project if any other party to the Ownership Agreement does not participate for the reasons set forth in the Ownership Agreement.

#### **Budgets**

Bonneville has reviewed the Supply System's Construction Budget. Promptly after the approval of any revised construction budget pursuant to the Ownership Agreement, the Supply System shall submit to Bonneville a revised Construction Budget. The budget shall include the Supply System's share of construction costs pursuant to the Ownership Agreement and all of the Supply System's other costs related to construction and financing of the Project. The updated Construction Budget for the succeeding calendar year and revised Construction Budgets for the current calendar year shall become effective unless disapproved by Bonneville within 30 days, and 7 days, respectively.

Prior to the Date of Commercial Operation and the beginning of each succeeding Contract Year, the Supply System shall submit an Annual Budget showing the Supply System's Ownership Share of operating costs under the operating budget adopted pursuant to the Ownership Agreement, its cost of fuel and all its other costs related to its Ownership Share of the Project. The Annual Budget shall be revised during the Contract Year if necessary. The Annual Budget and any revised Annual Budget shall become effective unless disapproved by Bonneville within 30 days and 7 days, respectively.

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

If in any Contract Year the amounts in the Annual Budget for renewals, repairs, replacements and betterments and for capital additions 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 Bond Resolution plus the proceeds of insurance, if any, available by reason of loss or damage to the 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 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 Bonds to pay such excess.

#### **Applicability of Other Instruments**

The Project Agreement is made subject to the terms and provisions of the Bond Resolution and all licenses, permits and regulatory approvals necessary for the ownership, construction and operation of the Project.

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

The Project Agreement contains certain provisions required by Statute or Executive Order. 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 a limited exemption from the provisions permitting cancellation, termination, and suspension of the Project Agreement in the event of non-compliance with the Equal Opportunity Clause contained in said Agreement by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

## THE OWNERSHIP AGREEMENT

The following is a summary of certain provisions of the Ownership Agreement and does not purport to be complete. A copy of the Ownership Agreement may be obtained from the Supply System.

### Ownership of the Project

The Project 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 Ownership Agreement.

The Parties waive the right to partition of the Project.

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 the Project and shall have possession and control of the Project 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 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 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 the Project, 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 the Project.

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 the Project

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 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 the Project if in excess of \$1,000,000, and estimate of the value of the Project 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 Columbia River Power 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
- (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 the Project 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 the Project, or one or more of the Parties may elect to proceed with the Project upon reimbursing the non-electing Parties for their Costs of Construction and Fuel. Upon such reimbursement, the interest of the non-electing Parties in the Project 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 the Project; (b) prosecute construction of the Project in accordance with Prudent Utility Practice, NRC licensing requirements, any applicable Federal or State laws and regulations thereunder, and plans and specifications for the Project prepared or recommended by the Project 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 the Project 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 the Project.

#### **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 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 Ownership Agreement shall be deposited in the appropriate Trust Account. Payments by the Parties shall be made at the times specified in the 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 Ownership Agreement. All accounts shall be so kept as to permit conversion to the system of accounts prescribed for electric utilities by the Federal Power Commission. 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 the Project.

#### **Fuel and Scheduling**

The Supply System shall arrange for Fuel in amounts so that each Party may utilize its Ownership Share of the Project 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 the Project 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 the Project 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 the Project 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 the Project to meet governmental requirements or to avoid hazard to the Project 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 the Project 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 the Project, including the 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 the Project or any part thereof, resulting from the Project 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 the Project.

#### **Uncontrollable Forces**

No Party shall be considered to be in default in the performance of any of the obligations under the 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 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 the Project**

If the Project suffers damage resulting from causes other than ordinary wear, tear or deterioration to the extent that Supply System's estimate of the cost of repair is less than 20% of the then depreciated value of the Project, and if the Parties do not unanimously agree that the Project shall be ended (see the caption "End of Project" below), 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 the Project suffers damage to the extent that Supply System's estimate of the cost of repair exceeds 20% of the then depreciated value of the Project, computed according to the Ownership Agreement, Supply System shall determine the estimated fair market value of the Project 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 the Project 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 the Project 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 the Project suffers damage to the extent that Supply System's estimated cost of repair exceeds 20% of the then depreciated value of the Project and no Party gives the notice referred to above, the Project 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 Ownership Agreement and to recover for any loss, damage or payment advances incurred by reason of such default.

#### **Assignment**

The 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 the Project to a single entity shall operate to give the assignee or transferee the status or rights of a Party under the 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 Ownership Agreement except to the extent agreed to in writing by the other Parties.

#### **End of Project**

When the Project 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 the Project is ended as a result of damage thereto as described above, Supply System shall sell for removal all saleable parts of the Project, exclusive of Fuel, to the highest bidders. After deducting all costs of ending the Project, Supply System shall close the appropriate Trust Account and, if there are net proceeds, distribute to each Party its Ownership Share of such proceeds. 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 the Project 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 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 the Project 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 Ownership Agreement. Upon such reimbursement, the non-electing Parties' interest in the Project shall forthwith vest in the electing Parties in such proportion as the electing Parties may agree.

**DESCRIPTION OF 1977 BONDS AND CERTAIN PROVISIONS  
OF THE RESOLUTION AND SUPPLEMENTAL RESOLUTION**

The following summary is a brief outline of certain provisions contained in the Resolution and the Supplemental Resolution and is not to be considered as a full statement thereof. The summary is qualified by reference to and is subject to the Resolution and the Supplemental Resolution, copies of which may be examined at the principal offices of the Supply System, the Bond Fund Trustee and the Paying Agents for the 1977 Bonds.

**The Bonds and the 1977 Bonds**

The Resolution creates and establishes an issue of Bonds of the Supply System which may be issued from time to time to pay the Supply System's Cost of Construction of the Project and to establish reserves. The 1977 Bonds are a part of such issue.

The 1977 Bonds will be dated July 1, 1977, 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, beginning January 1, 1978) on coupon 1977 Bonds and principal on registered 1977 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 1977 Bonds will be made by Seattle-First National Bank, Seattle, Washington, which has been appointed the Bond Fund Trustee. Coupon 1977 Bonds and fully registered 1977 Bonds are interchangeable at the office of the Bond Fund Trustee.

The 1977 Bonds will mature in the years and amounts and bear interest at the rates per annum shown on the cover page hereof. The 1977 Bonds maturing on July 1, 2009, and July 1, 2018, will have the benefit of a Bond Retirement Account to operate at the times and in the amounts set forth below. (Res. Secs. 4.5, 4.7; Supp. Res. Sec. 2).

*Redemption:* The 1977 Bonds will be subject to redemption prior to maturity at the option of the Supply System on and after July 1, 1987, 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</u> <u>Prices</u>
July 1, 1987 to June 30, 1990 .....	103%
July 1, 1990 to June 30, 1995 .....	102
July 1, 1995 to June 30, 2000 .....	101
July 1, 2000 and thereafter .....	100

The Supply System further reserves the right to redeem prior to maturity (a) the 1977 Bonds maturing on July 1, 2009 and on July 1, 2018 in part on any interest payment date on and after January 1, 2001, and on and after January 1, 2010, respectively, upon payment of the principal amount thereof from sinking fund installments as described below and (b) the 1977 Bonds maturing on July 1, 2018, in part on any interest payment date on and after January 1, 1986, upon payment of 101% of the



BRITISH COLUMBIA

A

Mica (Storage)

Duncan (Storage)

Vancouver

Arrow (Storage)

PACIFIC OCEAN

Libby

Libby Reregulation

Chief Joseph

Grand Coulee

Spokane

WPPSS PROJECT NO. 3

WPPSS NO. 5

CENTRALIA

SEE INSET

Little Goose

Lower Granite

Green Mountain

McWane

TRICAN

Port 270

BOONEVILLE

WASCO

WASCO

WASCO

WASCO

WASCO

WASCO

WASCO

WASCO

WASCO

WASCO

WASCO

WASCO

WASCO

Eugene

OREGON

Black Canyon

Boise

Boise Div

SNAKE RIVER

NEVADA



# ELECTRIC UTILITY PARTICIPANTS SERVICE AREAS

## Washington Public Power Supply System NUCLEAR PROJECT NO.3

T 4



### LEGEND

Public Agencies

Private Utilities

Pacific Power & Light Company

Portland General Electric Company

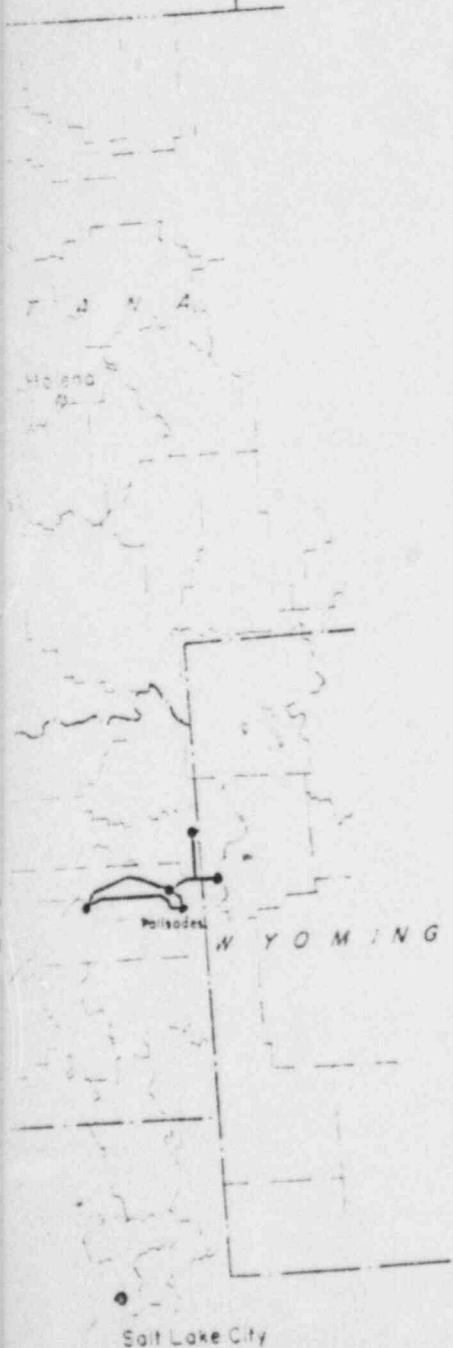
Puget Sound Power & Light Company

Washington Water Power Company

Nuclear Power Plants

Fossil Fueled Power Plant (coal)

B.P.A. Transmission Facilities



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 1977 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 the Project or in the event the 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 of 1977 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 in each case to be not less than 30 nor more than 60 days prior to the date fixed for redemption. The Bond Fund Trustee may approve substitute publication if a required publication cannot be made. Notice of redemption of 1977 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 1977 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. (Res. Secs. 5.2, 5.3; Supp. Res. Sec. 3).

*Sinking Fund Installments:* The 1977 Bonds due July 1, 2009 are to be retired by mandatory sinking fund installments accumulated in the Bond Retirement Account in the Bond Fund in amounts sufficient to redeem on July 1 of each year, at the principal amount thereof, the principal amount of such Bonds specified for each of the years shown below:

<u>Year</u>	<u>Amount</u>	<u>Year</u>	<u>Amount</u>
2001 .....	\$5,545,000	2006 .....	\$7,395,000
2002 .....	5,870,000	2007 .....	7,835,000
2003 .....	6,220,000	2008 .....	8,300,000
2004 .....	6,590,000	2009 .....	8,800,000
2005 .....	6,980,000		

The 1977 Bonds due July 1, 2018 are to be retired by mandatory sinking fund installments accumulated in the Bond Retirement Account in the Bond Fund in amounts sufficient to redeem on July 1 of each year, at the principal amount thereof, the principal amount of such Bonds specified for each of the years shown below:

<u>Year</u>	<u>Amount</u>	<u>Year</u>	<u>Amount</u>
2010 .....	\$ 9,325,000	2015 .....	\$12,475,000
2011 .....	9,880,000	2016 .....	13,235,000
2012 .....	10,475,000	2017 .....	14,025,000
2013 .....	11,105,000	2018 .....	14,870,000
2014 .....	11,770,000		

The sinking fund installments for the 1977 Bonds due July 1, 2009, and due July 1, 2018, may be applied to the redemption of such Bonds on July 1 of each of the above years or on the immediately preceding January 1. (Supp. Res. Sec. 2).

#### **Subsequent Series of Bonds**

The Supply System covenants to issue additional series of Bonds to the extent required to pay the Supply System's Cost of Construction of the Project and to establish the reserves required by the Reso-

lution 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 Bond Fund Trustee that no default exists in the payment of principal of and interest on any outstanding Bond, and there has been delivered to the Bond Fund Trustee a certificate of the Secretary of the Board of Directors of the Supply System that the Net Billing 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 the Bonds.

(2) Such Bonds shall be either serial or term bonds or a combination thereof, with the final maturity date to be no later than July 1, 2018.

(3) The Construction Engineer shall certify as to the amount expended for, and the amount remaining available to pay, the Supply System's Cost of Construction and the times funds will be required to pay such Cost, and, if such Cost of Construction has increased, give a statement of the reasons for such increase. (Res. Sec. 3.4).

#### **Additional Obligations Other Than Bonds**

The Supply System may also issue additional bonds ranking on a parity with the Bonds and secured by an equal charge and lien on the revenues of 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 Project;

(2) to comply with requirements of the Project Agreement for the issuance of additional bonds to pay for renewals, replacements and betterments and for capital additions and betterments necessary to achieve design capability, or required by any governmental agency or authority;

(3) to provide funds for capital additions and betterments to the Project which in the opinion of the Consulting Engineer are necessary or desirable to improve operating reliability or to reduce unit power costs;

(4) to provide funds for the purchase of Fuel for the Project; and

(5) to refund at any time any Bonds or additional Bonds.

The Supply System may not issue any additional bonds unless prior to or simultaneously with the issuance of such bonds the Supply System has in effect valid written contracts for the sale of its Ownership Share of the power and energy, including capability, 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 Resolution. Such contracts (1) must be for terms extending at least to the final maturity date of the Bonds, (2) unless such contracts are with the parties to the Net Billing Agreements, must in the opinion of the Consulting Engineer provide a sound basis for the issuance of such additional bonds and (3) must contain terms with respect to payment for the Supply System's Ownership Share of the Project power and energy, including capability, and the items of annual power costs to be included in the price for such power and energy which are no less favorable to the Supply System than the terms of the Net Billing Agreements.

Additional bonds may be either serial or term bonds or a combination thereof, with the final maturity date (i) in the case of refunding bonds, to be not later than the final maturity of the Bonds or additional bonds to be refunded, and (ii) in the case of all other additional bonds, to be 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. A separate bond fund is to be created 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 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 Bonds or additional bonds are no longer deemed outstanding and may be accomplished at that time from transfers from the Reserve Account for the Bonds or the reserve account for the additional bonds being refunded. (Res. Sec. 9.6).

#### **Construction Fund; Application of Bond Proceeds**

The Resolution establishes a Washington Public Power Supply System Nuclear Project No. 3 Construction Fund (the "Construction Fund") to be held by the Supply System.

The proceeds of sale of the 1977 Bonds and subsequent Series of Bonds will be applied as follows:

- (a) An amount equal to the interest on such Bonds from their date to September 1, 1982, will be credited to the Interest Account in the Bond Fund.
- (b) The balance of the Bond proceeds will be deposited in the Construction Fund.

The Resolution provides that if working capital and the Reserve Account requirements are not provided for by September 1, 1982, or the Date of Commercial Operation, whichever is earlier, or if the Reserve and Contingency Fund requirements are not provided for by the Date of Commercial Operation, through revenues received pursuant to the Net Billing Agreements, such amounts will be provided from Bond proceeds.

Moneys in the Construction Fund are to be used to pay the Supply System's Cost of Construction of the Project, which includes the Supply System's Ownership Share of the costs of constructing and acquiring the Project, obtaining permits and licenses and acquiring property and Fuel, trustee's 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 the Project.

The Resolution prescribes certain procedures designed to safeguard payments or transfers from the Construction Fund, including, among others, certificates by the Construction Engineer itemizing the amounts to be paid for certain items and the purposes thereof.

