

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)

WASHINGTON PUBLIC POWER)
SUPPLY SYSTEM)

Docket No. 50-513

(Nuclear Project No. 4))

AFFIDAVIT OF JAMES D. PERKO
REGARDING FINANCIAL QUALIFICATIONS UPDATE

A. Background

The evidentiary hearings on radiological health and safety issues for WPPSS Nuclear Project No. 1 ("WNP-1") and No. 4 ("WNP-4") were conducted on November 11-13, 1975 at which time the Applicant requested that consideration of its financial qualifications to construct WNP-4 be deferred. Accordingly, the Atomic Safety and Licensing Board ("Board") in its initial decision authorizing a construction permit for WNP-1, deferred consideration of the financial qualifications issue for WNP-4, and the issuance of a construction permit for WNP-4 was delayed pending disposition of the financial qualifications issue. 2 NRC 922, 927-928, 943, n. 28 (December 22, 1975).

On July 9, 1976, the Applicant informed the Board that it was in a position to demonstrate that it was financially qualified to construct WNP-4. The Board received evidence relating to, inter alia, the financial qualifications matter in the form of affidavit by James T. Bobo (Applicant's Exhibit 42). On August 27, 1976, the Applicant and the NRC Staff submitted joint proposed findings of fact and conclusions of law relating to, inter alia, the issue of financial qualifications for WNP-4. ✓

By Memorandum and Order dated September 7, 1976, the Board noted that it had received evidence on the issue of financial qualification for WNP-4. However, the Board also noted that issuance of the construction permit for WNP-4 had been further delayed pending resolution of other issues, i.e., matters relating to the environmental effects of spent fuel reprocessing and waste management (10 CFR, Part 51, Table S-3), ECCS evaluation models, and seismic design criteria. It appears that these remaining issues are now or will shortly be resolved. In the interim, certain matters have occurred which render it prudent to update the record in this proceeding with respect to the Applicant's financial qualifications to construct WNP-4. For example, the Applicant has engaged in additional financing activities for its projects which further demonstrate its ability to raise construction capital. In addition, the estimate of the total cost of WNP-4 has been updated. In these circumstances, it seems appropriate to update the record with respect to the financial qualifications matter.

B. Applicant's Financial Qualifications

My name is James D. Perko. I am the Assistant Director for Finance and Administration, and the Treasurer of the Washington Public Power Supply System. I previously testified in this proceeding at Tr. following p. 670. Mr. James T. Bobo's related Affidavit is in the record as Applicant's Exhibit 42. I am executing this affidavit to summarize and update the information in our license application and the record in this proceeding regarding the Applicant's financial qualifications in terms of NRC Regulations (10 CFR §50.33(f)), i.e., that the Applicant possesses, or has reasonable assurance of obtaining, the funds necessary to cover estimated construction costs and related fuel cycle costs for WNP-4.

WPPSS is a municipal corporation and joint operating agency of the State of Washington, organized in January 1957, pursuant to the laws of Washington. It is composed of 19 utility districts and three cities, each of which operates an electrical distribution system within the State of Washington. It is empowered to acquire, construct and operate facilities for the generation and transmission of electrical power and energy but does not engage in the distribution of electric energy at retail.

My previous testimony and Mr. Bobo's affidavit contained in the record for this proceeding set forth detailed discussions of the sources of construction funds for WNP-4 and the concept pursuant to which WNP-4 will be financed. In summary, permanent financing of WNP-4 will be effected through issuance of long-term debt securities of the revenue bond type. The Applicant is authorized (RCW 43.52.3411) to "issue revenue bonds or warrants payable from the revenues of the utility properties operated by it." The bonds 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 discussed in my previous testimony, and Mr. Bobo's Affidavit, WNP-4 and the Applicant's owner interests (90%) in WNP No. 5 (WNP-5) will be financed as one system pursuant to the project financing approach employed by the Applicant to finance its projects. Pursuant to that approach, the Applicant's Board of Directors has adopted a resolution for WNP-4 and WNP-5 for the plan and system and for the issuance of revenue bonds in amounts totalling \$365 million.

Bonds for WNP-4 and WNP-5 are rated A-1 by Moody's Investor Services, Inc., and A and A+ by Standard and Poor's Corporation. Information pertinent to the sale of these and other Supply System bonds may be found on the attached table entitled "Construction Projects Financing Activities".

The securities for WNP-4 and WNP-5 will be secured by contractual commitments between the Applicant and 88 public and cooperative utilities (the "Participants") ^{1/}to purchase the entire electrical capability of WNP-4 and the Applicant's share (90%) of the capability of WNP-5. A detailed description of the legal obligations of the Participants is described in Mr. Bobo's previous affidavit (Applicant's Exhibit 42) and in my testimony in this proceeding (Tr. following p. 670). In sum, the first level of security for repayment of bonds is the revenue 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. Thus, the source of funds for payment of project costs is not dependent on actual project revenues, but is "insured" on a broad base through the obligation of the 88 public and cooperative entities. Assurances 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 Applicant.

