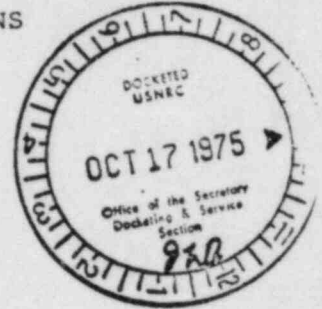


RELATED CORRESPONDENCE
SUMMARY OF APPLICANT'S FINANCIAL QUALIFICATIONS
WASHINGTON PUBLIC POWER SUPPLY SYSTEM

WNP-1

TESTIMONY OF JAMES D. PERKO



My name is James Perko. My business address is Washington Public Power Supply System, 3000 George Washington Way, Richland, Washington. I am the Treasurer of the Washington Public Power Supply System.

The purpose of my testimony today is to summarize and update the information in our license application regarding the Supply System's financial qualifications, that is, in the terms of the NRC regulations, 10 CFR 50.33(f), information which shows that WPPSS possesses, or has reasonable assurance of obtaining, the funds necessary to cover estimated construction costs and related fuel cycle costs for WPPSS Nuclear Project No. 1 ("WNP-1").

An updated estimate of the total cost of WNP-1 (current as of September 1, 1975) is:

(a) Total nuclear production plant costs. . .	\$1,042,509,000 ^{1/}
(b) Transmission and general plant costs. . .	\$ 15,426,000
(c) Nuclear fuel inventory cost ^{2/} for	
first core.	89,065,000
Total estimated cost. . .	\$1,147,000,000 ^{1/}

As to the source of construction funds, the following will provide background regarding, and will summarize, our plan for financing the cost of WNP-1.

- ^{1/} Including net interest during construction, owners' costs, and allowances for escalation and contingencies.
- ^{2/} Nuclear fuel will be purchased rather than leased.

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Washington Public Power Supply System is a municipal corporation and joint operating agency of the State of Washington, organized in January, 1957 pursuant to the laws of Washington. The Supply System is composed of 18 Public 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 Power Supply System are typical of those for a public agency, i.e., advances or guarantees from purchasers or prospective purchasers of the output of the project as an interim measure to cover initial expenditures (often followed by the issuance of short term debt securities), and, for permanent financing, issuance of long term debt securities. There is, of course, no equity, that is, no invested capital, involved in public agency financing. Since WPPSS itself does not have revenues from a variety of wholesale and retail sales, ~~and only~~ from sales of generation, and since revenues do not exceed 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.

WPPSS debt securities are of the revenue bond or revenue note type. Revenue bonds or notes are of course the normal form of debt security for public agency financing of activities such as electric generation construction programs, and, in any event, WPPSS is authorized to issue only revenue securities. Specifically, the Supply System is authorized by R.C.W. 43.52.3411 to "issue revenue bonds or warrants payable from the revenues of the utility properties operated by it". Project financing is being employed in the case of WNP-1, which will be 100% owned by the Supply System. This means that security issuances are earmarked as being for WNP-1, and proceeds of the sale of securities may be expended only for that project. Correspondingly, revenues associated with contracts for the sale and purchase of the output of WNP-1 may be applied only to WNP-1 costs, including debt service on, and the retirement of the principal of, bonds and notes.

Approval of the mechanics of the construction of a generating project and the issuance of securities on a project-financing basis are straightforward. The Supply System's Board adopts a resolution describing the proposed system or plan and setting forth the estimated cost just prior to the issuance of securities. Such resolutions have already been adopted for WNP-1 in connection with resolutions for revenue notes of \$25 million issued on February 15, 1973 and \$77 million issued on May 15, 1974, and a resolution for revenue bonds in the amount of \$175 million issued on September 1, 1975.

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 doing business in the State of Washington.

The note and bond resolutions adopted by the Supply System's Board of Directors serve as the indentures to the buyers of the securities in which certain covenants are made to such buyers.

The underlying security for the bonds or notes starts with contracts with utilities who have undertaken to purchase the output of WNP-1. That is, for WNP-1, the issuance of the revenue bonds will be based upon the contractual commitments of 104 public and cooperative utilities (the "Participants") and five investor-owned utilities (the "Companies"), to purchase the entire electrical capability of WNP-1. The contracts with the public agency and cooperative participants are called "Net Billing Agreements". The agreements with investor-owned utilities are called "Exchange Agreements." The entire capability of WNP-1, (except as noted later) has been sold by the Supply System to these 104 publicly and cooperatively owned utilities, all of whom are statutory preference customers of the Bonneville Power Administration (BPA" or "Bonneville"). The exception is that, during the period 1980 to 1996, 32.4% of the capability will be purchased by Portland General Electric Company, The Montana Power Company, The Washington Water Power Company,

Puget Sound Power and Light Company, and Pacific Power and Light Company, each of which are also customers of BPA. Stated another way, the Participants will purchase 67.53% of the facility's capability during the period 1980 to 1996 and 100% thereafter, while the Companies will purchase 32.47% during the period 1980 to 1996 only.

Under both Net Billing Agreements and Exchange Agreements, the effect is that the Supply System receives a promise to pay a portion of the costs of acquiring, constructing and operating the facility. The aggregate of these purchaser's obligations must equal the total costs of the facility. Each participant's 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 participant's share of the 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 by it which are pledged to payment of the bonds. The bonds are to be repaid on a level debt service basis over the anticipated life of the Project. 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 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. In this way the annual project budget, including retirement of debt and associated interest, is paid by the Participants and by the five Companies.

The 32.4% share during 1980 - 1996 will be purchased by Companies on the following basis: the Exchange Agreements provide that each of the five companies will purchase a 6.494 percent share of the project capability beginning July 1, 1980, and ending June 30, 1996. Such share is assigned to Bonneville in exchange for which Bonneville agrees to make available during such period to each company 80,000 kilowatts of capacity and 68,000 average kilowatts of energy (595,680,000 kilowatt hours annually).

The Exchange Agreements provide that each company will pay the Supply System for its share of project capability during the period of July 1, 1980, through July 30, 1990, an amount determined by applying Bonneville's wholesale rates then in effect to the capacity and energy made available to each company.