Moneys remaining in the Construction Fund after providing for the payment of the Supply System's Cost of Construction and after required payments, if any, to the Interest Account and Reserve Account in the Bond Fund and to the Reserve and Contingency Fund are to be transferred to the Bond Retirement Account. (Res. Secs. 6.8-6.12).

#### **Other Funds Established by the Resolution; Flow of Revenues**

The Resolution also establishes a Washington Public Power Supply System Nuclear Project No. 3 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 Fund, which is to be held by the Bond Fund Trustee.

*Revenue Fund:* The gross revenues derived by the Supply System from its ownership and operation of the Supply System's Ownership Share of the Project are to be paid into the Revenue Fund. \$3,000,000 of working capital for the Supply System's Ownership Share of the Project will be provided prior to September 1, 1982, or the Date of Commercial Operation, whichever is earlier, either through revenues

of the Supply System's Ownership Share of the Project or Bond proceeds. Additional working capital may be provided by mutual agreement between the Supply System and Bonneville. Moneys in the Revenue Fund are to be used for the purpose of making required payments into the Bond Fund and any special funds for additional bonds, paying for the Supply System's Ownership Share of the costs of operating and maintaining the Project, making required payments into the Fuel Fund and the Reserve and Contingency Fund, paying the Supply System's Ownership Share of the costs of repairs, renewals, placements, additions, betterments and improvements to, and extensions of, the Project, and paying all other charges or obligations against such revenues. (Res. Secs. 6.1, 6.6).

*Bond Fund:* From the gross revenues theretofore paid into the Revenue Fund, the Supply System is to pay monthly into the 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 Bonds as the same become due and payable. Interest on the 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 on September 25, 1982, and be sufficient to pay outstanding serial Bonds as they mature.

Beginning July 25, 2000, the Supply System is also obligated to pay monthly into the Bond Retirement Account amounts sufficient in the aggregate to redeem the 1977 Bonds maturing July 1, 2009, and July 1, 2018, in the principal amounts and at the times specified under the subcaption "Sinking Fund Installments" under "The Bonds and the 1977 Bonds". Such amounts are in addition to any amounts to be required to be paid into the Bond Retirement Account to redeem the term bonds of other series of Bonds in the principal amounts and at the times specified in the resolutions authorizing such Bonds. Moneys in the Bond Retirement Account are to be applied by the Bond Fund Trustee to the purchase or redemption of outstanding Bonds.

There is required to be paid into and maintained in the Reserve Account for each series of 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, or the Date of Commercial Operation, whichever is earlier, the Supply System will deposit the required amount in the Reserve Account either from Bond proceeds or amounts received under the Net Billing Agreements and deposited in the Revenue Fund. The Supply System is required to maintain the required amount in the Reserve Account at all times thereafter by additional payments from the Revenue Fund. If any Bonds are issued after September 1, 1982, or the Date of Commercial Operation, whichever is earlier, the additional amount required to be deposited in the Reserve Account shall be deposited therein from Bond proceeds or revenues available therefor at the time of issuance of the Bonds. (Res. Sec. 6.2).

*Fuel Fund:* Beginning on the Date of Commercial Operation, all payments for Fuel will be made from the Fuel Fund. After the Date of Commercial Operation, after making the required payments into the 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 the Project, including taxes or payments in lieu thereof, the Supply System will transfer to the Fuel Fund the following amounts:

- (1) the amount included in the Annual Budget for Fuel adopted pursuant to the 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 the Fuel Fund. (Res. Sec. 6.4).

*Reserve and Contingency Fund:* Beginning on September 25, 1982, the Supply System is required to pay monthly out of the Revenue Fund into the Reserve and Contingency Fund, after making the

required payments into the 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 the Project, an amount equal to 10% of the aggregate of the amounts required to be paid during such month from the Revenue Fund into the Interest, Principal and Bond Retirement Accounts in the 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 the Reserve and Contingency Fund the sum of \$3,000,000 either through the aforesaid payments into said Fund or revenues otherwise available therefor in the Revenue Fund or, to the extent such moneys are not available, from Bond proceeds.

Moneys in the Reserve and Contingency Fund are required to be used to make up deficiencies in the interest, principal and bond retirement accounts in the Bond Fund or in any bond funds established for additional bonds for which funds are not available, respectively, in the Construction Fund or Reserve Account or in the construction fund or reserve account in respect of additional bonds. To the extent not required for any such deficiency, moneys in the Reserve and Contingency Fund may be used after the Date of Commercial Operation for any one or more of the following purposes:

(i) to pay the Supply System's Ownership Share of the cost of renewals, replacements and normal additions to and extensions of the Project; and

(ii) to pay the Supply System's share of extraordinary operation and maintenance costs, including extraordinary costs of Fuel and the cost of preventing or correcting any unusual loss or damage (including major repairs), to the Project. (Res. Sec. 6.5).

*Investment of Funds:* The term "Government Obligations" means (i) direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America; (ii) 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, the Federal Land Banks, the Federal National Mortgage Association or any other agency of or corporation wholly owned by the United States of America; (iii) 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; and (iv) general obligation bonds 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. The term "Investment Securities" means (i) Government Obligations; (ii) 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 (iii) 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).

Moneys in the 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 Interest Account, Principal Account and Bond Retirement Account are to be invested in Government Obligations 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 Bonds may be in Investment Securities. Moneys in the Reserve Account not required for immediate disbursement are to be invested in Government Obligations maturing or redeemable within 7 years from the date of investment. Moneys in the 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 Construction Fund are to be invested in Investment Securities maturing or redeemable within 7 years of the date of investment. (Res. Secs. 1.1, 6.1, 6.7, 6.9).

*Excess Moneys:* Moneys and the value of Government Obligations in the Reserve Account in excess of the amounts required to be maintained in the Reserve Account constitute "excess moneys" in respect of such Account; moneys and the value of Investment Securities 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 the Reserve and Contingency Fund may be used constitute "excess moneys" in respect of such Fund.

If as of any June 30 excess moneys exist in the Reserve and Contingency Fund, such moneys shall be paid proportionately into the 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 the Revenue Fund; and

Prior to September 1, 1982, or the Date of Commercial Operation, whichever is earlier, excess moneys in the Reserve Account shall be paid into the Construction Fund. If as of any June 30 following September 1, 1982, or the Date of Commercial Operation, whichever is earlier, excess moneys exist in the Reserve Account, such moneys shall be paid proportionately into 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 the Revenue Fund.

If as of any June 30 following September 1, 1982, or the Date of Commercial Operation, whichever is earlier, there shall exist in the Revenue Fund, after giving effect to any transfer of excess moneys from the Reserve Account and the Reserve and Contingency Fund to such Fund, an amount which exceeds the Supply System's required amount of working capital, the amount of such excess is to be applied to reduce annual power costs under the Net Billing Agreements. 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. In addition, if the Supply System and Bonneville agree, all or any part of such excess over required working capital may be applied to paying the System's Ownership Share of making repairs, renewals, replacements, additions, betterments and improvements to, and extensions of, the Project, the purchase or redemption of Bonds and additional bonds; or for other purposes in connection with the Supply System's Ownership Share of the Project. (Res. Secs. 6.2, 6.5, 6.6).

#### **Certain Covenants**

Certain covenants of the Supply System with the holders of the Bonds and the holders of additional bonds are summarized as follows:

*The Project:* The Supply System will, subject to the Ownership Agreement and the Project Agreement, complete construction of the Project at the earliest practicable time, operate the Project and the business in connection therewith in an efficient manner and at reasonable cost, maintain the Project in good condition and make all necessary and proper repairs, renewals, replacement, additions, extensions and betterments to the Project. (Res. Sec. 9.1).

*Rates:* The Supply System will dispose of all capability of and power and energy from the Supply System's Ownership Share of the Project solely for the benefit and account of the Supply System's Ownership Share of the Project and pursuant to the provisions of the Net Billing Agreements and the 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 the 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 the Project, (ii) to make the required payments into the Bond Fund and any special funds for additional bonds, and (iii) to make the required payments into the Fuel Fund and Reserve and Contingency Fund. (Res. Secs. 9.2, 9.3).

*Net Billing Agreements, Project Agreement and Ownership 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 the Net Billing Agreements, Project Agreement or Ownership Agreement which will in any manner impair or adversely affect the rights of the Supply System or of the Bondholders; or take any action under or in connection with the Net Billing Agreements which will reduce the payments provided for therein. (Res. Sec. 9.4).

*Disposition of Properties:* The Supply System will not sell, mortgage, lease or otherwise dispose of its Ownership Share of any properties of the Project unless (a) simultaneous provision is made for the retirement in full of the 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 the Project, in which case \$100,000 of the moneys received therefor are to be transferred to the Reserve and Contingency Fund and the balance is to be paid proportionately into the 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 Reserve and Contingency Fund or the 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 the Bond Retirement Account and bond retirement accounts for additional bonds. Notwithstanding clauses (b) and (c) above, moneys received by the Supply System prior to the Date of Commercial Operation as a result of any sale, lease, transfer or other disposition of properties specified in such clauses shall be transferred to the Construction Fund. (Res. Sec. 9.7).

*Insurance:* The Supply System will keep its Ownership Share of the Project insured, to the extent such insurance is available at reasonable cost; against risks of direct physical loss or damage to or destruction of the 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 the Project covered by such insurance occurs during the Period of Construction the Supply System is to transfer the insurance proceeds, if any, in respect of such loss or damage to the Construction Fund; any insurance proceeds received by the Supply System in respect of such loss or damage occurring thereafter are to be transferred into the Reserve and Contingency Fund or, in the case of insurance covering loss or damage to Fuel, to the Fuel Fund. (Res. Sec. 9.8).

*Books of Account:* The Supply System will keep proper books of account, showing its Ownership Share of the Project as a separate utility system, 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 Supply System's Ownership Share of the Project and the annual audit report by sending a written request therefor to the Supply System. (Res. Sec. 9.9).

*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 the Project. In addition to his other duties, the Consulting Engineer shall prepare, not later than 18 months after the Date of Commercial Operation, and each 3 years thereafter, a report based upon a survey of the 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 the Resolution. The



Consulting Engineer is also required to report to the 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, the Project involving the expenditure of \$500,000 or more. The Consulting Engineer is also required to file annually a certificate with the Bond Fund Trustee describing the insurance then in effect and stating whether or not such insurance complies with the requirements of the Resolution. In the event of any loss or damage in excess of \$500,000, 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 repaired. 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. (Res. Secs. 9.8, 9.9, 9.10).

#### **Events of Default; Remedies**

Under the 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 Revenue Fund; (ii) default in the payment of the principal of or default for 30 days in the payment of interest on any Bonds; (iii) default for 90 days after written notice to the Supply System in the observance and performance of any other of the covenants, conditions and agreements of the Supply System in the Resolution; (iv) the sale or conveyance of the Supply System's Ownership Share of any properties of the Project except as permitted by the 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 the Project; and (v) certain events in connection with the bankruptcy, insolvency or reorganization of the Supply System. (Res. Sec. 11.1).

In case an Event of Default has occurred which has not been cured, the Bond Fund Trustee is required to exercise such of the rights and powers vested in it by the 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. (Res. Sec. 7.5).

If an Event of Default shall have occurred, and shall not have been remedied, the Bond Fund Trustee or the holders of 20% in principal amount of the Bonds and additional bonds then outstanding may declare the principal of all Bonds and additional bonds and the interest accrued thereon to be immediately due and payable, but such declaration may be annulled under certain circumstances. (Res. Sec. 11.1).

After the occurrence of an Event of Default and prior to the curing of such Event of Default, the Bond Fund Trustee may, to the extent permitted by law, take possession and control of the Supply System's Ownership Share of the Project and operate and maintain the same, prescribe rates for capability or power sold or supplied through the facilities of the Supply System's Ownership Share of the 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, shall be applied to the payment of principal of and interest on the Bonds and additional bonds. After all sums then due in respect of the Bonds and additional bonds have been paid, and after all Events of Default have been cured or secured to the satisfaction of the Bond Fund Trustee, the Bond Fund Trustee is required to relinquish possession and control of the Supply System's Ownership Share of the Project to the Supply System. (Res. Secs. 11.3, 11.4).

The Resolution empowers the Bond Fund Trustee to file proofs of claims for the benefit of the holders of the 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 the Bonds, to enforce specific performance of covenants contained in the Resolution or to obtain injunctive or other appropriate relief for the protection of the holders of the Bonds and additional bonds. (Res. Sec. 11.4).

The holders of a majority in principal amount of the 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 Bond Fund Trustee, or exercising any trust or power conferred upon the Bond Fund Trustee, but the 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 it 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 Bonds or additional bonds not parties to such direction. No holder of Bonds or additional bonds has any right to institute suit to enforce any provision of the Resolution or the execution of any trust thereunder (except to enforce the payment of principal or interest installments as they mature), unless the Bond Fund Trustee has been requested by the holders of not less than 20% in principal amount of the Bonds and additional bonds then outstanding to exercise the powers granted it by the Resolution or to institute such suit and unless the 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 the Bond Fund Trustee has failed or refused to comply with the aforesaid request, the Resolution provides for the creation of a "Bondholders' Committee". (Res. Secs. 11.4, 11.5).

The enforceability of rights under the Resolution may be subject to judicial discretion and to valid bankruptcy, insolvency, reorganization, moratorium and other laws for the relief of debtors.

#### **Amendments; Supplemental Resolutions**

Any amendment to the Resolution may be made by the Supply System with the consent of the holders of 66 $\frac{2}{3}$ % in principal amount of the Bonds and additional bonds then outstanding and with the consent of the holders of 66 $\frac{2}{3}$ % in principal amount of the outstanding Bonds and additional bonds which are adversely affected by an amendment which does not equally affect all such outstanding Bonds and additional bonds, provided that no such amendment shall permit a change in the date of payment of principal or of any installment of interest on any 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 holder of Bonds or additional bonds so affected. (Res. Article XII).

Without the consent of any holder of Bonds or additional bonds, the Supply System may adopt supplemental resolutions: to authorize the issuance of subsequent series of 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, the Resolution; to add to the restrictions contained in the Resolution upon the issuance of additional indebtedness; to confirm as further assurance any pledge under the Resolution of the revenues of the Supply System's Ownership Share of the Project or other moneys; otherwise to modify any of the provisions of the Resolution (but no such modification may be effective while any of the Bonds or additional bonds theretofore issued are outstanding); or to cure any ambiguity or defect or inconsistency in the Resolution, or to insert such provisions clarifying matters or questions arising under the Resolution as are necessary or desirable and either not adverse to the rights and interests of the Bondholders or not contrary to or inconsistent with the Resolution, provided that the Bond Fund Trustee shall consent thereto. (Res. Article X).

#### **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 the Project 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 the Project. This change would be subject to the approval of Bonneville and each Participant and Company as well as the consent of 66 $\frac{2}{3}$ % of the holders of the \$150,000,000 Series 1975 Bonds heretofore issued for the Project, and review by the appropriate committees of Congress. The Supply System has covenanted that it will not authorize the change if it would affect the tax exempt status of the Bonds. The holders of the 1977 Bonds, the Series 1976 Bonds and subsequent Bonds would not be required to approve such change in the Project.

## **Defeasance**

The obligations of the Supply System under the Resolution shall be fully discharged and satisfied as to any 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) Government Obligations 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; provided that, with respect to 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. (Res. Sec. 14.2).

## **LITIGATION**

### **Supply System**

There is no litigation pending or, to the knowledge of the 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 1977 Bonds, or the power and authority of the Supply System to issue the 1977 Bonds, or the validity of the Net Billing Agreements, the Power Sales Agreement, the Project Agreement or the Ownership Agreement, or the power and authority of the Supply System to fix, charge and collect rates for the sale of power, energy, and capability from the Supply System's Ownership Share of the Project as provided in the Resolution.