The Applicant's successful record of financing generating projects was also discussed in my previous testimony and Mr. Bobo's affidavit.

^{1/} These 88 Participants consist of 21 municipalities, 24 districts and 43 electric cooperatives located principally in Washington, Oregon, Idaho and Montana.

A table summarizing the Applicant's financing activities current as of June 15, 1976 was attached to Mr. Bobo's Affidavit (Applicant's Exhibit 42). That table reflected that the Applicant as of June 15, 1976 has successfully sold securities in the amount of \$1.562 billion. As noted previously in the instant affidavit, the Applicant has successfully sold additional securities since June 16, 1976. Accordingly, a revised table is attached hereto reflecting that as of November 16, 1977, the Applicant has successfully sold \$2.46 billion in securities.

The estimated total cost for WNP-4 has been increased to \$1,869,982,000 (current as of November 23, 1977). This updated estimated can be broken down as follows: ^{2/}

(a) Total nuclear production plant costs	\$1,650,806,000 ^{3/}
(b) Transmission and general plant costs	25,232,000
(c) Nuclear fuel inventory cost ^{4/}	<u>193,944,000</u>
Total Estimated Cost	\$1,869,982,000

Siting, fuel cycle costs, payments to vendors and preliminary construction expenditures through October 31, 1977 for WNP-4 and WNP-5 are \$124,183,000 and \$76,183,000, respectively. Current estimates for WNP-4 and WNP-5 expenditures (including fuel and owners' costs) are as follows:

^{2/} Attached is a table entitled, "Plant Capital Investment Summary", which provides a further breakdown of the plant costs in the format requested by the staff for the WNP-3/5 project.

^{3/} Including net interest during construction, owners' costs, and allowances for escalation and contingencies.

^{4/} Nuclear fuel will be purchased rather than leased. Fuel inventory cost includes first core cost of \$119,464,000 and first reload cost of \$74,480,000.

<u>Year</u>	<u>WNP-4 Expenditures</u>	<u>WNP-5 ^{5/} Expenditures</u>
Thru 1977	\$183,543,000	\$113,101,000
1978	172,256,000	110,709,000
1979	276,875,000	164,438,000
1980	246,415,000	312,894,000
1981	344,300,000	293,908,000
1982	303,279,000	304,315,000
1983	236,897,000	261,508,000
1984	81,856,000	179,454,000
1985	16,385,000	62,766,000
1986	8,023,000	18,948,000
1987		6,977,000

Financing of WNP-4 and WNP-5 will be continued by the issuance of approximately \$3,334,000,000 of tax exempt revenue bonds in series from time to time during the period of construction. The Applicant plans to issue these bonds in the following approximate amounts and on the following schedules:

<u>Date of Issue</u>	<u>Amount</u>
1978	\$400,000,000
1979	600,000,000
1980	600,000,000
1981	600,000,000
1982	600,000,000
1983	400,000,000
1984	134,000,000

I should note that the NRC Staff has previously reviewed and approved the financial qualifications of WPPSS to design and construct nuclear generating facilities.

In my testimony received into evidence in the NRC licensing proceeding involving WPPSS Nuclear Projects No. 3 ("WNP-3") and No. 5 ("WNP-5"), I updated the cost of the various nuclear projects of WPPSS, including WNP-4. The cost estimate set forth in my testimony there for WNP-4 was \$1,715,339,000, and the cost estimate for WNP-5 was \$1,909,626,000 (NRC Docket Nos. STN 50-508, STN 50-509; Tr. following p. 598, at pp. 11 and 19 respectively). ^{6/}

^{5/} WPPSS 90% share of WNP-5

^{6/} Mr. Bobo's prior affidavit (Applicant's Exhibit 42) contained an estimate of the total cost of WNP-4 (current as of May 31, 1976) of \$1.095 billion.

As noted, WNP-4 and WNP-5 are being financed by the Applicant as one system. Thus, the project financing approach used for other WPPSS projects has been followed for WNP-4 and WNP-5, and Staff approval of WPPSS' financial qualifications to design and construct WNP-5 carries the implication that WPPSS is financially qualified to design and construct WNP-4.

The Staff reviewed the general project approach of financing by WPPSS in the Staff's overall review of financial qualifications for WNP-3 and WNP-5. The Staff's review of financial qualifications in that proceeding included a review of the financing of WNP-5 (recognizing that WNP-4 and WNP-5 are financed as a single project) based upon the cost estimates for WNP-4 and WNP-5 presented in my testimony in that proceeding. The Staff concluded that WPPSS was financially qualified to design and construct its share of WNP-3 (70%) and WNP-5 (90%). The Staff noted in its review that "WPPSS' ability to finance its capital expenditures is well established by its issuance to date of billions of dollars in highly rated revenue bonds and notes." (NRC Docket Nos. STN 50-508, STN 50-509; Staff Exhibits 16 and 21).