For the final six years, i.e., July 1, 1990, through June 30, 1996, each company will pay its share based on the Supply System's estimated costs associated with the project. Monies paid by the Companies are used to reduce the annual project budget after which the balance is paid to WPPSS by the Participants.

Net Billing Agreements between each participant, the Supply System and Bonneville provide that the Project's entire capability (except as noted earlier) will be sold by the Supply System to the Participants as statutory preference customers of Bonneville, and assigned by the participants to Bonneville. Thus, as to each participant, the Net Billing Agreements provide that it will assign its share of Project capability to Bonneville. In turn, Bonneville will credit the payments made to the Supply System by each participant for its 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 delivered under other contracts. The Net Billing Agreements provide that the Participants are obligated to pay the Supply System whether or not the Project is completed, operable or operating and notwithstanding the suspension, interruption, interference, reduction or curtailment of the Project output. Because Bonneville gives credit for payments made irrespective of energy actually received, 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 are obligated to satisfy the total requirement of the defaulting Company. In the event of a default of a Participant,

other Participants agree to automatic set-ups in their billing (by as much as 25 percent) to satisfy the total participant obligations to WPPSS.

It will be seen that the first level of security for repayment of bonds (which will have retired outstanding notes) is the revenues to be derived from operation of the project. Since the Participants and the Companies 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 104 public and cooperative entities and, to the extent of their interest, the five utility companies. This is the second level of security. Moreover, it will be seen that there is a third level of security for the financing of the project in the obligation of the federal government, acting through the Bonneville Power Administration, to provide power and credits to the public participants and to provide capacity and energy at no additional cost to the companies (beyond that which they pay the Supply System) irrespective of the operation of the project. These arrangements tend to ensure the availability of revenues to the Participants and the Companies 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. These Net Billing Agreements are included in the Ten Year Hydrothermal Power Program of the Pacific Northwest. This program was approved by Congress in the Public Works Bill, 1970 (83 Stat. 323, 333) and in Public Works Appropriations Bill, 1971, (84 Stat. 890). The promise to pay is not dependent upon successful operation of the Project. In the case of the Participants, they are obligated to raise rates to whatever level necessary to meet their share of costs, and there is no legal restriction or mandatory review by other agencies to prevent this from occurring. The power received through exchange or net billing by the Companies or the Participants, respectively, is in almost all cases the most economic source available to them. BPA credits, power, and energy are available irrespective of Project output. In summary, the security for the WNP-1 obligations is well diversified and ultimately backed by the U. S. Government.

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 Hydro-

electric 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, in addition, excess construction funds have been applied to retire \$519,000 par value of bonds ahead of schedule. The project output is sold to 12 public utility districts. Operating revenues for fiscal year 1975 totaled \$749,460.

The Supply System successfully financed and is now operating the Hanford Generating Project, which is supplied 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, excess construction funds have been applied to retire \$28,408,700 par value of bonds ahead of schedule. The project output 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 1975 totaled \$30,210,421.

The Supply System is now constructing WPPSS Nuclear Project No. 2 or "WNP-2" (formerly Hanford No. 2) which is also located on the Hanford Reservation near WNP-1 and WPPSS Nuclear Project No. 4 or "WNP-4". 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 System issued the first long-term revenue bonds to finance WNP-2. To date, a total of \$480,000,000 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 \$794,000,000. Commercial operation is scheduled for late 1978. The System also plans to construct a nuclear electric generating plant, known as the Washington Public Power Supply System Nuclear Project No. 3, at its Satsop site in Grays Harbor County Washington, having an installed capacity of approximately 1130 megawatts and in which the Supply System will have a 70% ownership interest. The WPPSS share of WNP-3 is being financed in the same manner as WNP-2 and WNP-1 (apart from the exchange agreements)^{3/}.

To finance the WNP-1 project, as already noted, WNP-1 Revenue Notes in the amounts of \$25,000,000 and \$77,000,000 were sold in February, 1973 and May, 1974, respectively, for preliminary planning and initial construction costs and progress payments. From the proceeds of the \$77 million revenue notes, funds were placed in trust to redeem the \$25 million revenue notes.

^{3/} The Supply System is also planning to construct a duplicate to WNP-1 known as WNP-4 at the same Hanford site, and a duplicate to WNP-3, known as WNP-5, at the Satsop site. Financing plans for these units will be considered separately.

In September, 1975, the Supply System issued \$175 million of long term revenue bonds. These long term securities have been rated Aaa by Moody's Investor Service, Inc. and AAA by Standard and Poor's Corporation. From the proceeds of the \$175 million revenue bonds, funds were placed in trust to redeem the \$77 million revenue notes.

Siting, fuel cycle costs, payments to vendors, and preliminary construction expenditures through September 30, 1975, amount to \$41,286,500. As stated above, the total cost of the Project is estimated to be \$1,147,000,000. Current estimates for WNP-1 expenditures (including fuel and owners' cost) through the year 1980 are as follows:

<u>YEAR</u>	<u>EXPENDITURES</u>
1975	\$ 68,089,000
1976	172,919,000
1977	313,061,000
1978	253,272,000
1979	219,052,000
1980	86,253,000

To continue financing the WNP-1 project, in addition to the \$175 million revenue bonds already sold in September 1975, the Supply System will issue approximately \$972 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>
1976	\$150,000,000
1977	300,000,000
1978	150,000,000
1979	150,000,000
1980	222,000,000

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

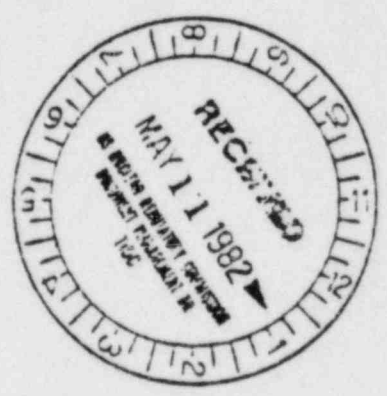
J Peterson
A.R. 5077

Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

April 30, 1982
G01-82-0169
Docket No. 50-460

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation/NRC
Phillips Bldg., Room P-404A
9720 Norfolk Avenue
Bethesda, Maryland 20014



Dear Mr. Denton:

Subject: STATUS OF WNP-1

The purpose of this letter is to provide you with current information regarding the status of activities related to continued construction of WNP-1.