### **Equal Employment Opportunity**

Four claims against the Supply System have been filed with the Federal Equal Employment Opportunity Commission alleging sex or race discrimination in its hiring and promotion practices. One of the claims has been administratively dismissed. The claimant whose claim was dismissed has also filed a similar charge with the United States General Services Administration ("GSA") which has commenced an investigation of the Supply System's compliance with the provisions of Executive Order 11246 of September 24, 1965. The same claimant has also commenced a lawsuit against the Supply System based on such claim in the Federal Court for the Eastern District of Washington.

The Supply System has been granted by the Director, Office of Contract Compliance, U. S. Department of Labor, a limited exemption from the cancellation, termination and suspension provisions contained in the Net Billing Agreements and the Project Agreement. 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 the Supply System under the Net Billing Agreements and the Project Agreement would remain in full force and effect regardless of any action by GSA.

### **Grays Harbor County**

On October 10, 1975, a law suit was filed by three individual residents and taxpayers of Grays Harbor County against Grays Harbor County, Washington, and its Commissioners ("Grays Harbor") in the Superior Court of the State of Washington for Grays Harbor County in which plaintiffs prayed that the court declare Grays Harbor's actions in connection with its sale of certain real estate to the Supply System wholly void on several grounds. In early 1976, the court entered an order dismissing a portion

of plaintiffs' claim and no further action has been taken in this matter by the plaintiffs although the matter is still pending.

The land acquired from Grays Harbor is not part of the Project site; however, the Supply System has exchanged it for certain land within the Project site area. The Supply System also has the power to acquire land needed for the Project site by purchase or condemnation.

Special Counsel to the Supply System is of the opinion that the said litigation is without substantial merit.

#### **Comptroller of the Currency Ruling**

On August 27, 1975, the Comptroller of the Currency issued a ruling that the \$175,000,000 Washington Public Power Supply System Nuclear Project No. 1 Revenue Bonds, Series 1975, are eligible for purchase, dealing in, underwriting and unlimited holding by national banks. It is expected that certain national banks will participate in bidding for the 1977 Bonds based upon that ruling. In 1975 the Supply System was advised that certain firms of investment bankers, acting independently or jointly, were considering whether or not to institute litigation to contest such ruling.

#### **REGISTRATION OF THE 1977 BONDS BY STATE AUDITOR**

The 1977 Bonds will be registered by the State Auditor of the State of Washington, and a certificate of such registration signed by the State Auditor or a Deputy State Auditor will be endorsed upon each Bond in accordance with the provisions of Section 54.24.070 of the Revised Code of Washington, made applicable to the Supply System by the Revised Code of Washington, Section 43.52.3411. Such Section 54.24.070 provides, in part, that any revenue obligations after having been so registered and bearing such certificate, shall be held in every action, suit or proceeding in which their validity is or may be brought into question prima facie valid and binding obligations in accordance with their terms.

#### **PROPOSED LEGISLATION**

Legislation has been introduced in the United States Congress implementing portions of the President's announced energy conservation program. This program would include proposals to restructure electric rate schedules; require stricter safety measures at nuclear generating units; impose taxes relating to utilization of oil and gas for electric generation; raise the prices for certain oil and natural gas supplies; increase the utilization of coal by electric utilities; defer development of breeder reactors and commercial reprocessing and recycling of spent nuclear fuel; re-evaluate nuclear waste storage methods; reduce the time periods required for licensing light-water nuclear reactors; require utilities to assist customers in the installation and financing of home insulation; and set higher efficiency standards for home appliances using electricity and gas. An analysis of the impact of this program must await the final adoption of any legislation and implementing regulations.

#### **APPROVAL OF LEGAL PROCEEDINGS**

Wood Dawson Love and O'Brien, 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 1977 Bonds, the Net Billing Agreements, the Project Agreement and the Ownership Agreement. Copies of the opinions they propose to render are appended hereto as Exhibit IV.

#### **TAX EXEMPTION**

In the opinion of the above named Counsel, the interest on the 1977 Bonds will be exempt from federal income taxation under existing laws, regulations and rulings issued by the Internal Revenue Service.

#### **CERTIFICATION AS TO OFFICIAL STATEMENT**

The System will confirm to the successful bidder for the 1977 Bonds, by a certificate signed on its behalf by the Managing Director of the System and dated and delivered on the date of delivery of and

payment for the 1977 Bonds, that on the date of this Official Statement and on the date of such certificate (i) the descriptions and statements of or pertaining to the Supply System contained in this Official Statement were and are true and correct in all material respects; (ii) insofar as the Supply System and its affairs, including its financial affairs, are concerned, this Official Statement did not and does not contain an untrue statement of a material fact or omit any statement or information which is necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; and (iii) insofar as the descriptions and statements, including financial data, of or pertaining to Bonneville and other governmental bodies, and non-governmental bodies, and their activities contained in this Official Statement are concerned, such descriptions, statements and data have been obtained from sources which the Supply System believes to be reliable and the Supply System has no reason to believe that they are untrue in any material respect. There will also be delivered to such bidder on the date of delivery of the 1977 Bonds a certificate of the Bonneville Power Administrator, dated such date, that on the date of this Official Statement and on the date of such certificate the descriptions and statements, including financial statements, of or pertaining to Bonneville contained in this Official Statement were and are true and correct in all material respects and that insofar as Bonneville and its affairs, including its financial affairs, are concerned, this Official Statement did not and does not contain an untrue statement of a material fact or omit any statement or information which is necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

#### RATINGS

As noted on the cover page of this Official Statement, Moody's Investors Service, Inc. and Standard & Poor's Corporation have given the 1977 Bonds ratings of . . . and . . . 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 1977 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 1977 Bonds.

#### MISCELLANEOUS

The references, excerpts, and summaries contained herein of the Net Billing Agreements, the Project Agreement, the Ownership Agreement and the Resolution do not purport to be complete statements of the provisions of such documents and reference should be made to such documents for a full and complete statement of all matters relating to the 1977 Bonds, the basic agreements securing the 1977 Bonds and the rights and obligations of the holders thereof. Copies of the forms of Net Billing Agreements, Project Agreement and Ownership Agreement 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 Resolution, and neither this Official Statement nor any advertisement of the 1977 Bonds are to be construed as a contract with the holders of the 1977 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 the Hydro Thermal Power Program" and in Exhibit VI. 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/ EDWIN W. TAYLOR  
Secretary

EXHIBIT I

WASHINGTON PUBLIC POWER SUPPLY SYSTEM NUCLEAR PROJECT NO. 3

The Participants, the Companies, their customers and gross revenues, and Shares of the Project capability.

Participant	1976 Statistics		Participants' Shares 1982-1983(A)
	Customers	Revenues	
City of Albion, Idaho	148	\$ 32,664	.00003
City of Bandon, Oregon	1,829	543,327	.00066
Public Utility District No. 1 of Benton County, Washington	20,930	8,177,175	.02523
Benton Rural Electric Association	6,258	2,166,046	.00524
Big Bend Electric Cooperative, Inc.	5,087	3,368,671	.00052
Blachly-Lane Electric Cooperative Association	2,165	1,131,749	.00272
City of Blaine, Washington	1,415	384,184	.00064
City of Bonners Ferry, Idaho	1,689	516,045	.00059
City of Burley, Idaho	4,145	1,251,628	.00057
City of Canby, Oregon	2,489	843,691	.00097
City of Cascade Locks, Oregon	727	293,424	.00029
Central Electric Cooperative, Inc.	7,031	2,412,870	.00870
City of Centralia, Washington	6,813	1,613,772	.00104
Central Lincoln People's Utility District	19,826	8,305,122	.01934
Public Utility District No. 1 of Chelan County, Washington	20,991	7,343,637	.00335
City of Cheney, Washington	2,726	835,170	.00302
Public Utility District No. 1 of Clallam County, Washington	12,788	4,683,098	.00517
Public Utility District No. 1 of Clark County, Washington	64,475	21,585,668	.09635
Clatskanie People's Utility District	2,653	2,540,380	.00344
Clearwater Power Company	6,162	2,022,558	.00423
Columbia Basin Electric Cooperative, Inc.	3,404	1,447,988	.00152
Columbia Power Cooperative Association	1,377	479,467	.00055
Columbia Rural Electric Association, Inc.	2,140	1,462,943	.00931
Consolidated Irrigation District No. 19, Washington	1	12,780	.00006
Consumers Power, Inc.	11,084	4,227,570	.01226
Coos-Curry Electric Cooperative, Inc.	9,191	3,344,845	.00337
City of Coulee Dam, Washington	555	200,731	.00022
Public Utility District No. 1 of Cowlitz County, Washington	32,262	17,501,700	.02959
City of Declo, Idaho	78	28,889	.00009
Public Utility District No. 1 of Douglas County, Washington	8,638	4,222,009	.00068
Douglas Electric Cooperative, Inc.	6,188	1,843,162	.00447
City of Drain, Oregon	581	255,941	.00036
East End Mutual Electric Co., Ltd.	385	125,120	.00020
City of Ellensburg, Washington	4,914	1,444,980	.00409
Fall River Rural Electric Cooperative, Inc.	4,999	1,806,037	.00069
Farmers Electric Co., Ltd.	237	49,428	.00010
Public Utility District No. 1 of Ferry County, Washington	1,715	743,385	.00070
Flathead Electric Cooperative, Inc.	4,939	1,362,597	.00229
City of Forest Grove, Oregon	4,714	1,300,871	.00000(B)
Public Utility District No. 1 of Franklin County, Washington	11,876	4,890,988	.00629
Public Utility District No. 2 of Grant County, Washington	23,170	12,540,752	.00325
Public Utility District No. 1 of Grays Harbor County, Washington	30,066	13,239,350	.02163

EXHIBIT I - (Continued)

WASHINGTON PUBLIC POWER SUPPLY SYSTEM NUCLEAR PROJECT NO. 3

The Participants, the Companies, their customers and gross revenues, and Shares of the Project capability.

Participant	1976 Statistics		Participants' Shares 1982-1983(A)
	Customers	Revenues	
Harney Electric Cooperative, Inc. ....	2,062	\$ 1,363,700	.00039
City of Heyburn, Idaho .....	863	619,479	.00063
Hood River Electric Cooperative, Oregon .....	2,341	890,462	.00238
Idaho County Light & Power Cooperative Association, Inc. ....	1,857	514,330	.00047
City of Idaho Falls, Idaho .....	14,325	4,775,861	.00254
Inland Power & Light Company .....	15,177	5,351,403	.01453
Public Utility District No. 1 of Kittitas County, Washington ....	1,335	510,043	.00126
Public Utility District No. 1 of Klickitat County, Washington ...	6,356	2,478,021	.00309
Kootenai Electric Cooperative, Inc. ....	5,736	1,638,836	.00351
Lane County Electric Cooperative, Inc. ....	8,143	2,835,896	.00582
Public Utility District No. 1 of Lewis County, Washington ....	17,078	5,787,433	.00661
Lincoln Electric Cooperative, Inc. (Montana) .....	1,734	704,533	.00134
Lincoln Electric Cooperative (Washington) .....	1,661	1,130,404	.00100
Lost River Electric Cooperative, Inc. ....	1,550	661,170	.00048
Lower Valley Power & Light, Inc. ....	8,149	2,748,991	.00379
Public Utility District No. 1 of Mason County, Washington ....	3,039	672,477	.00101
Public Utility District No. 3 of Mason County, Washington.....	14,026	3,913,665	.00928
Town of McCleary, Washington .....	679	267,839	.00025
City of McMinnville, Oregon .....	6,374	2,375,489	.00276
Midstate Electric Cooperative, Inc. ....	5,183	1,553,715	.00367
City of Milton-Freewater, Oregon .....	3,589	891,304	.00000(c)
City of Minidoka, Idaho .....	65	11,597	.00001
Missoula Electric Cooperative, Inc. ....	4,605	1,348,856	.00288
City of Monmouth, Oregon .....	2,285	547,921	.00204
Nespelem Valley Electric Cooperative, Inc. ....	1,084	405,412	.00090
Northern Lights, Inc. ....	6,784	2,072,633	.00358
Northern Wasco County People's Utility District .....	7,670	1,467,510	.00103
Okanogan County Electric Cooperative, Inc. ....	1,177	278,286	.00023
Public Utility District No. 1 of Okanogan County, Washington ..	12,584	3,814,144	.00177
Orcas Power and Light Company .....	4,295	1,463,663	.00423
Public Utility District No. 2 of Pacific County, Washington ....	11,599	2,933,987	.00522
Public Utility District No. 1 of Pend Oreille County, Washington	2,992	1,245,218	.00036
City of Port Angeles, Washington .....	7,495	3,229,766	.00256
Prairie Power Cooperative, Inc. ....	396	153,077	.00020
Raft River Rural Electric Cooperative, Inc. ....	2,061	1,547,465	.00239
Ravalli County Electric Cooperative, Inc. ....	2,674	900,136	.00319
City of Richland, Washington .....	11,568	4,183,844	.00704
Riverside Electric Company, Ltd. ....	227	62,621	.00019
City of Rupert, Idaho .....	2,299	637,681	.00043
Rural Electric Company .....	2,149	720,436	.00309
Salem Electric .....	7,961	2,007,410	.00692
Salmon River Electric Cooperative, Inc. ....	1,411	495,788	.00044

**EXHIBIT I -- (Continued)**

**WASHINGTON PUBLIC POWER SUPPLY SYSTEM NUCLEAR PROJECT NO. 3**

The Participants, the Companies, their customers and gross revenues, and Shares of the Project capability.

<u>Participant</u>	<u>1976 Statistics</u>		<u>Participants' Shares 1982-1983(A)</u>
	<u>Customers</u>	<u>Revenues</u>	
City of Seattle, Washington .....	273,483	\$ 79,193,926	.08218
Public Utility District No. 1 of Skamania County, Washington ..	3,382	1,167,963	.00145
Public Utility District No. 1 of Snohomish County, Washington ..	114,083	41,123,926	.16846
South Side Electric Lines, Inc. ....	456	249,037	.00057
City of Springfield, Oregon .....	16,286	6,090,507	.00028
City of Sumas, Washington .....	333	94,025	.00007
Surprise Valley Electrification Corporation .....	3,126	1,076,066	.00068
City of Tacoma, Washington .....	90,858	48,222,894	.02131
Tanner Electric .....	866	321,434	.00059
Tillamook People's Utility District, Oregon .....	13,347	3,904,726	.00325
Umatilla Electric Cooperative Association .....	6,014	4,629,247	.01027
Unity Light and Power Company .....	1,354	481,964	.00193
Vera Irrigation District No. 15, Washington .....	3,700	979,359	.00181
Vigilante Electric Cooperative, Inc. ....	3,658	1,098,737	.00046
Public Utility District No. 1 of Wahkiakum County, Washington ..	1,663	557,317	.00109
Wasco Electric Cooperative, Inc. ....	2,813	1,028,105	.00158
Wells Rural Electric Company .....	1,579	888,387	.00172
West Oregon Electric Cooperative, Inc. ....	2,999	920,001	.00160
Public Utility District No. 1 of Whatcom County, Washington ..	1	489,530	.00337
<b>Total Participants (103) .....</b>	<b>1,107,560</b>	<b>\$460,312,026</b>	<b>.70000</b>

<u>Company</u>	<u>1976 Statistics</u>		<u>Ownership Shares</u>
	<u>Customers</u>	<u>Revenues</u>	
Pacific Power & Light Company .....	607,394	\$316,197,678	.10000
Portland General Electric Company .....	412,556	217,786,708	.10000
Puget Sound Power & Light Company .....	424,439	191,088,435	.05000
The Washington Water Power Company .....	197,742	92,188,559	.05000
<b>Total Companies (4) .....</b>	<b>1,642,131</b>	<b>\$817,261,380</b>	<b>.30000</b>

(A) Participants' Shares of the Supply System's 70% Ownership Share of the Project capability. Participants' Shares vary from year to year prior to July 1, 1986.

(B) Has .00000 Participant's Share until July 1, 1986 and .00091 Participant's Share thereafter.

(C) Has .00000 Participant's Share until July 1, 1986 and .00002 Participant's Share thereafter.