As noted, I updated the estimates of total costs for WNP-3 and WNP-5, which were increased due in part to delays in licensing for those facilities. The estimated costs for WNP-3 and WNP-5 increased from \$2.550 billion to approximately \$3.2 billion. With respect to these cost increases, the Staff in its review noted that WPPSS would be responsible for the bulk of the increase, and that the impact of the cost increase on the annual construction budget of WPPSS was "relatively insignificant" (Id., Staff Exhibit 21).

Likewise, the increase in the cost estimate for WNP-4 which I have provided in the instant affidavit from \$1,715,339,000 (as presented in the WNP-3 and WNP-5 docket) to \$1,869,982,000 represents an increase of \$154,643,000 or 8.3% of the cost estimate for WNP-4 provided to and reviewed by the Staff in the WNP-3 and WNP-5 proceeding. The impact of this cost increase on the annual construction budget of WPPSS also is relatively insignificant.

James D. Perko
JAMES D. PERKO

Subscribed and sworn before me
this 5th day of December, 1977

Kelva B. Helgeson
Notary Public in and for the State
of Washington

WASHINGTON PUBLIC POWER SUPPLY SYSTEM
CONSTRUCTION PROJECTS FINANCING ACTIVITIES

November 16, 1977

PROJECT	TYPE	RATING	SALE DATE	MATURITY	PAR	PROCEEDS RECEIVED	EFFECTIVE INT. RATE
W N P 1	Bonds	Aaa:AAA	09/18/75	07/01/2017	\$ 175,000,000	\$173,257,213	7.7275
"	Bonds	Aaa:AAA	02/04/76	07/01/2017	180,000,000	180,325,601	6.83734
"	Bonds	Aaa:AAA	08/31/76	07/01/2017	180,000,000	179,715,169	6.3699
"	Bonds	Aaa:AAA	11/09/77	07/01/2017	180,000,000	180,506,326	5.497826
W N P 2*	Bonds	A-1:Aa	06/26/73	07/01/2012	150,000,000	149,861,616	5.650
"	Bonds	A-1:AA	07/23/74	07/01/2012	80,000,000	79,864,055	7.2035
"	Bonds	AA:AA	11/26/74	07/01/2012	125,000,000	124,458,992	7.6667
"	Bonds	Aaa:AAA	03/06/75	07/01/2012	125,000,000	126,813,477	6.7097
"	Bonds	Aaa:AAA	06/03/76	07/01/2012	120,000,000	119,321,710	6.6350
"	Bonds	Aaa:AAA	11/18/76	07/01/2012	200,000,000	200,212,911	5.8650
W N P 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	99,515,830	6.481385
"	Bonds	Aaa:AAA	07/12/77	07/01/2018	230,000,000	229,249,445	5.7133
GENERATING FACILITIES (Nos. 4/5)	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
"	Bonds	A-1:A+	05/24/77	07/01/2012	90,000,000	89,752,542	6.318143
"	Bonds	A-1:A+	09/13/77	07/01/2018	130,000,000	130,017,405	5.963475
					<u>\$2,460,000,000</u>		

*All outstanding bonds are rated AAA by both rating agencies.

NOVEMBER, 1977
PLANT CAPITAL INVESTMENT
SUMMARY

BASIC DATA

Name of plant	WNP-4	Cost basis	
Net capacity	1,250	MW(e)	
Reactor type	PWR(B&W)		
Location	Richland, Was	ington	Type of Cooling

Design & Construction Period

Month, year NSSS order placed	7/74	Run of river	
Month, year of commercial operation	6/84	Natural draft	
Length of work week	40	hours	cooling towers
Interest rate, interest			Mechanical draft
during construction	7.75%	simple	cooling towers
			Other (describe)

X

COST SUMMARY

Account Number	Account Title	Total Cost (Thousand dollars)
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DIRECT COSTS

20	Land and land rights.....	\$ -0-
	<u>PHYSICAL PLANT</u>	
21	Structures and site facilities.....	\$ 157,292
22	Reactor plant equipment.....	160,625
23	Turbine plant equipment.....	136,259
24	Electric plant equipment.....	68,871
25	Misc. plant equipment.....	33,081
	Subtotal.....	\$ 556,128
	Spare parts allowance.....	4,492
	Contingency allowance.....	146,427
	Subtotal.....	707,047

INDIRECT COSTS

91	Construction facilities, equipment, and services.....	19,588
92	Engineering and const. mg't. services..	76,936
93	Other costs.....	426,630 (1)
94	Interest during construction.....	499,617
	Subtotal.....	\$ 1,022,771
	Start of construction cost.....	9,701
	Escalation during construction (% yr.)	130,463 (2)
	Total plant capital investment (\$ /KW)	1,869,982

(1) Includes \$119,464 and \$74,480 for initial core and reload nuclear fuel requirements, respectively.

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