On April 19, 1982, the Administrator of Bonneville Power Administration (BPA) recommended to the Supply System's Board of Directors that construction of WNP-1 be delayed for a period of "from 2 to 5 years" (see attached letter). On Wednesday (April 21) an order was issued by the Benton County Superior Court restraining the Board from taking any action to slowdown or terminate construction on WNP-1 for a two week period, until a show-cause hearing could be held. The Supply System Board met in Richland on Friday (April 23) to review the BPA recommendation with the Administrator and to receive further input from the Supply System staff and the public. Because of the existence of the restraining order, and to provide time for the Board to evaluate alternatives presented at the meeting, no action was taken by the Board at the April 23 meeting. As a result of a court hearing held on Monday (April 26) the restraining order against Board action on WNP-1 was lifted.

Several alternatives to the BPA recommendation were presented at the April 23 meeting, and others were prepared subsequent to that. The Board met again on Wednesday (April 28) in Seattle to hear further public comment on the BPA recommendation. At the conclusion of the April 28 meeting, the Board deferred their decision until Thursday (April 29) to provide time to review the alternatives and consider public comments. At the Thursday meeting, the BPA Administrator stated

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H. R. Denton
Page 2
April 30, 1982
Status of WNP-1

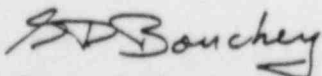
that none of the alternatives would be acceptable to BPA and that a construction delay on WNP-1 was required. Because BPA support is essential to the financing of all three Supply System projects, the Board voted to accept the BPA recommendation.

A ramp down of construction activities at WNP-1 will begin immediately. Activities essential to maintaining the Construction Permit will continue throughout the construction delay. This will include supporting NRC review of the FSAR as required, and processing of the OL Application. We would like to meet with the staff in the near future to discuss details of the WNP-1 licensing review schedule in light of the planned construction delay.

It should be noted that the most recent "need for power" study performed by BPA (attached), which was the basis for the recommendation to delay WNP-1, shows a clear need for all three of the Supply System projects. The only item being questioned is the time of the need. Therefore, the action taken on WNP-1 is only a deferral and not termination. Because WNP-1 is approximately 63% complete at this time and represents a valuable resource to the region, termination of the plant at this stage is not being considered. We firmly believe that construction will be resumed in the 2 to 5 year period discussed by BPA. For this reason, we believe it will be to our mutual benefit for the Commission to proceed with the docketing of the WNP-1 FSAR. The FSAR was submitted for acceptance review in November 1981, and it is our understanding that the staff has found it acceptable for docketing. Copies of the FSAR are now being prepared for docketing and it is our intent to submit those copies to the staff by May 14, 1982. Docketing of the Operating License Application at this time would avoid the need to repeat the acceptance review process when construction resumes.

We will continue to keep you apprised of the situation as further information is developed.

Very truly yours,



G. D. Bouchey, Deputy Director
Safety & Security

GCS/sm

Attachments

cc:	CR Bryant	BPA
	RW Hernan	NRC
	AD Toth	NRC
	DG Eisenhut	NRC
	RH Engelken	RO. V



Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

OFFICE OF THE ADMINISTRATOR

April 19, 1982

In reply refer to: AP

Mr. Stanton H. Cain
Chairman, Executive Board
Washington Public Power Supply System
17930 Pacific Highway South
Suite 400
Seattle, Washington 98188

Dear Mr. Cain:

In accordance with my commitment to express my recommendation regarding the construction schedules to be maintained for the WNP 1, 2, and 3 projects, I am hereby notifying you of the conclusions which have been reached. It is necessary that these recommendations be fully understood by you and the members of your Board in the development of the Washington Public Power Supply System's 1983 budget and in the development of a future financing plan. To assist in this understanding, members of my staff and I will be available at the Executive Board meeting of April 19, 1982 to review the factors leading to this recommendation and will be available thereafter to respond to any further inquiries which you or members of your Board may develop.

I am recommending to the Board and staff of the Supply System that:

1. The construction of WNP #2 and WNP #3 proceed at full pace to maintain or improve the existing construction schedules for these projects.
2. The construction completion schedule of WNP #1 be delayed for a period of from 2 to 5 years; and
3. The Board instruct the staff of the Supply System to prepare a budget and financing plan consistent with these recommendations.

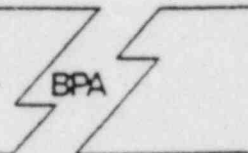
This recommendation is the result of careful consideration of many factors and, in view of the significant impact it will have on the region, was not an easy choice. However, I believe that as you and the other members of your Board become more fully acquainted with all of the financing, economic, marketing and load/resource balance studies and investigations which have preceded this recommendation you will share my belief that adherence to the proposal is the prudent action to be taken.

Sincerely,

Administrator

Analysis of Resource Alternatives

Bonneville Power Administration
U.S. Department of Energy



April 19, 1982

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ANALYSIS OF RESOURCE ALTERNATIVES

BONNEVILLE POWER ADMINISTRATION
April 19, 1982

SUMMARY

This paper presents the details of a decision which will have a significant impact on the future of the Pacific Northwest. Circumstances which are largely economic have placed in jeopardy major regional energy programs, the financial health of many of the region's electric utilities, and possibly the region's fiscal credibility. The incomes and employment of thousands of the region's citizens are being impacted by these circumstances.

The decision announced in this paper was made following extensive analysis of complex power financing and supply issues. There was wide consultation with regional leaders, concerned individuals, and experts inside and outside the region. The final decision was based upon the judgment of the Bonneville Power Administration (BPA), which is charged with the responsibility of providing electrical energy to the region on a "prudent and businesslike" basis.

The decision BPA has been addressing is what its recommendation should be to the Washington Public Power Supply System (Supply System) on future financing alternatives for the Supply System's projects #1, #2, and #3. Because of the need for additional financing in May 1982 to continue construction of these plants, decisions must be made immediately to provide as much certainty as possible about the future of these projects. The managers of the financing group which markets the Supply System's construction bonds for the projects have advised BPA that existing circumstances could make the next bond sale, scheduled for May 1982, more difficult and perhaps more expensive than past sales. The costs of these plants, as a result of long-term contracts called net-billing agreements, became the ultimate responsibility of BPA and its customers several years ago. The status and scheduling of these plants, therefore, inescapably affect every person and every consumer of electricity in the region.