EXHIBIT II

R. W. BECK AND ASSOCIATES

ENGINEERS AND CONSULTANTS

200 TOWER BUILDING  
SEATTLE, WASHINGTON 98101  
TELEPHONE 206-622-5000

SEATTLE, WASHINGTON  
DENVER, COLORADO  
PHOENIX, ARIZONA  
ORLANDO, FLORIDA  
COLUMBUS, NEBRASKA  
WELLESLEY, MASSACHUSETTS  
INDIANAPOLIS, INDIANA

July .., 1977

Board of Directors  
Washington Public Power Supply System  
Post Office Box 968  
Richland, Washington 99352

Gentlemen:

**Subject: Consulting Engineer's Report  
Washington Public Power Supply System  
Nuclear Project No. 3**

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 \$230,000,000 of its Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds, Series 1977 (the "1977 Bonds") in accordance with its Resolution No. 775 and supplemental resolutions ("Bond 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 of approximately 1,240,000 kilowatts and related facilities known as Washington Public Power Supply System Nuclear Project No. 3 (the "Project"). The Supply System has previously issued \$250,000,000 of its Nuclear Project No. 3 Revenue Bonds in two series: Series 1975 and Series 1976. The Supply System's present financing program provides that additional bonds (which together with the 1977 Bonds and previously issued bonds are hereinafter referred to as the "Bonds") will be issued at later dates and in amounts necessary to pay the Supply System's share of the cost of completing the Project and placing it into operation.

The Supply System has entered into an agreement (the "Ownership Agreement") with Pacific Power & Light Company, Portland General Electric Company, Puget Sound Power & Light Company and The Washington Water Power Company (the "Companies") which provides for the acquisition, construction, operation and ownership, as tenants in common, of the Project. Under the Ownership Agreement each party will be responsible for providing for its ownership share of the costs of construction and operation of the Project and will be entitled to its ownership share of the Project's capability. The parties to the Ownership Agreement have designated the Supply System to act as their agent to construct, operate and maintain the Project. Under the Ownership Agreement the parties will have ownership shares as follows:

	<b>Percentage Ownership Share</b>
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 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 3 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, including the Project, has under construction five large nuclear projects.

The following table shows the status, schedule and estimated financing for the Supply System's projects:

Project	Location	Initial Operating Date(1)	Size(1) MW	Bonds Issued to Date (000)	Estimated Additional Financing Required (000)	Total Financing Required (000)(1)
Packwood	Packwood	June 1964	27.5	\$ 13,700	\$ —	\$ 13,700
Hanford(2)	Hanford	November 1966	860.0	122,000	—	122,000
WPPSS No. 1(3)	Hanford	September 1981(4)	1,250.0	535,000	671,000(5)	1,206,000
WPPSS No. 2(3)	Hanford	September 1980	1,100.0	800,000	165,000(5)	965,000
WPPSS No. 3(6)(7)	Satsop	September 1983	868.0	480,000(8)	464,000	944,000
WPPSS No. 4(6)	Hanford	March 1983(4)	1,250.0	235,000(11)	3,199,000(5)	3,434,000
WPPSS No. 5(6)(9)	Satsop	March 1985	1,116.0			
			6,471.5	\$2,185,700	\$4,499,000	\$6,684,700

- (1) Hanford and Packwood projects actual, other projects estimated.
- (2) Turbine-generator facility using steam from a nuclear reactor owned and operated by the Energy Research and Development Administration ("ERDA").
- (3) Under construction—Nuclear Regulatory Commission ("NRC") construction permit and Washington State site approval received.
- (4) Does not include potential delays discussed in the Official Statement to which this report is attached ("Official Statement") under the caption "The Supply System's Other Generating Projects".
- (5) Does not include potential cost increases discussed in the Official Statement under the caption "The Supply System's Other Generating Projects".
- (6) Under construction—NRC limited work authorization and Washington State site approval received.
- (7) Supply System's 70% ownership share. Four investor-owned utilities own 30% of WPPSS No. 3.
- (8) Includes this issue.
- (9) Supply System's 90% ownership share. Pacific Power and Light Company owns 10% of WPPSS No. 5.
- (10) The Packwood, Hanford, WPPSS No. 1, and WPPSS No. 2 projects, and the Supply System Ownership Share of the Project are each financed as separate systems. WPPSS No. 4 and the Supply System ownership share of WPPSS No. 5 are together being financed as a separate system.
- (11) Excludes \$100,000,000 of Development Bonds.

## The Project

The Project is located about three miles south of the community of Satsop in Grays Harbor County, Washington, approximately 16 miles east from the City of Aberdeen, and 66 miles southwest from the City of Seattle. The Supply System is also constructing its Nuclear Project No. 5 ("WPPSS No. 5") on the same site. WPPSS No. 5 is being designed and constructed as a twin to the Project and will share some common facilities with the Project.

The Project's 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. The Project's output will be delivered into the Federal Columbia River System transmission grid in the vicinity of the Project.

#### Permits and Licenses

The Supply System has received site certification from the State of Washington and on April 8, 1977 received a limited work authorization from NRC for both the Project and WPPSS No. 5. Hearings in connection with issuance of a construction permit were held on May 24 and 25, 1977 before the Atomic Safety and Licensing Board and the Supply System expects a decision on the issuance of the construction permits for both projects by late summer or early fall this year.

#### Construction Program

The Supply System has employed the firm of Ebasco Services Incorporated ("Ebasco") as Construction Engineer to design and supervise the construction of the Project.

Limited construction at the site has begun with the receipt of the limited work authorization; however, on-site construction and installation of nuclear components cannot proceed without a construction permit issued by the NRC. Any significant delay in obtaining the construction permit will delay the Project schedule and increase the Project cost. The initial fuel loading is currently scheduled for March 1983 and commercial operation for September 1983.

The Supply System has entered into equipment, material and construction contracts for the Project with a total estimated value of \$267,954,000. As of May 31, 1977, actual expenditures for the Supply System's 70% share of the Project totalled \$94,564,000, as summarized in the following table:

Total Construction Cost .....	\$75,318,000
Nuclear Fuel .....	10,566,000
Bond Discount Financing Cost .....	3,875,000
Interest During Construction .....	4,805,000
Total .....	<u>\$94,564,000</u>

#### Nuclear Fuel

Nuclear fuel services have been contracted for in the following quantities as a percentage of total requirements for operation for the years shown:

Contract Status for Nuclear Materials and Services (%)

Year	Uranium concentrates(1)	Conversion(2)	Enrichment(3)	Fabrication(4)	Shipping	Reprocessing(5)
1983 .....	100	100	100	100	0	0
1984 .....	100	100	100	100	0	0
1985 .....	100	100	100	100	0	0
1986 .....	100	100	100	100	0	0
1987 .....	100	100	100	100	0	0
1988 .....	100	100	100	100	0	0
1989-1998 .....	100	0	100	100	0	0

(1)—Sufficient uranium concentrates for the initial core have been obtained from Allied Chemical Corporation. Uranium requirements for 14 years of reload fuel are under contract with Exxon Nuclear Company, Inc.

(2)—Conversion service sufficient for operation through 1988 has been contracted with Kerr McGee Corporation.

(3)—Enrichment services meeting operating requirements for 30 years are under contract with ERDA.

(4)—Fabrication services for the initial core have been contracted for with Combustion Engineering, Inc. Reload fabrication services sufficient to meet operating needs through 1998 are under contract with Exxon Nuclear Company, Inc.

(5)—Initial facilities for spent fuel storage will be constructed at the Project site to provide storage requirements until about 1990.

### Long-Term Financing Program

The long-term financing program contemplates the issuance of Bonds in several series to finance the construction of the Supply System's Ownership Share of the Project. The present estimates of actual needs by the Construction Engineer and the Supply System show the proceeds from the 1977 Bonds will be sufficient to continue construction of the Project until February 1980 prior to which time additional Bonds are planned to be issued. Construction cost estimates are based on a scheduled commercial operating date of September 1983.

Based on the foregoing, the estimate total financing requirements for the Supply System's Ownership Share of the Project are shown in the following tabulation.

#### Estimated Project Financing Required (\$000)

	Total Project Costs	Supply System's 70% Share of Project Costs
Land and Land Rights(1) .....	\$ 2,422	\$ 1,696
Structures and Improvements(2) .....	165,416	115,791
Reactor Plant Equipment(2) .....	166,958	116,871
Turbogenerator Units(2) .....	131,240	91,868
Accessory Electric Equipment(2) .....	42,634	29,844
Miscellaneous Power Plant Equipment(2) .....	29,122	20,385
Station Equipment(2) .....	6,519	4,563
Other Tangible Property(2) .....	14,894	10,426
<b>Project Construction Costs</b> .....	<b>\$ 559,205</b>	<b>\$ 391,444</b>
Escalation(2) .....	196,338	137,437
Contingencies(2) .....	39,033	27,323
Sales Tax(1)(3) .....	42,759	29,932
Nuclear Fuel(1)(4) .....	65,810	46,067
Owner's Contingencies(1) .....	35,000	24,500
Architect-Engineer(2) .....	41,278	28,894
Construction Manager(2) .....	30,968	21,677
Owner's Direct Cost(1) .....	83,500	58,450
Performance Bonds(1) .....	1,000	700
<b>Total Construction and Nuclear Fuel Costs</b> .....	<b>\$1,094,891</b>	<b>\$ 766,424</b>
Bond Discount and Other Financing Expenses(5) .....		10,815
Capitalized Interest During Construction(6) .....		255,983
<b>Gross Requirements</b> .....		<b>\$1,033,222</b>
Less: Estimated Income from Temporary Investments(7) .....		(89,222)
<b>Net Requirements</b> .....		<b>\$ 944,000</b>

(1)—Estimated by Supply System.

(2)—Estimated by Ebasco. Takes into consideration that the Project and WPPSS No. 5 will benefit from the economy of dual-unit construction.

(3)—Excludes sales tax on nuclear fuel.

(4)—Includes sales tax.

(5)—Includes actual expense of previous financing and estimated costs of the 1977 Bonds and additional Bonds.

(6)—Based on actual interest rates for previous financings, an assumed 6.0% for the 1977 Bonds, and an assumed 7.5% for additional Bonds. Interest is capitalized to September 1, 1982. Does not include interest for the period from September 1, 1982 to September 1, 1983 (see the caption "Financing Program" in the Official Statement).

(7)—Includes actual income to June 1, 1977 from temporary investment of proceeds from previous financings and estimated future income from temporary investment of proceeds from additional Bonds at an annual interest rate of 5.75%.

A summary of the total financing actually accomplished and contemplated for the future by the Supply System for its Ownership Share of the Project costs is shown in the following table:

### Estimated Financing Required

	(000)			
	Previous Financing	1977 Bonds	Additional Bonds	Total
Total Construction Costs .....	\$154,896	\$185,979	\$379,482	\$ 720,357
Nuclear Fuel .....	10,026	0	36,041	46,067
Bond Discount and Financing Costs .....	3,875	2,300	4,640	10,815
Interest During Construction .....	120,814	71,300	63,869	255,983
Gross Requirements .....	\$289,611	\$259,579	\$484,032	\$1,033,222
Less: Investment Income .....	(39,611)	(29,579)	(20,032)	(89,222)
Net Requirements .....	\$250,000	\$230,000	\$464,000	\$ 944,000

In addition to the foregoing amounts to be obtained through issuance of Bonds, present planning anticipates the following will be paid from revenues of the Supply System's Ownership Share of the Project under the Net Billing Agreements.

Reserve Account in Bond Fund .....	\$33,236,000
Working Capital .....	3,000,000*
Reserve and Contingency Fund .....	3,000,000
Total .....	\$39,236,000

\* The amount of working capital may be increased by agreement between the Supply System and The United States of America, Department of the Interior, Acting by and through The Bonneville Power Administrator ("Bonneville").

If for any reason such amounts are not provided under the Net Billing Agreements, the Bond Resolution provides that they will be obtained through the issuance of additional Bonds.

### Project Output

The Project is expected to have a net generating capability of 1,240,000 kilowatts. Although there is not yet sufficient historical operating information available on large nuclear plants to establish an expected plant factor for the Project from operational experience, the regional planning guidelines assume a 75% plant factor for the Project. A 75% plant factor would result in the production of about 8.1 billion kilowatt-hours annually. The Supply System's Ownership Share would be 5.7 billion kilowatt-hours annually. During certain periods there will be times when 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, including the Project.

### Cost of Power

Estimates of the annual costs of the Supply System's portion of the Project's operations are given in the following table. The cost per kilowatt hour of 21.3 mills is based on 5.7 billion kilowatts-hours

The Supply System, Bonneville and 15 industrial companies that purchase electrical energy from Bonneville have entered into a Power Sales Agreement under which such companies will purchase a portion of the energy from the Supply System's Ownership Share of the Project during the period from the date of commercial operation to June 30, 1984, if such energy is not needed by Bonneville to meet its contractual obligations to supply firm power. The payments made to the Supply System for such sale of power to the industrial companies will serve to reduce the Participants' and Bonneville's payments under the Net Billing Agreements. The Power Sales Agreement provides that the energy sold to and the payments made by the industrial customers will be up to 750,000,000 kilowatt hours in Contract Year 1983-84 at a price of \$5,625,000 assuming a commercial operation date of September 1983.

### **Agreements**

The Net Billing Agreements provide that each Participant pay the Supply System its share of the annual costs the Supply System incurs for its Ownership Share of the Project less amounts payable to the Supply System under the Power Sales Agreement. The Participants, in turn, assign their shares of the Project capability to Bonneville. Bonneville pays each Participant, in the form of credits on its power bills from Bonneville or through cash payments, in the manner described in the Official Statement, in amounts equal to the Participant's payments to the Supply System.

The Supply System and Bonneville have entered into a Project Agreement which, among other things, provides standards for the design, construction and operation of the Project.

Summaries of the Ownership Agreement, the Net Billing Agreements, and the Project Agreement are included in the Official Statement.

### **Participants' Allocations of Bonneville Resources**

The Participants' current power sales agreements with Bonneville provide a formula for allocation of Bonneville's available energy resources to each Participant as well as its other preference customers after the date that Bonneville is unable to supply such customers' full requirements. Bonneville has notified all Participants that Bonneville will be unable to meet all of the energy requirements of its preference customers after June 30, 1983.

Under the current power sales agreements allocation formula, the actual allocation of Bonneville energy to each Participant will not be determinable until June 30, 1983 because a portion of the allocation depends on load growth from July 1, 1976 to June 30, 1983, and certain features of the formula permit some changes to be made at Bonneville's discretion. In view of the foregoing uncertainties, Bonneville has indicated that it is unable to determine at this time what the allocation of power will be after June 30, 1983.

The Participants' power sales agreements with Bonneville expire between 1983 and 1994. In the past Bonneville has executed new preference customer power sales agreements prior to the termination of existing preference customer power sales agreements. However, Bonneville does not expect to execute new preference customer power sales agreements until after it has completed an environmental impact statement entitled "The Role of BPA in the Pacific Northwest Power Supply System. Including Its Participation in the Hydro-Thermal Power Program: A Program Environmental Statement and Planning Report" and has given consideration to the material presented in the final impact statement and its other legal obligations. In addition, from time to time, Bonneville receives applications for purchase of power from agencies which may also have a statutory preference and priority on power from the Bonneville system. These applications for power and resultant power sales agreements and the terms of preference customers' future power sales agreements, could affect future allocations of power from the Bonneville system. Also, we are advised that the City of Portland, Oregon, is considering litigation questioning the validity of the existing power sales agreements. The outcome of these matters and a proposal being

developed by the utilities in the Pacific Northwest could also substantially alter the amount of Bonneville energy which will be available to the Participants. For a description of the proposal see "Proposed Regional Power Program" herein.

#### **Proposed Regional Power Program**

The region's utilities, states and Bonneville's industrial customers are currently developing a program to provide a continuing power supply to the region. The proposed program presently includes the enactment of federal legislation providing for a method of allocating Bonneville power; the creation of a regional organization for load forecasting and the designation of energy resources to be available for acquisition by Bonneville to meet the loads of the region; the purchase of power from such resources by Bonneville; a conservation program; and pooling and sale of power by Bonneville to the region's utilities and Bonneville's industrial customers. There is no assurance that the legislation will be passed by Congress or that the program as currently constituted will remain as drafted through the legislative process if the legislation passes.