N.B.

In reaching a decision on the scheduling of resources needed in the region, a number of realities other than economics must be addressed. Not the least of these is the State of Washington Initiative 394 which signals a serious voter concern. BPA respects this concern and understands that the decision it makes regarding the Supply System projects, and other energy facilities, must be in the best interests of BPA's ultimate constituents--the ratepayers throughout the Pacific Northwest.

Actions taken now must provide sufficient flexibility for the region to respond to future load/resource imbalances and changes in power marketing conditions. Because of the enormous regional investment in the three Supply System projects, means must be found to realize the maximum value of these important regional assets.

In all of the analyses BPA performed, it was apparent that the on-schedule completion of WNP #2 is a critical event in the region from the standpoint of both power production and the economic benefits of the revenues it will produce. The advanced stage of completion of the project (it is about 90 percent complete), the large capital investment (more than \$2 billion already committed), and the near-term availability of the power and revenues (about 22 months away) make the early completion and operation of WNP #2 an economic imperative for the region.

On the basis of these analyses, BPA has concluded that from the viewpoint of need-for-power, economics, and financing, it will be feasible to extend the construction schedule of WNP #1 for a period of up to 5 years. Near-term funding options appear to be adequate to continue WNP #2 and WNP #3 on their current schedules and extend construction of WNP #1. A forecasted near-term power surplus supports extension of the WNP #1 construction schedule by up to 5 years. Construction can be restarted earlier if circumstances dictate.

Given the uncertainties involved, no one element of the BPA analyses is, by itself, persuasive. What is persuasive is the reinforcing consistency with which all factors--load/resource uncertainties, resource economics, and financial planning--point to the same conclusion. It is a matter of business prudence that BPA reduce its financial risk and not leverage itself further by incurring additional debt to support surplus capability.

Considering the interests of the ratepayers and the region as a whole, continuing WNP #2 and #3 on current schedules and extending the construction of WNP #1 best preserves and protects the economic and financial integrity of BPA and the region. It has fewer disadvantages and more advantages than any of the other options, and provides flexibility for the region in meeting future load/resource balances and in responding to rapid changes and contingencies.

OBJECTIVES

The principal objectives BPA used in performing the analyses and testing the decisions were:

1. To further the best interests of current and future ratepayers of the region.
2. To minimize the financial risks to, and maximize the fiscal integrity of, BPA and the region as a whole.
3. To preserve the region's economic ability to deliver the benefits of the Pacific Northwest Electric Power Planning and Conservation Act (Regional Act), including conservation and renewable resource development.
4. To bring greater certainty, stability, and predictability to rates and resource decisions.
5. To provide a maximum opportunity for the region's economy to recover and remain prosperous.

6. To identify the most effective strategy for marketing the bonds needed to finance the completion or preservation of the Supply System projects.
7. To maximize the region's flexibility to accommodate changing load and economic conditions.
8. To identify a choice which assures a healthy and positive construction environment within the Supply System in order that maximum efficiencies can be achieved.

LOAD/RESOURCE ANALYSIS

Recent demand forecasts, including BPA's preliminary forecast, show that the region, while needing additional electricity supplies in the 1990's, now faces possible surpluses of generating capacity in the 1980's. BPA's forecast shows annual average percentage load increases of .8, 1.7, and 2.5 percent as its low, base, and high case forecasts. Under the Regional Act, the Regional Power Planning Council has responsibility for forecasting future loads and resource requirements. It will be several months before the Regional Council can publish for comment its first load forecast which, in April 1983, will become a part of the official regional power plan. In this interim period BPA has been working closely with the Regional Council, and has reviewed the BPA preliminary forecast with the Council as well as other regional public and private utilities.

BPA also arranged to have its preliminary forecast independently reviewed by National Economic Research Associates (NERA), consulting economists from outside the region with an international reputation for expertise in electric energy demand forecasting. That firm suggested that the BPA range of load growth is too narrow and recommended that a higher range "would provide a more defensible guide to policy." A number of utility executives and experts believe it is prudent utility practice to plan resources to meet loads in the high portion of the forecasting range. Under these circumstances, and using the high range recommended, all three net-billed projects could prove to be needed on schedule. However, a driving element in the situation is that financial and other constraints preclude this option.

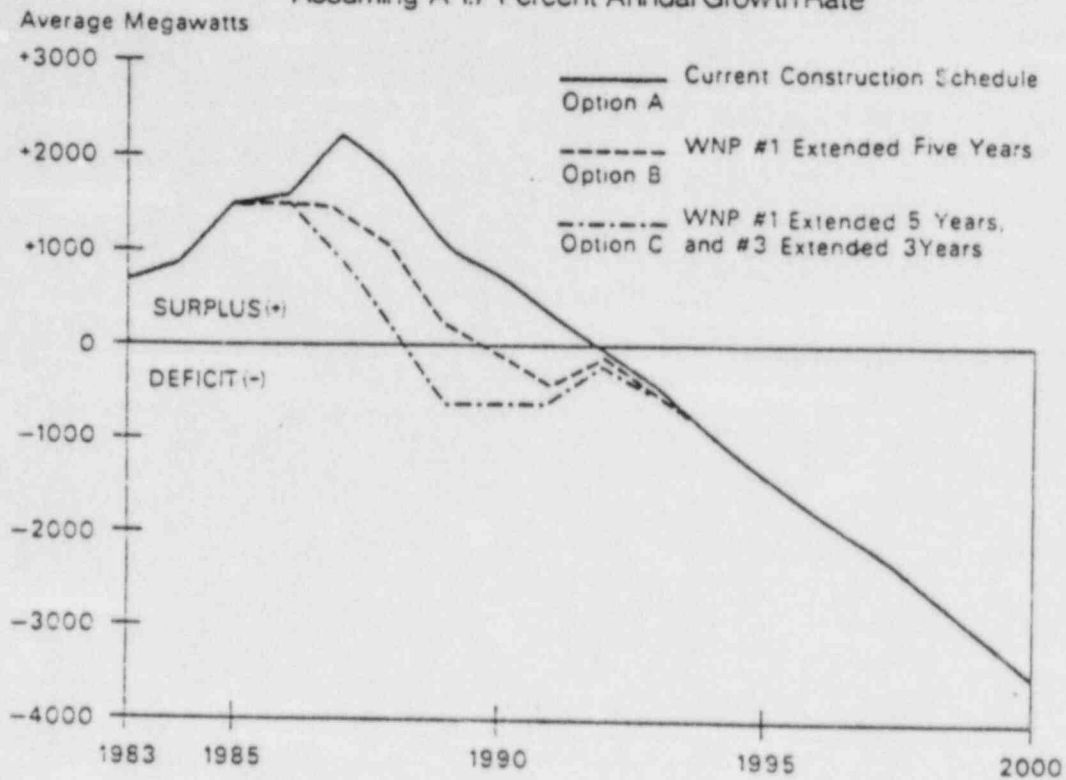
~~WNP #2 is currently scheduled to become commercially operational in February 1984, WNP #1 in June 1986, and WNP #3 in December 1986. Although numerous alternatives for revising the completion schedules were examined, in the following analysis only the three most likely options are depicted:~~

- Option A - Continue the current schedule for completing all three plants.
- Option B - Complete WNP #2 and #3 on schedule and extend completion of WNP #1 up to 5 years.
- Option C - Complete WNP #2 on schedule and extend completion of WNP #1 up to 5 years and #3 up to 3 years.

The following chart shows the effect of these options on the load/resource balance:

REGIONAL FIRM LOAD/RESOURCE BALANCE

Assuming A 1.7 Percent Annual Growth Rate



This chart suggests the following:

1. Clearly, all three plants are needed by the region since there will be significant firm deficits in the early 1990's. The questions are "When are they needed?" and "Should construction of any of the plants be extended?"
2. Under the current construction schedule for the three net-billed plants, there will be some significant surpluses in the mid- and late 1980's.
3. If construction is extended on two projects, there will be some significant firm load deficits in the late 1980's and early 1990's.
4. If the loads turn out to be greater, as some of the forecasts indicate, then the point at which deficits occur is moved up in time. For example, the upper forecast of 2.5 percent combined with all three plants on schedule would show a deficit in 1987 instead of the 1990 shown on the chart.

CONSERVATION AND RENEWABLE RESOURCES

The region's future power needs, forecasting uncertainties, and the desirability of having additional resources near-at-hand dictate that BPA's existing and announced conservation and small (under 5 average megawatts) renewable resources programs should continue to operate during the period of surplus. BPA considers these programs to be valuable, unfinished resources and will make an aggressive effort to complete them.

BPA has estimated that, at most, 450 average megawatts are achievable by 1990 in conservation and renewables in addition to the savings from programs already underway or included in BPA's preliminary forecast, at costs less than the incremental cost to complete and operate the Supply System projects.

The cost-effectiveness test for conservation and small renewables in this period will reflect the reduced value of the resources during the probable near-term surpluses.

BPA will continue to emphasize its residential conservation programs which have been offered to all regional utilities and which are underway in 96 utility service areas. The programs offer increased energy efficiency to qualifying households with electric space or water heat in these service areas at little or no cost to the homeowner.

Commitments to large renewable resources will be made on the basis of an extended planning horizon showing need for new power in the post-1990 period. BPA must continue to develop its policy, program, and organizational capability in renewables in order to be able to address this need effectively.

The principles of cost-effectiveness and the protection of the ratepayers' interest in assuring an adequate and reliable power supply will continue to be paramount in BPA's decisions and actions on conservation and renewable resources development.

ECONOMIC ANALYSIS OF ALTERNATIVES FOR SUPPLY SYSTEM PROJECTS #1, #2, AND #3

BPA's economic analysis examined a large number of resource alternatives including the alternative of completing all three plants on schedule but not operating WNP #1 and #3 until they are needed. The analysis then focused on the economic impact of the alternatives on revenues from power sales, including the examination of the most likely outlook for marketing any excess power. BPA estimated the construction costs, operating costs, fuel costs, the costs which would be incurred if the plants stood idle waiting to serve, and financing costs.

The net economic impacts of the three alternatives, when compared with the current schedules for completing and operating the three plants were found to be:

1. Completing all three plants on schedule but deferring the operation of WNP #1 and #3 (letting them sit idle) in the event of surplus would create

a net economic disadvantage of about \$128 million (compared with completing the plants on their current schedule, operating them and selling the surplus).

2. Constructing WNP #2 and #3 on schedule, but extending construction of WNP #1 up to 5 years would have an economic advantage of about \$212 million compared with bringing all the plants in on schedule (about \$340 million advantage over alternative 1).
3. Constructing WNP #2 on schedule, but extending construction of WNP #1 up to 5 years and #3 up to 3 years would also present a slight economic advantage of about \$20 million compared with completing all the plants on schedule (roughly \$200 million less advantage than option 2).

FINANCIAL ANALYSIS

In BPA's financial analysis, performed concurrently with the two analyses described previously, an equally large number of alternatives were examined. In order to fully assess the alternatives, BPA considered the following:

- a. The financing requirements for each plant.
- b. The revenue/rate impacts of the construction and operational alternatives.
- c. The limits of BPA's flexibility in financing the plants.
- d. The constraints of the financial markets (amounts that can be raised at reasonable interest rates).
- e. The impacts on the credit worthiness of BPA, the region's utilities, and states.
- f. The legal and political implications of the alternatives, including the possible impacts of Initiative 394.

Based on advice provided by underwriters (the people who market the bonds to individual investors) and financial advisors, it was determined that \$550 to \$650 million would be a reasonable amount for the bond offering this May. Therefore, BPA realistically has only two financing options available: (1) to fund WNP #2 to a level which will permit completion while continuing construction of one of the other two plants, or (2) to delay both other plants while applying all the proceeds of the bond sale toward completion of WNP #2.