#### **Conclusions**

Based on our studies and analyses of the Supply System's proposal to construct the Project, we are of the opinion that:

1. The output of the Project is required to meet the load growth of the utility systems of the Pacific Northwest and can be readily absorbed by Bonneville and the industrial companies that are parties to the Power Sales Agreement when the Project is scheduled for initial operation.
2. The Ownership Agreement, the Net Billing Agreements, the Power Sales Agreement and the Project Agreement provide a sound foundation for proceeding with the Project.
3. The estimated costs of the output of the Project are reasonable and comparable to costs expected from similar projects being developed within the same time frame.

We have furnished you the information in the Official Statement under the headings entitled "Project Financing Requirements", "Estimated Project Annual Costs", "Power Supply in the Pacific Northwest and the Hydro Thermal Power Program", and in Exhibits I and V. In our opinion, the information contained therein is correct.

Respectfully submitted,

/s/ R. W. BECK AND ASSOCIATES

TABLE 1

WASHINGTON PUBLIC POWER SUPPLY SYSTEM  
 NUCLEAR PROJECT NO. 3 PARTICIPANTS  
 SUMMARY OF FINANCIAL AND STATISTICAL DATA FOR 1976

	Districts	Municipalities	Cooperatives	Companies	1976 Statistics Total	1975 Statistics Total
<b>STATISTICS:</b>						
<b>Customers:</b>						
Residential .....	401,171	4,0934	150,646	1,405,907	2,368,658	2,281,221
Total .....	462,246	463,325	181,989	1,642,131	2,749,691	2,646,607
Energy Sales: kWh (000) .....	19,137,814	15,499,268	4,985,327	53,777,266	93,399,675	86,609,709
<b>Energy Purchases: kWh (000)</b>						
Bonneville (Hanford Project Exchange) .....	267,117	69,160	71,116	662,484	1,069,877	3,472,156
Bonneville .....	17,578,616	6,021,549	5,400,296	5,220,052	34,220,513	27,525,505
Other .....	1,469,376	(235,184)	2,370	27,106,799	28,343,361	28,662,633
Total Energy Purchases kWh (000) .....	19,315,109	5,855,525	5,473,782	32,989,335	63,633,751	59,660,294
Energy Generated: kva (000) .....	775,019	10,854,475	9,404	25,381,392	37,020,290	33,528,501
Total Energy Requirements kWh (000) .....	20,090,128	16,710,000	5,483,186	58,370,727	100,654,041	93,188,795
Peak Demands: kW .....	3,877,465	2,888,599	1,734,100	9,425,826	17,925,990	16,854,942
<b>OPERATIONS:</b>						
<b>Income:</b>						
Total Operating Revenues ....	\$176,831,363	\$160,687,450	\$ 68,793,213	\$ 817,261,380	\$1,223,573,406	\$1,063,038,734
Other Income (Non-Operating) ..	4,486,836	4,447,478	1,064,193	79,280,806	89,279,313	85,160,830
Total Income .....	\$181,318,199	\$165,134,928	\$ 69,857,406	\$ 896,542,186	\$1,312,852,719	\$1,148,199,564
<b>OPERATING EXPENSES:</b>						
<b>Purchased Power:</b>						
Bonneville (Hanford Project Exchange) .....	\$ 974,279	\$ 247,916	\$ 276,827	\$ 1,912,256	\$ 3,411,278	\$ 12,097,409
Bonneville .....	66,832,109	22,383,096	21,154,075	32,654,895	143,024,175	108,872,173
Other .....	4,954,674	(1,201,787)	12,997	75,132,362	78,898,246	108,884,599
Total Purchased Power Expense .....	\$ 72,761,062	\$ 21,429,225	\$ 21,443,899	\$ 109,599,513	\$ 225,333,699	\$ 229,854,181
Generating Expense .....	7,654,806	17,555,194	30,558	103,117,414	128,357,972	94,991,920
Total Power Supply Expense .....	\$ 80,415,868	\$ 38,984,419	\$ 21,474,457	\$ 212,816,927	\$ 353,691,671	\$ 324,846,101
Depreciation .....	16,752,732	23,124,593	9,105,547	82,123,295	131,106,167	107,057,406
Other Expense (Including Taxes) .....	49,995,572	70,034,992	25,513,693	253,340,256	398,884,513	342,540,437
Total Operating Expenses .....	\$147,164,172	\$132,144,004	\$ 56,093,697	\$ 548,280,478	\$ 883,682,351	\$ 774,443,944
<b>CONDENSED BALANCE SHEET:</b>						
<b>Assets:</b>						
Net Utility Plant .....	\$451,826,456	\$707,555,703	\$270,774,252	\$4,094,451,801	\$5,524,608,212	\$4,951,694,105
Other Property and Investments ..	102,261,300	48,032,841	11,408,681	133,623,049	295,325,871	248,941,004
Current Assets .....	79,455,388	83,642,758	28,028,302	238,820,595	429,947,043	341,359,941
Deferred Debits .....	14,110,283	14,825,227	1,702,277	58,918,412	89,456,199	76,749,268
Total Assets .....	\$647,653,427	\$854,056,529	\$311,913,512	\$4,525,713,857	\$6,339,337,325	\$5,618,744,318
<b>Liabilities:</b>						
Long Term Debt .....	\$263,936,058	\$443,575,583	\$227,257,652	\$2,269,546,971	\$3,204,316,264	\$2,683,500,706
Current Liabilities .....	40,803,507	35,307,668	14,175,549	346,257,478	436,544,202	568,714,845
Deferred Credits .....	9,001,953	1,508,370	2,103,488	94,271,375	106,885,186	103,517,732
Reserves .....	813,529	7,986,105	335,160	6,944,495	16,079,289	16,971,239
Contributions in Aid of Construction .....	17,013,436	20,871,597	231,414	0	38,116,447	31,794,045
Retained Earnings .....	316,084,944	344,807,206	67,810,249	1,808,693,538	2,537,395,937	2,214,245,751
Total Liabilities .....	\$647,653,427	\$854,056,529	\$311,913,512	\$4,525,713,857	\$6,339,337,325	\$5,618,744,318

\* End of year.



EXHIBIT III

**EBASCO SERVICES  
INCORPORATED**

UTILITY CONSULTANTS - ENGINEERS - CONSTRUCTORS

TWO RECTOR STREET  
NEW YORK, N. Y. 10006

CABLE ADDRESS "EBASCOE"

Board of Directors  
Washington Public Power Supply System  
3000 George Washington Way  
Post Office Box 968  
Richland, Washington 99352

July ..., 1977

Gentlemen:

**Re: Washington Public Power Supply System  
WPPSS Nuclear Project No. 3  
Project Status Review and Analysis**

The purpose of this letter is to review the current status of the Washington Public Power Supply System Nuclear Project No. 3 (the "Project") which is being constructed on a site near Satsop in southeastern Grays Harbor County, Washington, and to analyze the important objectives necessary for its successful completion.

In January 1973, Ebasco Services Incorporated ("Ebasco") was selected and retained by the Washington Public Power Supply System ("WPPSS") to provide engineering, construction management and related services for the Project. As Construction Engineer for the Project, Ebasco is responsible for the engineering, design, quality assurance, cost estimating and reporting and construction management of the Project. In addition Ebasco is providing related services including expediting, materials application engineering, vendor quality assurance, site 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. Ebasco is also Construction Engineer for WPPSS Nuclear Project No. 5 (WNP-5) of similar design and located adjacent to the Project.

**The Project**

The Project consists of a single unit, 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"). The Project shares certain common facilities with WNP-5.

The Project is located 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; Highway 12; the Chehalis River, which is navigable to ocean-going barges to a point within 5 miles 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 the Project 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 psi 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 structure in the plant. In addition, there is an administration and service building.

The Project 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 proposed site region.

#### **Current Estimated Project Costs and Construction Contracts**

The current capital cost estimate of the items within Ebasco's scope of responsibility is \$864,400,000 and is shown in detail in Attachment A. This cost estimate is based on a cost estimate of \$848,400,000 prepared in September 1976, which was predicated upon receipt of a limited work authorization ("LWA") from the Nuclear Regulatory Commission ("NRC") in December 1976 and commencement of preliminary site work in January 1977, to which has been added \$16,000,000 attributable to a four-month delay until April 1977 in receipt of the LWA and commencement of preliminary site work.

The current capital cost estimate was developed on an equitable cost basis which takes into consideration that both the Project and WNP-5 benefit from the economies of dual unit construction and therefore share certain costs on the basis of the proportions of respective benefit. The estimate of Project cost of March 1976 (used when bonds were last issued by WPPSS for the Project) was \$851,600,000 and was developed using the costs which would have been incurred if WNP-5 was not to be built. The reduction in Project costs attributable to sharing of costs between the Project and WNP-5 has been offset by a change in the commercial operation date for the Project from October 1982 to September 1983.

The bases 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 material contracts. For labor and material not presently covered by labor agreements or material contracts, escalation is computed at 8% and 6%, respectively, per year compounded from May 1, 1976.

A total of \$196,338,000 is included to cover anticipated escalation for the period May 1976 through completion of the Project. 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 \$39,033,000 in May 1976 dollars is included as contingency to cover the impact of design uncertainties, quantity refinements, and departures from assumed productivity rates.

As of June 1, 1977, seventy-four equipment and construction contracts totaling \$267,954,000 or approximately 45 percent of the expected total value of all equipment and construction contracts for the Project have been placed. A listing of the contracts placed is shown in Attachment B. The majority of the remaining equipment contracts are expected to be awarded during the next twelve months.

These contracts were awarded by WPPSS by means of a competitive bidding process pursuant to the statutory requirements with which WPPSS must conform as a joint operating agency of the State of Washington. Factors considered by WPPSS include price and the responsiveness of the bid to bidding requirements. WPPSS is also authorized to consider the bidder's experience, qualifications, available personnel and facilities. In our opinion, the vendors and contractors who have been awarded contracts by WPPSS are qualified for the particular type of work to be performed by them.

#### **Project Status and Schedule**

The final Environmental Statement was issued by the NRC in June 1975. The Preliminary Safety Evaluation Report was issued by the NRC in February 1976. A site certification agreement was issued by the State of Washington in October 1976. The LWA was issued by the NRC on April 8, 1977 and Notices to Proceed were issued immediately on five construction contracts. The Atomic Safety and Licensing Board's final safety hearings related to issuance of a construction permit by the NRC were held on May 24 and 25. The hearings were uncontested and a decision on issuance of a construction permit is expected in late summer or early fall.

As of June 1, 1977, engineering activities were 62 percent complete and procurement activities 43 percent complete. Construction activities were 0.1 percent complete, preliminary site work having commenced in mid-April.

The current capital cost estimate set forth in Attachment A is based on the following assumptions made with regard to schedule:

- a. Limited work authorization from NRC—April 1977
- b. Commencement of preliminary site work—April 1977
- c. Start of major excavation activities—August 1977
- d. Receipt of a construction permit from NRC—August 1977
- e. Initial concrete placement—February 1978
- f. Fuel loading—March 1983
- g. Commercial operation—September 1983

Based upon the present construction schedule for the Project, a construction labor force peak of approximately 1500 is anticipated in the fall of 1981.

#### **Conclusions**

We have reviewed in depth those aspects of the Project 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 the Project that:

1. The Satsop site is a suitable location for the Project.
2. All aspects of the Project are of presently proven engineering design or application, or are reasonable extensions thereof.
3. The Project 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 the Project in accordance with the schedule is reasonably anticipated.
5. The work within Ebasco's scope of responsibility is expected to be completed within the current capital cost estimate.
6. Following an initial period of testing and preliminary operation, the Project is expected to operate in a reliable manner with normal maintenance.

The Project description and statements and summaries of our estimates contained in this letter which are set forth in the Official Statement to which this letter is attached are correct.

Very truly yours,

R J SHERMAN  
President

**ATTACHMENT A**  
**WASHINGTON PUBLIC POWER SUPPLY SYSTEM**  
**WPPSS NUCLEAR PROJECT NO. 3**  
**CAPITAL COST ESTIMATE**

	<u>Estimate of March 1976*</u>	<u>Estimate of April 1977**</u>
Land and Land Rights .....	Not Included	Not Included
Structure and Improvements .....	\$182,268,000	\$165,416,000
Reactor Plant Equipment .....	\$132,928,000	\$166,958,000
Turbogenerator Units .....	\$128,272,000	\$131,240,000
Accessory Electric Equipment .....	\$ 38,920,000	\$ 42,634,000
Miscellaneous Power Plant Equipment .....	\$ 24,789,000	\$ 29,122,000
Station Equipment .....	\$ 7,278,000	\$ 6,519,000
Other Tangible Property .....	<u>\$ 17,280,000</u>	<u>\$ 14,894,000</u>
Subtotal Direct Construction Cost .....	\$531,735,000	\$556,783,000
Escalation .....	\$184,746,000	\$196,338,000
Contingency .....	<u>\$ 52,181,000</u>	<u>\$ 39,033,000</u>
Total Direct Construction Cost .....	\$768,662,000	\$792,154,000
Sales Tax .....	Not Included	Not Included
Architect-Engineer .....	\$ 51,576,000	\$ 41,278,000
Construction Manager .....	\$ 31,632,000	\$ 30,968,000
Performance Bonds .....	Not Included	Not Included
Nuclear Fuel .....	Not Included	Not Included
Owner's Cost .....	Not Included	Not Included
Interest During Construction .....	<u>Not Included</u>	<u>Not Included</u>
Total Estimate .....	\$851,600,000	\$864,400,000

\*Based on commercial operation date of October 1, 1982. Estimate was developed using the costs which would have been incurred if WNP-5 were not to be built.

\*\*Based on commercial operation date of September 1983. Estimate was developed on an equitable cost basis which takes into consideration that both WNP-5 and the Project benefit from the economies of dual unit construction and, therefore, share certain costs on the basis of the proportion of respective benefit.

**ATTACHMENT B**  
**AWARDED PROJECT EQUIPMENT AND CONSTRUCTION CONTRACTS**  
**FOR**  
**WPPSS NUCLEAR PROJECT NO. 3**  
**(As of June 1, 1977)**

<u>Item</u>	<u>Contractor</u>	<u>Contract Award Date</u>	<u>Present* Contract Amount</u>
Nuclear Steam Supply System . . . .	Combustion Engineering, Inc.	7/25/73	\$ 56,951,000
Turbine Generator and Accessories	Westinghouse Electric Corp.	8/31/73	39,342,000
Steel Containment Vessel . . . . .	Chicago Bridge and Iron Co.	10/ 9/74	28,351,000
Surface Condenser . . . . .	Ingersoll-Rand Company	11/20/74	5,070,000
Clearing and Grubbing . . . . .	J J Welcome Construction Co.	1/ 2/76	3,714,000
Radwaste Evaporators . . . . .	HPD Incorporated	2/20/76	2,054,000
Supply and Delivery of Concrete ..	Associated Sand & Gravel Co. Inc.	4/13/76	8,320,000
Feedwater Heaters . . . . .	Southwestern Engineering Company	4/20/76	3,551,000
Transformers . . . . .	General Electric Company	4/22/76	5,586,000
Condenser Tubes . . . . .	Carpenter Technology	4/26/76	3,384,000
Concrete Reinforcing Steel . . . . .	Bethlehem Steel Corporation	6/ 2/76	12,558,000
Excavation . . . . .	S J Groves and Sons Company	6/29/76	23,313,000
Natural Draft Cooling Tower . . . .	Zurn Industries, Incorporated	9/17/76	12,557,000
Diesel Generators . . . . .	Colt Industries	11/29/76	4,309,000
Piping and Piping Supports . . . . .	Associated Piping & Engr. Corp.	3/ 2/77	19,656,000
Field Erected Tanks . . . . .	Chicago Bridge and Iron Co.	5/13/77	4,235,000
Fifty Eight (58) Equipment and Construction Contracts, each with Value Less than \$2,000,000 . . . .			35,003,000
			<u>\$267,954,000</u>

\* Includes executed change orders.