Because the load/resource, resource economic, and financial analyses indicate the feasibility and prudence of continuing WNP #2 plus one other plant on their current schedules, a choice must be made between proceeding with WNP #1 or #3.

CHOICE OF WNP #1 OR WNP #3

There are several valid arguments for selecting WNP #1 over WNP #3 for on-schedule completion. WNP #1 would be in commercial operation about 6 months earlier than WNP #3; the power would be about 9 mills per kWh cheaper (or about 10 percent); and WNP #1 is located on the Hanford, Washington, nuclear reservation, near WNP #2.

However, since WNP #1 is located on the Hanford reservation, it is near numerous DOE nuclear programs and a skilled nuclear labor force. When a startup is required, remobilization of the work force should occur more rapidly at the WNP #1 plant at Hanford than at Satsop, Washington, location of WNP #3. Such an edge might prove to be a significant economic advantage in view of the rapid changes which have occurred in regional load/resource balances. This could result in significant cost savings to regional ratepayers.

WNP #3's location is west of the Cascade Range and closer to the major Pacific Northwest load centers than WNP #1, resulting in shorter transmission distances. This reduces line losses and increases transmission reliability--an additional potential cost savings to regional ratepayers.

In terms of the total financing required to complete all of WNP #1 and the Supply System's 70-percent share of WNP #3, there is little to distinguish between the projects. Roughly \$1.5 billion in additional Supply System financing is required to complete each plant.

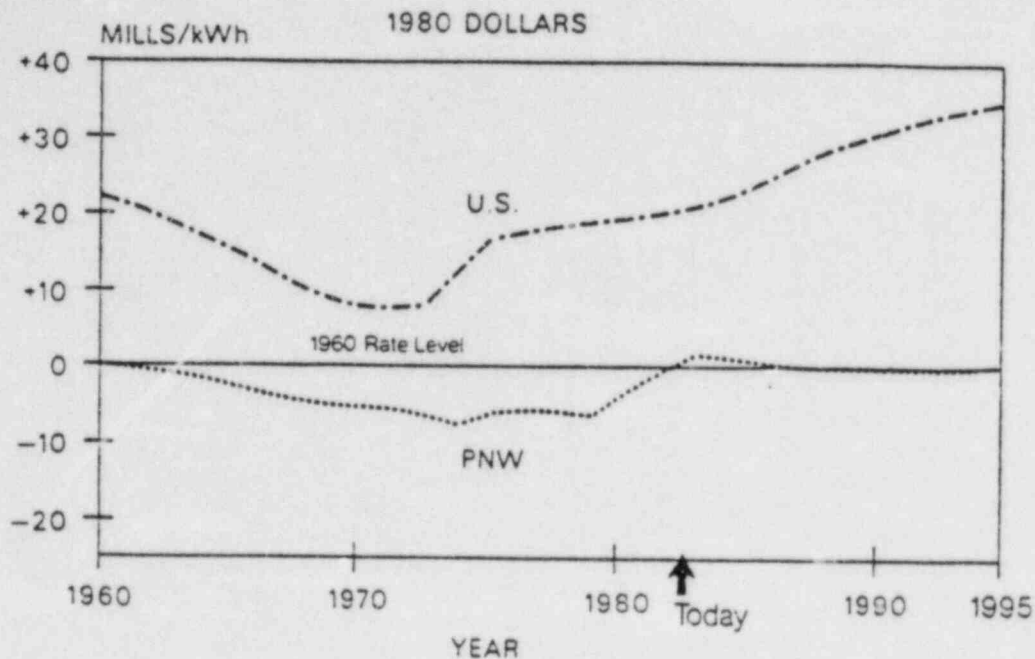
It is of significance that the capability of WNP #1 has been wholly assigned to BPA. WNP #3 is jointly owned by the Supply System and four investor-owned utilities (IOU's) with only 70 percent of its capability assigned to BPA. A decision to extend the construction schedule of WNP #3 would require the agreement of the other owners and it now appears they may need that power earlier than BPA. Additionally, the other owners will assist BPA in furnishing oversight to the Supply System.

Finally, extending construction on WNP #1 will result in a slightly lower BPA rate increase next October than if WNP #3 construction schedules were extended instead.

RATE IMPACTS

During a period when rates are rising rapidly, it is difficult to find cause for optimism. However, the future outlook is for stabilization of electricity rates in view of an estimated reduction in the need for expensive new resources. Also, the anticipated temporary resource surplus will allow the region to take advantage of time in anticipation of lower inflation and interest rates when it may meet its needs at reduced borrowing rates which will produce lower cost resources. Most importantly, the region will continue to enjoy electricity prices which, as a whole, are significantly lower than the national average, as shown on the chart on the following page.

AVERAGE RETAIL ELECTRICITY RATES
IN COMPARISON TO 1960 PNW RATES
PNW vs. U.S.



In addition, the results of our economic analysis and our review of the debt service BPA would have to pay on bonds yet to be issued for the construction of the Supply System projects #1, #2, and #3, indicate that:

1. Failing to go forward with WNP #2 would result in increased power purchases and higher rates both in the near- and long-term.
2. Going forward with all three projects would result in the need for a higher rate increase planned for next October.
3. If we proceed with WNP #2 and #3 on current schedules and extend construction of WNP #1 for 5 years, 1983 rates will be reduced by about \$90 million.
4. Finally, while extending construction schedules for all three projects could result in a short-term decrease in rates, it would result in much higher rates in the mid- and long-term.

Consequently, proceeding with current construction on WNP #2 and WNP #3, and extending the construction for WNP #1 will benefit ratepayers in both the short- and long-term while providing power supply flexibility necessary to support the regional economy.

NOTE: THE BONNEVILLE POWER ADMINISTRATION WELCOMES QUESTIONS AND COMMENTS ON THE INFORMATION PROVIDED IN THIS PAPER.

WNP-1

RELATED CORRESPONDENCE

File

QUALIFICATIONS

James D. Perko
Treasurer

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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Perko Testimony
Washington Public
Power Supply
System

My name is James D. Perko and my business address is 3000 George Washington Way, Richland, Washington 99352. I am the Treasurer of the Washington Public Power Supply System.

I am a graduate of Gonzaga University, Spokane, Washington, holding a degree of Bachelor of Business Administration, majoring in Economics and General Business Administration.

Upon graduation in 1963, I fulfilled my military obligation with two years in the U. S. Army, receiving an honorable discharge as a First Lieutenant.

In the summer of 1965, I accepted a position as a management trainee with Seattle Trust and Savings Bank, Seattle, Washington. After completing the trainee program, I was appointed to fill a vacancy in the Investment Department. In January, 1970, I was promoted to Manager of the Investment Division. My responsibilities were to manage the bank's U. S. Government and municipal bond portfolio, manage the short-term (less than one year) investments, and supervise a six person staff.

In 1973, I accepted a position as Manager of the Bond Department at Peoples National Bank of Washington, Seattle. My duties in this new department were to develop a municipal bond department and marketing section for both U. S. Government and municipal securities. In addition, I managed the municipal bond portfolio and made recommendations to the senior management for purchases and/or sales of U. S. Government securities.

I joined Washington Public Power Supply System in 1974 as Treasurer. My duties include receiving and disbursing all Supply System funds, participating in arrangement of additional financing to meet the Supply System's requirements and managing Supply System funds so as to obtain the best possible yield from investments.



RELATED CORRESPONDENCE
SUMMARY OF APPLICANT'S FINANCIAL QUALIFICATIONS
WASHINGTON PUBLIC POWER SUPPLY SYSTEM

WNP-1

TESTIMONY OF JAMES D. PERKO



My name is James Perko. My business address is Washington Public Power Supply System, 3000 George Washington Way, Richland, Washington. I am the Treasurer of the Washington Public Power Supply System.

The purpose of my testimony today is to summarize and update the information in our license application regarding the Supply System's financial qualifications, that is, in the terms of the NRC regulations, 10 CFR 50.33(f), information which shows that WPPSS possesses, or has reasonable assurance of obtaining, the funds necessary to cover estimated construction costs and related fuel cycle costs for WPPSS Nuclear Project No. 1 ("WNP-1").

An updated estimate of the total cost of WNP-1 (current as of September 1, 1975) is:

(a) Total nuclear production plant costs. . .	\$1,042,509,000 ^{1/}
(b) Transmission and general plant costs. . .	\$ 15,426,000
(c) Nuclear fuel inventory cost ^{2/} for first core.	89,065,000
Total estimated cost. . .	\$1,147,000,000 ^{1/}

As to the source of construction funds, the following will provide background regarding, and will summarize, our plan for financing the cost of WNP-1.

- 1/ Including net interest during construction, owners' costs, and allowances for escalation and contingencies.
- 2/ Nuclear fuel will be purchased rather than leased.

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Washington Public Power Supply System is a municipal corporation and joint operating agency of the State of Washington, organized in January, 1957 pursuant to the laws of Washington. The Supply System is composed of 18 Public 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 Power Supply System are typical of those for a public agency, i.e., advances or guarantees from purchasers or prospective purchasers of the output of the project as an interim measure to cover initial expenditures (often followed by the issuance of short term debt securities), and, for permanent financing, issuance of long term debt securities. There is, of course, no equity, that is, no invested capital, involved in public agency financing. Since WPPSS itself does not have revenues from a variety of wholesale and retail sales, but only from sales of generation, and since revenues do not exceed 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.

WPPSS debt securities are of the revenue bond or revenue note type. Revenue bonds or notes are of course the normal form of debt security for public agency financing of activities such as electric generation construction programs, and, in any event, WPPSS is authorized to issue only revenue securities. Specifically, the Supply System is authorized by R.C.W. 43.52.3411 to "issue revenue bonds or warrants payable from the revenues of the utility properties operated by it". Project financing is being employed in the case of WNP-1, which will be 100% owned by the Supply System. This means that security issuances are earmarked as being for WNP-1, and proceeds of the sale of securities may be expended only for that project. Correspondingly, revenues associated with contracts for the sale and purchase of the output of WNP-1 may be applied only to WNP-1 costs, including debt service on, and the retirement of the principal of, bonds and notes.

Approval of the mechanics of the construction of a generating project and the issuance of securities on a project-financing basis are straightforward. The Supply System's Board adopts a resolution describing the proposed system or plan and setting forth the estimated cost just prior to the issuance of securities. Such resolutions have already been adopted for WNP-1 in connection with resolutions for revenue notes of \$25 million issued on February 15, 1973 and \$77 million issued on May 15, 1974, and a resolution for revenue bonds in the amount of \$175 million issued on September 1, 1975.

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 doing business in the State of Washington.

The note and bond resolutions adopted by the Supply System's Board of Directors serve as the indentures to the buyers of the securities in which certain covenants are made to such buyers.

The underlying security for the bonds or notes starts with contracts with utilities who have undertaken to purchase the output of WNP-1. That is, for WNP-1, the issuance of the revenue bonds will be based upon the contractual commitments of 104 public and cooperative utilities (the "Participants") and five investor-owned utilities (the "Companies"), to purchase the entire electrical capability of WNP-1. The contracts with the public agency and cooperative participants are called "Net Billing Agreements". The agreements with investor-owned utilities are called "Exchange Agreements." The entire capability of WNP-1, (except as noted later) has been sold by the Supply System to these 104 publicly and cooperatively owned utilities, all of whom are statutory preference customers of the Bonneville Power Administration (BPA" or "Bonneville"). The exception is that, during the period 1980 to 1996, 32.4% of the capability will be purchased by Portland General Electric Company, The Montana Power Company, The Washington Water Power Company,

Puget Sound Power and Light Company, and Pacific Power and Light Company, each of which are also customers of BPA. Stated another way, the Participants will purchase 67.53% of the facility's capability during the period 1980 to 1996 and 100% thereafter, while the Companies will purchase 32.47% during the period 1980 to 1996 only.

Under both Net Billing Agreements and Exchange Agreements, the effect is that the Supply System receives a promise to pay a portion of the costs of acquiring, constructing and operating the facility. The aggregate of these purchaser's obligations must equal the total costs of the facility. Each participant's 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 participant's share of the 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 by it which are pledged to payment of the bonds. The bonds are to be repaid on a level debt service basis over the anticipated life of the Project. 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 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. In this way the annual project budget, including retirement of debt and associated interest, is paid by the Participants and by the five Companies.