**EXHIBIT IV**  
**OPINIONS OF COUNSEL**

[LETTERHEAD OF WOOD DAWSON LOVE & O'BRIEN]

[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 1977, \$230,000,000**

At your request we have examined into the validity of an issue of \$230,000,000 Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds, Series 1977, 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 July 1, 1977. The fully registered bonds are numbered from R-1 upwards and, except fully registered bonds initially issued, which are dated July 1, 1977, 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, 1978, and semi-annually thereafter on January 1 and July 1, as follows:

<u>Year</u>	<u>Amount</u>	<u>Interest Rate</u>	<u>Year</u>	<u>Amount</u>	<u>Interest Rate</u>
1985.....	\$2,620,000	...%	1994.....	\$ 3,830,000	...%
1986.....	2,725,000	...	1995.....	4,030,000	...
1987.....	2,825,000	...	1996.....	4,240,000	...
1988.....	2,945,000	...	1997.....	4,460,000	...
1989.....	3,065,000	...	1998.....	4,700,000	...
1990.....	3,200,000	...	1999.....	4,950,000	...
1991.....	3,335,000	...	2000.....	5,235,000	...
1992.....	3,490,000	...	2009.....	63,535,000	...
1993.....	3,655,000	...	2018.....	107,160,000	...

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. ...., adopted by said Board on ....., 1977 (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 to be 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 and Series 1976, and any bonds hereafter issued on a parity therewith pursuant to the Bond Resolution.

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 and to valid bankruptcy, insolvency, reorganization, moratorium and other laws for the relief of debtors.

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,



[LETTERHEAD OF WOOD DAWSON LOVE & O'BRIEN]

[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 1977, \$230,000,000**

Under date of . . . . ., 1977, 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 . . . . ., 1977 (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 . . . . ., 1977 relating to the Bonds, among the United States of America, Department of the Interior, acting by and through the Bonneville Power Administrator, the System and certain of the Participants referred to in Exhibit I 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 and reduced in the period prior to June 30, 1984 by certain short-term sales of output) 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 the Interior, 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 and to valid bankruptcy, insolvency, reorganization, moratorium and other laws for the relief of debtors.

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,

**EXHIBIT V**

**SUPPLY SYSTEM NET BILLED PROJECTS(1)**

Annual Costs (\$000)

Year	Estimated Debt Service WPPSS No. 3 1977 Bonds(2)	Debt Service Financing Issued to Date(3)	Estimated Additional Debt Service(4)	Estimated Operation Expenses(5)	Estimated Amounts Net Billed to Fund Reserves(6)	Total
1978	\$ 0	\$ 49,326	\$ 10,313	\$ 5,964(7)	\$12,858	\$ 78,461
1979	0	57,508	12,376	1,025(7)	0	70,909
1980	0	57,124	12,376	0	37,096	106,596
1981	0	90,933	54,314	38,909	24,137	208,293
1982	0	98,824	67,711	83,703	23,542	273,780
1983	11,500	115,388	96,711	103,757	3,923	331,279
1984	13,800	118,388	102,511	142,443		377,142
1985	16,008	118,394	105,766	158,353		398,521
1986	16,008	118,405	105,766	166,858		407,037
1987	16,008	118,423	105,766	175,593		415,790
1988	16,008	118,418	105,766	182,161		422,353
1989	16,008	118,445	105,766	188,453		428,672
1990	16,008	118,547	105,766	194,915		435,236
1991	16,008	118,551	105,766	153,865		394,190
1992	16,008	118,548	105,766	157,707		398,029
1993	16,008	118,649	105,766	152,085		402,508
1994	16,008	118,734	105,766	168,233		408,741
1995	16,008	118,804	105,766	176,140		416,718

- (1) Includes WPPSS Nuclear Project No. 1, WPPSS Nuclear Project No. 2 and the Supply System's Ownership Share of the Project.
- (2) Based on an assumed interest rate of 6.0% for the 1977 Bonds, and level debt service with principal payments beginning in 1985.
- (3) Actual debt service on WPPSS Nuclear Project No. 1 Series 1975, 1976A and 1976B Bonds, WPPSS Nuclear Project No. 2 Series 1973, 1974, 1974A, 1975A, 1976 and 1976A Bonds, and on the Project Series 1975 and 1976 Bonds.
- (4) Based on most recent estimates of project costs and computed as level debt service assuming a 7.5% interest rate on bonds to be issued.
- (5) Estimated operating costs by year includes taxes and net payments to Reserve and Contingency Fund. Assumptions used in the calculation are:
  - a. 1977 cost levels escalated to the year of expenditure at 6.0% per year.
  - b. Commercial Operation dates of September 1981 for WPPSS Nuclear Project No. 1, September 1980 for WPPSS Nuclear Project No. 2 and September 1983 for the Project.
  - c. Plants are assumed to operate at a plant factor of 60% the first year and 75% thereafter PNUCC guidelines.
  - d. For the period 1991 through 1996, payments to be made by the Companies pursuant to the Exchange Agreements will reduce the total annual costs for WPPSS Nuclear Project No. 1.
  - e. Includes taxes calculated at 0.2 mills per kwh. Legislation passed by the state legislature and now on the Governor's desk may increase taxes.
- (6) Includes funding of Working Capital, Reserve and Contingency Fund, and Reserve Account in Bond Fund.
- (7) Excess amount of payment to Reserve and Contingency Fund over surplus from prior year's payment to the Reserve and Contingency Fund.

**EXHIBIT VI**  
**BONNEVILLE POWER ADMINISTRATION**  
**PROJECTED REVENUES**  
(\$ millions)

(1) Fiscal Year	(2) BPA Revenues	(3) Cost of Power Acquisition		(4) BPA O&M Expense	(5) Remaining BPA Revenues
		WPPSS	Other		
1977	316.6	50.6	32.7	54.0	179.3
1978	322.2	76.6	31.5	54.5	159.6
1979	339.3	79.8	36.8	57.8	164.9
1980	517.2	132.0	28.9	60.3	296.0
1981	614.7	224.7	37.8	61.7	290.5
1982	733.7	288.2	41.8	62.8	340.9
1983	776.5	342.8	51.2	64.5	318.0
1984	839.3	382.5	31.9	65.7	413.2
1985	838.7	400.7	30.9	66.1	341.0
1986	852.6	409.2	31.7	66.2	315.5
1987	863.7	417.4	32.3	66.3	347.7
1988	873.1	423.9	32.3	67.3	349.5
1989	874.1	423.9	32.3	67.3	343.3
1990	881.7	425.0	33.9	68.3	354.5
1991	878.6	395.2	34.3	68.3	380.8
1992	876.7	399.2	34.4	68.3	374.8
1993	874.1	404.1	28.5	68.3	373.2
1994	871.4	410.7	27.4	68.3	365.0
1995	868.7	420.0	27.4	68.3	353.0

NOTES

Column (1)—Fiscal Year

1. Fiscal Year 1977 and subsequent Fiscal Years begin on October 1 of the year preceding, and terminate 12 months later.

Column (2)—BPA Revenues

1. Revenues from the sale of nonfirm energy and from the delivery of firm energy to Bonneville's direct-service industrial customers during fiscal year 1977 may be as much as \$89 million below the estimate made in advance of the fiscal year as the result of unusually low streamflows during the winter and spring of 1977 on the Columbia River and its tributaries. (See "Pacific Northwest Drought" under the caption "Bonneville Power Administration".)
2. Estimates of revenues and cost of power acquisition do not include the impact of the withdrawal by the City of Eugene after 1984 from sale to Bonneville of Eugene's ownership share of the Trojan Project.
3. A rate increase which will increase revenue by approximately 60 percent is forecasted for December 20, 1979 (three-fourths of Fiscal Year 1980), and is based upon (a) the September 1976 forecast of additional costs to Bonneville for the acquisition of the capability of the Supply System's Nuclear Project No. 1, plus (b) the overall cost escalation which has occurred since Bonneville effectuated its last rate increase as of December 20, 1974, including the cost escalation

as of September 1976 for the Supply System's Nuclear Project No. 2, the cost of which was included in the December 20, 1974 rate increase. Because the Bonneville rates, by virtue of existing power sales contract provisions, cannot be increased until December 20, 1979, the increase estimated to be required as of that date will have to provide for a significant amount of catch-up to cover the cost escalation. This estimate of future revenue increase requirements is believed to be conservative in that it makes no provision for additional cost escalation which has occurred since September 1976 and which may occur between the present and December 1979; i.e., if costs continue to escalate during that time, a larger increase could be necessary.

4. A rate increase which will increase revenues by approximately 20 percent is forecasted for July 1, 1981 (one-fourth of Fiscal Year 1981) to cover additional costs, principally for the acquisition of the capability of the Supply System's Ownership Share of the Project commencing in 1981.
5. If costs increase, a rate increase could be effected on July 1 of each year, subject to new or revised power sales contract terms providing for annual rate review after 1981.

Column (3)—Cost of Power Acquisition

1. The column "WPPSS" includes the Supply System's Hanford Project, Nuclear Projects Nos. 1 and 2 and its Ownership Share of the Project.
2. The column "Other" includes the City of Eugene's 30 percent share of the Trojan Project and the purchase of secondary energy. The estimate as to the purchase of secondary energy is obtained from load forecasts and is also used in computing revenue estimates.
3. The figures in the column "WPPSS" for Fiscal Year 1977 is estimated by Bonneville, and for subsequent Fiscal Years the figures are from cost estimates developed by the Supply System and indicated in Exhibit V, adjusted to Fiscal Years commencing October 1.

Column (4)—BPA Operation and Maintenance Expense

The estimates for Bonneville's operation and maintenance expenses are based on budgeted figures for Fiscal Year 1977. Commencing in Fiscal Year 1978, the estimates are computed using the Fiscal Year 1977 figure as a base and increasing that number by a percentage of annual plant-in-service additions. This percentage is based on a study of historical data.

Column (5)—Remaining BPA Revenues

Remaining Bonneville revenues are available for financing Bonneville construction and for payments to the Treasury for Corps of Engineers and Bureau of Reclamation operation and maintenance costs, annual interest expenses of the Federal System and amortization of the power facilities financed from appropriated funds.

Provided by Bonneville Power Administration, Divisions of Power Management and Management Services, June 28, 1977.



Washington, organized in January 1957 pursuant to the laws of Washington. The Supply System is composed of 19 utility districts and three cities, each of which operates an electrical distribution system within the State of Washington.

The Supply System is empowered to acquire, construct and operate facilities for the generation and transmission of electric power and energy, but does not engage in the distribution of electric energy at retail.

The sources of construction funds for Washington Public Supply System are typical of those for a public agency, advances or guarantees from purchasers or prospective buyers of the output of the projects as an interim measure over initial expenditures (often followed by the issuance of short-term debt securities), and, for permanent financing, the issuance of long-term debt securities. There is no equity (that is, no invested capital) involved in public agency financing. Since the Supply System itself does not have revenues from a variety of wholesale and retail sales, but derives from sales of generation, and since revenues do not cover costs but rather are limited to reimbursement of costs, there are no internally generated funds in the sense of retained earnings which might be looked to as sources of construction funds. Thus, in the absence of equity or internally generated funds, debt securities are the fundamental source of construction financing.

Revenue bonds or notes are the normal form of debt security for public agency financing of activities such as electric generation construction programs, and Supply System debt securities are of the revenue bond or revenue note type. Specifically, the Supply System is authorized by RCW 43.52.3411 to "issue revenue bonds or warrants payable from the revenues of the utility properties operated by it".

The issuance of securities by the Supply System on a project-financing basis is straightforward. The Supply System's Board of Directors adopts resolutions describing the proposed system or plan and setting forth the estimated cost just prior to the issuance of securities. These resolutions serve as the indentures to the buyers of the securities in which certain covenants are made to such buyers. Such plan and system resolutions have been adopted for WNP-3 and WNP-5, in addition to specific resolutions for the issuance of revenue bonds for these Projects.

The bonds or notes of the Supply System are negotiable instruments and legal securities **for** deposits of public monies, and are legal investments for trustees and other fiduciaries, and for savings and loan associations, banks, and insurance companies.



As to the source of construction funds, the following will summarize and provide background regarding, and explain the difference in some respects between, the plans for financing the cost of WNP-3 and WNP-5.

## II. WNP-3 FINANCING

The underlying security for the bonds or notes for WNP-3 starts with contracts with utilities who have undertaken to purchase the output of WNP-3. Thus, the issuance of the revenue bonds for WNP-3 is based upon the contractual commitments of 103 public and cooperative utilities (the "Participants") to purchase the entire electrical capability of the Supply System's 70% share of WNP-3. The remaining ownership share of WNP-3 has been purchased by four investor-owned utilities (the "Companies"), as discussed in detail below. The contracts with the public agency and cooperative participants are called "Net Billing Agreements". The term of Net Billing Agreement is set forth in Exhibit A to the Supply System's formal Application (Applicant's Exhibit 1). The agreements with investor-owned utilities are called "Ownership Agreements". The Ownership Agreement also is set forth in Exhibit A to the Application. The Supply System's ownership share of the capability of WNP-3 (70%) has been sold by the Supply System to those 103 publicly and cooperatively owned utilities, all of whom

are statutory preference customers of the Bonneville Power Administration ("BPA" or "Bonneville"). In addition, a portion of the Supply System's share of Project output will be sold to 15 industrial customers of Bonneville from the date of commercial operation through June 30, 1984, pursuant to a Power Sale Agreement. The remainder of the Project (30%) has been purchased by the following Companies, each of which are also customers of BPA, in the following individual portions: Pacific Power and Light Company ("PPL") (10%), Portland General Electric Company ("PGE") (10%), The Washington Water Power Company ("WWP") (5%), and Puget Sound Power and Light Company ("PSP&L") (5%).

Under both Net Billing Agreements and Ownership Agreements, the Supply System receives a promise to pay a portion of the costs of acquiring, constructing and operating WWP-3. The aggregate of these purchaser's obligations equals the total costs of the facility. Each Participants' portion of such costs includes the amount required each year to pay the interest and a portion of the principal on the bonds outstanding, plus the Participants' share of the annual operating costs. The Companies are financing their 30% ownership share of WWP-3 individually. However, the Companies also promise to pay the Supply System for their ownership share of annual operating costs. The supply System covenants with the bond holders to pay this principal and interest, as

provided in the bond resolution, from the revenues received which are pledged to payment of the bonds. The Supply System agrees to set aside, in sinking funds, amounts sufficient to pay each year's accrued interest and principal and to deposit all revenues of the Project into a Project Revenue Fund. The Supply System further promises not to make any modification of the contracts with Participants or any amendment of the bond resolution which would materially affect the rights of the bond holders.

The Net Billing Agreements are executed by each Participant, the Supply System and Bonneville. The Net Billing Agreements provide that the Supply System's ownership share of WNP-3 capability (except as noted earlier with respect to industrial customers) will be sold by the Supply System to the Participants as statutory preference customers of Bonneville. The Net Billing Agreements also provide that each Participant will assign its share of Project capability to Bonneville. In turn, Bonneville will credit the payments to the Supply System by each Participant for the Participant's proportionate share of the Project's annual costs (which includes debt service) against billings made by Bonneville to the Participant for power and certain services provided under other contracts. The Net Billing Agreements provide that the Participants are obligated to pay the Supply System whether or not WNP-3 is completed, operable or operating,

and notwithstanding the suspension, interruption, interference with, reduction or curtailment of the Project output. Significantly, the Net Billing Agreements also provide that Bonneville will credit the Participants for payments made to the Supply System irrespective of energy actually received. Thus, there is assurance that the Participants will have funds to bear their share of costs irrespective of operation.

In case of default of a Company, the non-defaulting companies may satisfy the total requirement of the defaulting Company. In the event of a default of a Participant, other Participants are obligated to automatic step-ups of their billing (by as much as 25 percent) to satisfy the total Participant obligations to WPPSS.



The first level of security for repayment of Project bonds is the revenues to be derived from operation of the Project. The second level of security is the Net Billing Agreements executed by the Participants and the Ownership Agreements executed by the Companies. Since the Participants and the Companies are obligated by those Agreements to make payments whether or not WNP-3 is completed, operable or operating, and notwithstanding interruption or curtailment of output, the source of funds for the payment of project costs is not dependent on actual project revenues. Rather, payment of Project costs is "insured" on a broad

use through the obligation of the 103 public and cooperative entities and, to the extent of their interest, the four investor-owned Companies. The aggregate of these obligations equals the total cost of the Project. The third level of security is the obligation of the United States Government, through Bonneville, to provide power and credits to the Participants irrespective of the operation of the Project. These arrangements ensure the availability of revenues to the Participants sufficient to cover payments to the Supply System.

This method of financing large electric generating projects and electric systems has been successfully utilized in the Pacific Northwest for many years. It has proven to be a sound economic means of financing and is particularly well adapted to the needs of the Supply System in undertaking the financing of large nuclear generating projects. Again, the promise to pay contained in the Net Billing Agreements is not dependent upon successful operation of WNP-3. Each Participant is obligated to raise rates to whatever level necessary to meet its share of costs, and there is no legal restriction or mandatory

view by other agencies to prevent this from occurring.

A credits and power are available irrespective of Project output. In summary, there are three levels of security for WNP-3 obligations, which ultimately are backed by the U.S. Government.

Each of the Companies will finance their ownership interests of WNP-3 in the same manner as the balance of their respective construction programs, via, short-term borrowing, sale of equity securities, proceeds from first mortgage bonds, internally generated funds, leases or other executory arrangements and other secured and unsecured transactions or construction financing.

The Supply System has a record of successful financing of generating projects. In 1962, the Supply System began construction and is now operating the Packwood Lake Hydroelectric Project (27,000 kw). Construction costs of this project were financed by the sale of revenue bonds in the amount of \$13,700,000. All costs, including debt service, have been paid on a current basis and, excess construction funds have been applied to retire \$519,000 par value of bonds ahead of schedule. In addition, \$415,000 bonds have been retired according to the original retirement schedule. The Project output is sold to 12 public utility districts. Operating revenues for fiscal year 1976 totaled \$782,259.

The Supply System also has financed, constructed and now operating the Hanford Generating Project, which is cooled steam by ERDA's N-Reactor. Construction costs were financed by the sale of revenue bonds in 1963 in the total amount of \$122,000,000. All costs, including debt service, have been paid on a current basis and, in addition, the construction funds have been applied to retire \$25,000 par value of bonds ahead of schedule. In addition, \$23,265,000 bonds have been retired according to the original debt retirement schedule. The Project is sold to 76 power purchasers, including public utility districts, municipalities, rural electric cooperatives and investor-owned utilities in the Northwest region. Operating revenues for fiscal year 1976 totaled \$29,190,579.

The Supply System is constructing a 1250 mw nuclear generating plant designated WPPSS Nuclear Project No. 1 "WNP-1" located on ERDA's Hanford Reservation near Richland, Washington. In September of 1975, the Supply System issued the first long-term revenue bonds to finance the plant. To date, a total of \$535,000,000 in long-term bonds has been issued. These securities were rated Aaa by Moody's Investor Service, Inc. and AAA by Standard and Poor's Corporation. WNP-1 will have an installed capacity of 1250 megawatts and will cost an estimated \$1,206,000,000. Commercial operation is scheduled for January 1982.

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The Supply System is also constructing WPPSS Nuclear project No. 2 or "WNP-2" (formerly Hanford No. 2) which is also located on the Hanford Reservation. WNP-2 is being financed in the same manner as WNP-1 with the entire capability being sold to public and cooperative bodies under similar Net Billing Agreements. In July of 1973, the Supply System issued the first long-term revenue bonds to finance WNP-2. To date, a total of \$800,000,000 in long-term debt has been issued. These securities were rated Aaa by Moody's Investor Service, Inc. and AAA by Standard and Poor's Corporation. WNP-2 will have an installed capacity of 1100 megawatts and will cost an estimated \$965,000,000. Commercial operation is scheduled for September 1980.

The Supply System has also begun work on two other nuclear electric generating plants. Nuclear Project No. 4, a duplicate of Nuclear Project No. 1, is located on the Hanford Reservation and is scheduled for commercial operation in July 1983. WNP-4 will cost an estimated \$1,715,339,000. Nuclear Project No. 5 (in which the Supply System has a 90% ownership interest), a duplicate of Nuclear Project No. 3, is located at the Satsop Site, near Aberdeen, in Grays Harbor County, Washington, and is scheduled for commercial operation in March 1985. WNP-5 will cost an estimated \$1,718,661,000. The NRC has issued limited work authorizations for both Projects and work is progressing.

3.55  
1.7

difference of 529,942

400,000 million  
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340

Mult. Items  
no production  
WPPSS  
9/27/77  
will not change  
cost of 1972

to finance WNP-3, revenue notes in the amount of \$29,000,000 were sold in November 1972 for preliminary financing and initial construction costs and progress pay-  
These notes matured and were retired on June 15,

The Supply System has also issued \$250 million of general revenue bonds for the Project. These long-term securities were rated Aaa by Moody's Investor Service, Inc. and Aaa by Standard and Poor's Corporation.

These and all subsequent issuances are earmarked as being for WNP-3 and proceeds of the sale of securities may be used for that Project only. Correspondingly, revenues associated with contracts for the sale and purchase of the fuel for WNP-3 may be applied only to WNP-3 costs, including debt service. An updated estimate of the total costs of WNP-3 (current as of April 30, 1977) is:

- no conc change  
- push up  
25%

	<u>WPPSS - 70%</u>	<u>Total Project Cost</u> <sup>IX</sup>
Total nuclear production plant costs	\$910,536,000	\$1,196,707,000
Transmission and general plant costs	\$ 14,989,000	\$ 21,413,000
Nuclear fuel inventory cost <sup>2/</sup> for first core	\$ 44,475,000	\$ 63,537,000
	-----	-----
Total Estimated Cost	\$970,000,000	\$1,281,657,000

Exclusive of Companies financing expenses.  
Nuclear fuel will be purchased rather than leased.

Siting, fuel cycle costs, payments to vendors, and preliminary construction expenditures for WNP-3 through April 30, 1977, exclusive of Companies financing expense, amount to \$124,737,000. The Supply System ownership share is \$89,779,000. Current estimates for WNP-3 expenditures (including fuel and owners' cost) through the year 1984 are as follows:

<u>Year</u>	<u>WPPSS-704</u>	<u>Total Excluding Private Financing</u>
Thru 1976	\$ 74,734,000	\$103,691,000
1977	\$ 60,413,000	\$ 86,405,000
1978	\$124,735,000	\$167,726,000
1979	\$147,652,000	\$195,796,000
1980	\$202,228,000	\$269,326,000
1981	\$234,269,000	\$307,741,000
1982	\$107,237,000	\$130,355,000
1983	\$ 12,468,000	\$ 17,313,000
1984	\$ 6,161,000	\$ 8,804,000

To continue financing WNP-3, in addition to the \$250 million revenue bonds already sold, the Supply System will issue approximately \$720 million dollars of its tax exempt revenue bonds in series from time to time during the period of construction. The Supply System plans to issue these bonds in the following approximate amounts and on the following schedule:

<u>Date of Issue</u>	<u>Amount</u>
1977	\$200,000,000
1978	0
1979	\$150,000,000
1980	\$150,000,000
1981	\$150,000,000
1982	\$ 70,000,000

Each series of bonds issued will be on a parity with other bonds issued.

### III. WNP-5 FINANCING

The Supply System's ownership share of WNP-4 (100%) and WNP-5 (90%) will be financed in the same manner as WNP-1, WNP-2, and WNP-3, i.e., through the issuance of revenue bonds. All projects heretofore undertaken by the Supply System, except WNP-4 and WNP-5, have been financed as separate systems. The Supply System's ownership interests in WNP-4 and WNP-5 will be financed together as one system, and the project financing approach used for WNP-1, WNP-2 and WNP-3 will not be altered, although there are some differences in the underlying contractual arrangements, as I will explain later. Under that approach, the Supply System's Board of Directors adopts a resolution describing the proposed plan and system which sets forth the estimated cost just prior to the issuance of securities. These resolutions, adopted by the Supply System's Board, serve as the indentures to the buyers of the securities in which certain covenants are made to the buyers. Such

and system resolutions have been adopted for WNP-4 and WNP-5, in addition to specific resolutions for the issuance of revenue bonds for the Projects.

Pacific Power and Light Company, an investor-owned utility, is contractually committed in an "Ownership Agreement" to purchase 10% of the electrical capability of WNP-5. A copy of the Ownership Agreement between PP&L and the Supply System is set forth in Exhibit H to the Supply System's formal Application (Applicant's Exhibit 1). Exhibit H was added to the formal Application in PSAR Amendment 39 filed on April 22, 1977. PP&L will finance its ownership share of WNP-5 in the same manner as the balance of its respective construction programs, i.e., short-term borrowing, sale of equity securities, proceeds from first mortgage bonds, internally generated funds, leases or other executory arrangements and other secured and unsecured transactions or construction financing.

The securities for WNP-4 and WNP-5 are secured by contractual commitments between the Supply System and 88 public and cooperative utilities (the "Participants")<sup>3/</sup> to purchase the entire electrical capability of WNP-4 and ninety percent (90%) of the capability of WNP-5. These contracts are called

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3/ These 88 Participants consist of 21 municipalities, 2 districts and 43 electric cooperatives located principally in Washington, Oregon, Idaho and Montana.

Participants' Agreements". A form of Participants' Agreement is set forth in Exhibit H to the Supply System's formal application (Applicant's Exhibit 1). Under the Participants' Agreements, the Supply System receives a promise from the Participants that each will pay a portion of the costs of acquiring, constructing and operating the Projects. The aggregate of the Participants' obligations equals the total costs of the Projects. Each Participants' portion of such costs includes the amount required each year to pay the interest and a portion of the principal on the bonds outstanding, plus the Participants' share of the annual operating costs. The Supply System covenants with the bond holders in the bond resolution to pay this principal and interest from the revenues derived from the operation of the facilities. The Supply System agrees to set aside, in sinking funds, amounts sufficient to pay each year's accrued interest and principal and to deposit all revenues of the Project (WNP-4 and WNP-5) into a Project Revenue Fund. The Supply System further promises not to agree to any modification of the contracts with Participants or others, or amendment of the bond resolution which would adversely affect the rights of the bond holders.

The first level of security for repayment of bonds is the revenues to be derived from operation of the Project. The second level of security is that the Participants are

obligated to make payments whether or not the Project is completed, operable or operating, and notwithstanding interruption or curtailment of output. The source of funds for the payment of Project costs is not dependent on actual project revenues, but is "insured" on a broad base through the obligation of the public and cooperative entities. Assurance that such obligations can be met is provided in that the Participants covenant to increase rates to the level necessary to meet their obligations to the Supply System. These rates are not subject to review or approval by any State agency. In the case of default by a Participant, each other Participant in its class (i.e., cooperative or public agencies) promises to step-up their respective obligations by as much as 25 percent.

Prior to the execution of the Participants' Agreements, initial financing of WNP-4 and WNP-5 was supported to a maximum level of \$100 million by Option Agreements. The Option Agreements gave each signer (93 Option Participants, consisting of 25 municipalities, 24 districts and 44 electric cooperatives located principally in Washington, Oregon, Idaho and Montana) an option to obtain a share of the Project's output by executing a Participants' Agreement at least equal to his Final Option Share. Under the Option Agreements each utility had the same absolute obligations

to repay the \$100 million authorized as he would in the Participants' Agreements. However, that utility was not obligated to execute a Participants' Agreement. Based upon the Option Agreements, short-term revenue bonds in the amount of \$100,000,000 were sold in July 1975. Participants' Agreements are fully executed for 100% of the output of WNP-4 and 90% of the output of WNP-5, and the obligation of the parties to the Option Agreements is being phased out by the parties to the Participants' Agreement.

To finance WNP-4 and WNP-5, revenue notes in the amount of \$15,000,000 were sold in August of 1974 for the preliminary planning and progress payments. These notes matured and were retired on June 15, 1976. In addition to the \$100 million short-term revenue bonds sold in July of 1975, the Supply System has also sold \$145 million in long-term revenue bonds in February of 1977. These bonds were rated A-1 by Moody's and A+ by Standard and Poor's.

An updated estimate of the total cost of WNP-5 (current as of April 30, 1977) is:

	<u>WPPSS 90%</u>	<u>Total Project Cost</u>
(a) Total nuclear production plant costs <u>5/</u>	\$1,539,207,000	\$1,710,233,000
(b) Transmission and general plant costs	\$ 19,271,000	\$ 21,412,000
(c) Nuclear fuel inventory cost <u>6/</u>	\$ 160,183,000	\$ 177,981,000
	<hr/>	<hr/>
Total Estimated Cost	\$1,718,661,000	\$1,909,626,000

Siting, fuel cycle costs, payments to vendors and preliminary construction expenditures for WNP-5 through April 30, 1977, exclusive of PP&L financing expense, amount to \$14,202,000. The Supply System's ownership share is \$12,823,000. Current estimates for WNP-5 expenditures (including fuel and owners' cost through the year 1984) are as follows:

<u>Year</u>	<u>WPPSS-90%</u>	<u>Total Excluding Private Financing</u>
Thru 1976	\$ 10,261,000	\$ 11,339,000
1977	\$131,228,000	\$148,277,000
1978	\$106,537,000	\$119,894,000
1979	\$142,902,000	\$159,438,000
1980	\$254,777,000	\$282,229,000
1981	\$251,677,000	\$298,019,000
1982	\$363,885,000	\$398,740,000
1983	\$282,080,000	\$304,953,000
1984	\$175,314,000	\$186,737,000

Exclusive of Pacific Power and Light's financing expenses. Including net interest during construction, owners' costs, and allowance for escalation and contingencies.

Nuclear fuel will be purchased rather than leased; inventory cost includes capitalized first core and reload fuel.



In view of execution of the Participants' Agreements, financing of WNP-4 and WNP-5 will be continued by the issuance of approximately \$3,199,000,000 of tax exempt revenue bonds in series from time to time during the period of construction. The Supply System plans to issue these bonds in the following schedules:

<u>Date of Issue</u>	<u>Amount</u>
1977	\$255,000,000
1978	\$535,000,000
1979	\$550,000,000
1980	\$550,000,000
1981	\$529,000,000
1982	\$541,000,000
1983	\$229,000,000

Each series of bonds issued will be on a parity with other bonds issued. A schedule summarizing WPPSS construction projects financing activities through April 30, 1977 is attached hereto. WNP-4 and WNP-5 financing activities are set forth in this schedule under the heading "Generating Facilities".