The 32.4% share during 1980 - 1996 will be purchased by Companies on the following basis: the Exchange Agreements provide that each of the five companies will purchase a 6.494 percent share of the project capability beginning July 1, 1980, and ending June 30, 1996. Such share is assigned to Bonneville in exchange for which Bonneville agrees to make available during such period to each company 80,000 kilowatts of capacity and 68,000 average kilowatts of energy (595,680,000 kilowatt hours annually).

The Exchange Agreements provide that each company will pay the Supply System for its share of project capability during the period of July 1, 1980, through July 30, 1990, an amount determined by applying Bonneville's wholesale rates then in effect to the capacity and energy made available to each company.

For the final six years, i.e., July 1, 1990, through June 30, 1996, each company will pay its share based on the Supply System's estimated costs associated with the project. Monies paid by the Companies are used to reduce the annual project budget after which the balance is paid to WPPSS by the Participants.

Net Billing Agreements between each participant, the Supply System and Bonneville provide that the Project's entire capability (except as noted earlier) will be sold by the Supply System to the Participants as statutory preference customers of Bonneville, and assigned by the participants to Bonneville. Thus, as to each participant, the Net Billing Agreements provide that it will assign its share of Project capability to Bonneville. In turn, Bonneville will credit the payments made to the Supply System by each participant for its 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 delivered under other contracts. The Net Billing Agreements provide that the Participants are obligated to pay the Supply System whether or not the Project is completed, operable or operating and notwithstanding the suspension, interruption, interference, reduction or curtailment of the Project output. Because Bonneville gives credit for payments made irrespective of energy actually received, 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 are obligated to satisfy the total requirement of the defaulting Company. In the event of a default of a Participant,

other Participants agree to automatic set-ups in their billing (by as much as 25 percent) to satisfy the total participant obligations to WPPSS.

It will be seen that the first level of security for repayment of bonds (which will have retired outstanding notes) is the revenues to be derived from operation of the project. Since the Participants and the Companies 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 104 public and cooperative entities and, to the extent of their interest, the five utility companies. This is the second level of security. Moreover, it will be seen that there is a third level of security for the financing of the project in the obligation of the federal government, acting through the Bonneville Power Administration, to provide power and credits to the public participants and to provide capacity and energy at no additional cost to the companies (beyond that which they pay the Supply System) irrespective of the operation of the project. These arrangements tend to ensure the availability of revenues to the Participants and the Companies sufficient to cover payments to the Supply System. **B.P.A.**

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. These Net Billing Agreements are included in the Ten Year Hydrothermal Power Program of the Pacific Northwest. This program was approved by Congress in the Public Works Bill, 1970 (83 Stat. 323, 333) and in Public Works Appropriations Bill, 1971, (84 Stat. 890). The promise to pay is not dependent upon successful operation of the Project. In the case of the Participants, they are obligated to raise rates to whatever level necessary to meet their share of costs, and there is no legal restriction or mandatory review by other agencies to prevent this from occurring. The power received through exchange or net billing by the Companies or the Participants, respectively, is in almost all cases the most economic source available to them. BPA credits, power, and energy are available irrespective of Project output. In summary, the security for the WNP-1 obligations is well diversified and ultimately backed by the U. S. Government.

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 Hydro-

electric 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, in addition, excess construction funds have been applied to retire \$519,000 par value of bonds ahead of schedule. The project output is sold to 12 public utility districts. Operating revenues for fiscal year 1975 totaled \$749,460.

The Supply System successfully financed and is now operating the Hanford Generating Project, which is supplied 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, excess construction funds have been applied to retire \$28,408,700 par value of bonds ahead of schedule. The project output 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 1975 totaled \$30,210,421.

The Supply System is now constructing WPPSS Nuclear Project No. 2 or "WNP-2" (formerly Hanford No. 2) which is also located on the Hanford Reservation near WNP-1 and WPPSS Nuclear Project No. 4 or "WNP-4". 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 System issued the first long-term revenue bonds to finance WNP-2. To date, a total of \$480,000,000 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 \$794,000,000. Commercial operation is scheduled for late 1978. The System also plans to construct a nuclear electric generating plant, known as the Washington Public Power Supply System Nuclear Project No. 3, at its Satsop site in Grays Harbor County Washington, having an installed capacity of approximately 1130 megawatts and in which the Supply System will have a 70% ownership interest. The WPPSS share of WNP-3 is being financed in the same manner as WNP-2 and WNP-1 (apart from the exchange agreements)^{3/}.

To finance the WNP-1 project, as already noted, WNP-1 Revenue Notes in the amounts of \$25,000,000 and \$77,000,000 were sold in February, 1973 and May, 1974, respectively, for preliminary planning and initial construction costs and progress payments. From the proceeds of the \$77 million revenue notes, funds were placed in trust to redeem the \$25 million revenue notes.

^{3/} The Supply System is also planning to construct a duplicate to WNP-1 known as WNP-4 at the same Hanford site, and a duplicate to WNP-3, known as WNP-5, at the Satsop site. Financing plans for these units will be considered separately.

In September, 1975, the Supply System issued \$175 million of long term revenue bonds. These long term securities have been rated Aaa by Moody's Investor Service, Inc. and AAA by Standard and Poor's Corporation. From the proceeds of the \$175 million revenue bonds, funds were placed in trust to redeem the \$77 million revenue notes.

Siting, fuel cycle costs, payments to vendors, and preliminary construction expenditures through September 30, 1975, amount to \$41,286,500. As stated above, the total cost of the Project is estimated to be \$1,147,000,000. Current estimates for WNP-1 expenditures (including fuel and owners' cost) through the year 1980 are as follows:

<u>YEAR</u>	<u>EXPENDITURES</u>
1975	\$ 68,089,000
1976	172,919,000
1977	313,061,000
1978	253,272,000
1979	219,052,000
1980	86,253,000

To continue financing the WNP-1 project, in addition to the \$175 million revenue bonds already sold in September 1975, the Supply System will issue approximately \$972 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>
1976	\$150,000,000
1977	300,000,000
1978	150,000,000
1979	150,000,000
1980	222,000,000

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