CONSTRUCTION PROJECTS FINANCING ACTIVITIES

APRIL 30, 1977

PROJECT	TYPE	RATING	SALE DATE	MATURITY	PAR	PROCEEDS RECEIVED	EFFECTIVE INT. RATE
WNP 1	Bonds	Aaa;AAA	09/18/75	07/01/2017	\$ 175,000,000	\$ 172,159,750	7.7269
"	Bonds	Aaa;AAA	02/04/76	07/01/2017	180,000,000	179,715,934	6.83734
"	Bonds	Aaa;AAA	03/31/76	07/01/2017	180,000,000	179,028,535	6.3699
WNP 2*	Bonds	A-1;Aa	06/26/73	07/01/2012	150,000,000	149,628,930	5.650
"	Bonds	A-1;AA	07/23/74	07/01/2012	80,000,000	79,854,055	7.2085
"	Bonds	AA;AA	11/26/74	07/01/2012	125,000,000	124,458,592	7.6667
"	Bonds	Aaa;AAA	03/06/75	07/01/2012	120,000,000	126,013,477	6.7097
"	Bonds	Aaa;AAA	06/03/76	07/01/2012	120,000,000	118,845,130	6.634
"	Bonds	Aaa;AAA	11/13/76	07/01/2012	200,000,000	199,954,000	5.865
WNP 3	Bonds	Aaa;AAA	12/03/75	07/01/2018	150,000,000	147,876,742	7.867599
"	Bonds	Aaa;AAA	04/13/76	07/01/2018	100,000,000	99,444,851	6.481385
GENERATING FACILITIES	Bonds	A-1;A	07/24/75	06/01/1981	100,000,000	99,419,902	7.04099
	Bonds	A-1;A+	02/23/77	07/01/2015	145,000,000	144,496,314	5.9333
					\$ 1,830,000,000		
Total Outstanding							
*All lower rated bonds for WNP-2 have been upgraded to triple-A rating by both services.							
<u>NOTES RETIRED</u>							
GENERATING FACILITIES	Notes	MIG-1;A	3/20/74	12/15/1975	2,500,000	2,500,000	4.700
	Notes		8/01/74	6/15/1976	15,000,000	15,056,867	8.007
WNP 1	Notes	A-1;AA	8/24/72	8/24/1973	1,500,000	1,492,879	2.925
"	Notes	MIG-1;AA	2/15/73	12/15/1975	25,000,000	24,984,325	4.270
"	Notes		5/22/74	12/15/1976	77,000,000	76,722,800	6.050
WNP 2	Notes	A-1;AA	7/01/71	7/01/1974	15,000,000	14,775,100	3.550
"	Notes	A-1	12/15/72	12/15/1974	40,000,000	40,000,401	3.500
WNP 3	Notes	MIG-1;A	5/15/73	12/17/1973	2,000,000	2,004,026	4.050
	Notes		10/01/73	6/15/1976	29,000,000	29,004,640	4.368

BY MR. REYNOLDS:

Q Mr. Perko, on April 22nd, 1977, the Applicant submitted to the NRC Staff Amendment 39 to the PSAR. That Amendment provided updated information on the formal application and the financial qualifications aspect of the application.

Have you reviewed Amendment 39?

A Yes, I have.

Q Is your testimony in this profiled testimony consistent with the information contained in Amendment 39?

A In my testimony here, it would update the cost information in the amendment. Otherwise, everything else is fine.

MR. REYNOLDS: No further questions.

CHAIRMAN HASE: Mr. Swanson, does the Staff have cross-examination?

MR. SWANSON: I just have one question.

CROSS-EXAMINATION

BY MR. SWANSON:

Q Mr. Perko, in answer to the last question I believe you said the costs have been updated but everything else was fine. I just want to make clear on the record what this testimony represents.

MR. HASE: Mr. Swanson, as you know, has already reviewed Amendment 39 to the PSAR and has found it satisfactory.

1 I want to make it clear:

2 Are there any differences in the methods of  
3 financing WNP-3 and 5 as represented in your testimony and  
4 as stated in Amendment 39 to the PSAR?

5 A No, there is no difference.

6 Q Is it also true then that the obligations of  
7 the participating utilities also have not changed since  
8 PSAR Amendment 39 was sent to the Staff?

9 A That's correct. They have not changed.

10 MR. SWANSON: We have no further questions.

11 Mr. Chairman.

12 CHAIRMAN LADD: Very well.

13 EXAMINATION BY THE COURT

14 BY DR. LUBKE:

15 Q Mr. Paske, I read on page 11 the cost of WNP-4  
16 as being some \$1.7 billion, and WNP-5 also being \$1.7 billion.  
17 My round number nuclear power plants per unit is sort of  
18 \$1 billion, and I find these numbers quite a bit higher  
19 than that.

20 Is there any clarification of that?

21 A (Witness Paske) Yes, there is. The direct  
22 construction costs and architect-engineering and construc-  
23 tion management costs will provide about \$1,100,000,000  
24 of the costs of these plants. However, there are additional  
25 costs of investment and financing activities which include

the costs for these plants.

Q Are these latter plants are usually not included in the other figures I see?

A That's correct. I'm not sure what figures you are keying in on.

Q Just the plants that are being licensed these days.

DR. MURPHY: I don't know. Maybe the Staff can correct me on that. Isn't a billion dollars a well north of a world market?

MR. SUNDWAL: Yes, sir.

BY MR. MURPHY:

Q Which page is page 14?

BY DR. SUNDWAL:

Q Could we stop there just a minute?

Do I understand you to say that the financing

the engine, which cost about 2.7 million in 1957

A (Sighs) That's correct.

Q \$100 million?

A That's correct.

BY DR. MURPHY:

Q On page 14 I read that PAF-4 and PAF-5 will be

financed largely by the Government, and our own Government

will be financing the PAF-4 and PAF-5 through the

Government, is that correct?

1 Together, and in this case 4 and 5 are geographically quite  
2 separate.

3 Is there some subtle reason for doing this?

4 A Yes. WNP-3 was included with WNP-1 and -2  
5 under the net billing arrangements as security for financing  
6 these three plants. This security has the ultimate guaran-  
7 tee of the Bonneville Power Administration and were con-  
8 templated as the first phase of adding thermal resources  
9 to the region.

10 After some time, 4 and 5 came along and were  
11 added as twin plants to those plants, 1 and plant 3. In  
12 order to give better geographic dispersion, plant 4 was  
13 planned to be on the western side of the mountains so  
14 when we added an additional plant, it was plant 5 as a twin  
15 to that.

16 However, the same security arrangements were not  
17 available for 4 and 5 as there were for the first three  
18 plants, and we financed each of the first three projects as  
19 separate financing systems. In 4 and 5, we combined those  
20 systems for financing purposes.

21 Q Thank you. That's all I have.

22 BY MR. SCHINK:

23 Q Now indicate in your bond ratings by Moody's  
24 and by Standard and Poor's. Could you explain the bond  
25 ratings of the first three plants and the last two?

A. Yes.

Generally they consider four investment grade ratings. AAA is the highest rating that they give, and is the highest type of security with no unfavourable factors that could effect a down rating.

The next rating is a AA, which is considered also extremely high with many favorable investment attributes.

Rating A is considered a middle upper grade rating.

BBB is a lower grade rating.

They also have many, many issuers are rated in the A category so they have a higher rating, a midpoint between the A and the AA which Moody's classification as A-1 and Standard and Poor's as A+.

Q And this is the category that your bonds are in, between medium and very high?

A WSP-3 is AAA and WSP-5 is A-1 on the AA rating.

Q What is the reason for the difference in the rating of these two projects?

A It's the Bonneville Power Administration as the ultimate guarantor that is the difference in the rating,  
the fact that in the 1970's, Bonneville  
can use its revenues to directly pay the supply system in  
case of any default of any independent provider the

1 participants themselves have used up all the mandatory  
2 obligations in picking up the defaults of the other par-  
3 ticipants.

4 In the case of WNP-5, the participants them-  
5 selves are obligated and must pick up each other's default  
6 up to a certain share, but the ultimate guarantee of  
7 Bonneville does not exist for WNP-5.

8 Q What percentage of bonds of this sort are rated  
9 above A-1?

10 A A very small portion of bonds are rated A-1.  
11 Might now we find that there are many public power utilities  
12 that are in joint financing programs and their ratings are  
13 either A+, A, or A-1. And some of the existing systems  
14 that have been operating for many, many years, such as  
15 Omaha, are rated AA -- Omaha Public Power -- are rated AA.

16 Q At what rating level do you begin to have  
17 difficulty selling your bonds?

18 A I would think that below A or at the AA rating  
19 we would have difficulty selling bonds.  
20  
21  
22  
23



BY CHAIRMAN LAYTON:

Q Mr. Perko, which of the WNP projects will be the first one to achieve commercial operation under your present plans?

A Are you referring just to 3 and 5, or all five of them?

Q All five.

A WNP-2 is scheduled for commercial operation in September of 1980. That will be the first plant operating of the five.

Q And your testimony is -- what will be the next one, according to plans?

A Let's see. WNP-1 is scheduled for early 1981. *Commit*  
 WNP-3 for mid-'83, WNP-4 for also mid-'83, and WNP-5 for *Commit*  
 early 1985.

Q Now, the Supply System buys steam from the N-reactor, is that correct?

A Yes.

Q How long is that contract for? For how long do you expect to be purchasing steam from PWR?

A We have just ourselves -- Bonneville Power Administration has just entered into an agreement that we will continue to purchase steam until June of 1983.

Q By which time you would expect that you would have other nuclear units in commercial operation?

1 A Yes, sir.

2 Q I see.

3 And your current contract extends through 1983?

4 A Through that fiscal year ending June, '83.

5 CHAIRMAN LAZO: Very well. Thank you, gentle-  
6 men.

7 Applicants, do you have redirect?

8 MR. REYNOLDS: Just a few questions, Mr.  
9 Chairman.

10 REDIRECT EXAMINATION

11 BY MR. REYNOLDS:

12 Q Mr. Parko, in your opinion does the Supply  
13 System have a record of success for financing of generating  
14 projects?

15 A (Witness Parko) Yes, we do.

16 Q And was it to demonstrate this record that you  
17 attached the table to your testimony?

18 A Yes, it is.

19 Q I notice that that table is dated April 30, 1977.  
20 Can you tell us whether there have been other bond sales  
21 after April 30, 1977?

22 A We had a bond sale yesterday, May 24.

23 Q And what was the par value of the bonds?

24 A 50 million. They were for projects 4 and 5.

25 Q And what rating did you receive?

A. A-1 by Hoody's, and A-plus by Standard & Poors.

Q. And what was the effective interest rate?

A. 6.31.

Q. Do you consider that to be a favorable interest rate?

A. Yes, I do.

Q. What is the maturity date of those bonds?

A. Well, the last maturity date is in the year 2012, although there are serial maturities.

MR. REYNOLDS: No further questions.

CHAIRMAN LAZO: Thank you, gentlemen. You may be excused.

(The panel excused.)

MR. REYNOLDS: Mr. Chairman, are those financial witnesses excused?

CHAIRMAN LAZO: Yes, indeed.

Mr. Swanson, does the Staff wish to offer any direct testimony in this area of financial qualifications?

MR. SWANSON: Yes, we do, Mr. Chairman. Mr. McGurren will handle this portion of the proceeding.

MR. MC GURREN: Wasn't your question concerning financial?

MR. SWANSON: Financial? I'm sorry.

No, the Staff does not have any testimony in this

1 CHAIRMAN LAZO: Well, then, we're going to move  
2 into another area.

3 Who's going to go first? This is the, if I  
4 understand your agreed agenda which is suitable to us, we  
5 would move on to quality assurance and inspection and  
6 enforcement matters.

7 Is the Applicant going to go first?

8 MR. RYHOLDS: It's the pleasure of the Board.  
9 He could go first, or, since the Staff filed testimony on  
10 this, they could go first. We have no preference.

11 MR. MC GURRYN: Mr. Chairman, we're prepared to  
12 go first.

13 CHAIRMAN LAZO: I think that would be better.  
14 May don't we proceed then with the Staff's testimony?

15 MR. MC GURRYN: The Staff calls Mr. Vorderbruggen  
16 to be sworn.

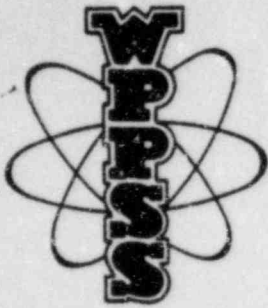
17 Whereupon,

18 ROBERT H. VORDERBRUGGEN:  
19 was called to the stand as a witness on behalf of the  
20 Nuclear Regulatory Commission Staff, and, having been first  
21 duly sworn, was examined and testified as follows:

22 DIRECT EXAMINATION

23 BY MR. MC GURRYN:

24 Q Mr. Vorderbruggen, do you have before you a copy  
25 of NRC Staff response to the Board's Question Regarding



Washington Public Power Supply System  
A JOINT OPERATING AGENCY

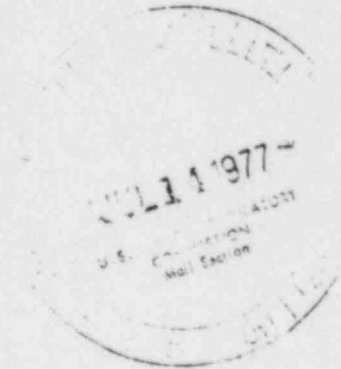
P. O. Box 968 3000 GEO. WASHINGTON WAY RICHLAND, WASHINGTON 99352 PHONE (509) 946-1611

Docket Nos. STN 50-508  
and 50-509

July 12, 1977  
G03-77-744

Director of Nuclear Reactor Regulation  
ATTN: Olan D. Parr, Chief  
Light Water Reactors Branch No. 3  
U. S. Nuclear Regulatory Commission  
Washington D.C. 20555

Subject: WPPSS NUCLEAR PROJECTS NOS. 3 & 5  
FINANCIAL INFORMATION UPDATE



Dear Mr. Parr:

In response to a request to update certain financial information concerning WNP-3/5, directed to WPPSS by your Mr. Daniel T. Swanson, the requested information is provided in the below listed attachments.

Attachment I - Official Statement, \$90,000,000 Washington Public Power Supply System Generating Facilities Revenue Bonds, Series 1977B (Nuclear Projects Nos. 4 and 5).

Attachment II - Proposed Official Statement, \$230,000,000 Washington Public Power Supply System Nuclear Project No. 3 Revenue Bonds, Series 1977.

Attachment III - Discussion of WNP-5 cost increases and a discussion of cost differences between WNP-3 and WNP-5.

Attachment IV - Source of Funds for System - Wide Construction Expenditure during Period of Construction of WNP-3 and WNP-5, Applicable to Pacific Power and Light Company.

While preparing the Plant Capital Investment Summary for WNP-3 (Attachment III), we determined that the total project cost for WNP-3 was miscalculated in the Testimony of James D. Perko regarding Financial Qualifications which was submitted at the evidentiary hearing on May 24 - 25, 1977 (Transcript following page 598). In Mr. Perko's testimony, the total estimated cost for WPPSS' 70% share of WNP-3 was accurately stated to be \$970 million. However, the total project cost for WNP-3 was erroneously stated to be \$1,281,657,000. This will advise that the correct total estimated cost for the entire project is \$1,385,716,000. Mr. Perko's testimony will be corrected on the record by affidavit when the Applicant submits its reply proposed findings of fact later this week.

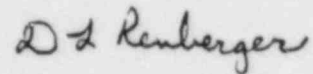
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Olan D. Parr  
Page two

We trust the attached information satisfies your request, and assume the Staff will submit an affidavit updating its financial qualifications conclusions by July 21, 1977, in order to promptly close the hearing record.

Very truly yours,



D. L. Renberger  
Assistant Director -  
Generation and Technology

DLR/RCD:gs

Attachments

Docket Nos. STN 50-508 and 50-509  
Letter DL Renberger to OD Parr,  
Financial Information Update

STATE OF WASHINGTON )  
                          ) ss  
COUNTY OF BENTON   )

D. L. RENBERGER, Being first duly sworn, deposes and says: That he is the Assistant Director, Generation and Technology, for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that he is authorized to submit the foregoing on behalf of said applicant; that he has read the foregoing and knows the contents thereof; and believes the same to be true to the best of his knowledge.

DATED July 12, 1977

D L Renberger  
D. L. RENBERGER

On this day personally appeared before me D. L. RENBERGER to me known to be the individual who executed the foregoing instrument and acknowledged that he signed the same as his free act and deed for the uses and purposes therein mentioned.

GIVEN under my hand and seal this 12th day of July, 1977.

Robert B. Helgeson  
Notary Public in and for the State of  
Washington  
Residing at Leahurst

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Ltr. Notorized 07-12-77...Trans The Following:  3 pages	Furnishing update financial information concerning WNP-3/5 consisting of Attachments I, II, III, & IV  3/8"
PLANT NAME: WPPSS UNCLEAR PROJ # 3 & 5  jcm 07-18-77	

SAFETY	FOR ACTION/INFORMATION	ENVIRONMENTAL
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PROJECT MANAGER:	<i>Bourria</i>	
LICENSING ASSISTANT:	<i>(ltr) Rushbrook</i>	
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CASE	SIHWELL	OPERATING REACTORS	BALLARD
BOVD	PAWLICKI	STELLO	YOUNGBLOOD
		EISENHUT	
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