Bonneville Power Administration

10-YEAR FINANCIAL PLAN

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I. INTRODUCTION

For nearly the past 2 years, the Bonneville Power Administration (BPA) has worked with its customers and other regional interests to develop this 10-Year Financial Plan (Financial Plan). The development of BPA's Financial Plan through such a broad, participatory process is unprecedented for BPA. The Financial Plan is a financial companion to BPA's other long-term program plans, such as the 10-Year Operations, Maintenance and Replacement Plan and the 1992 Resource Plan. The time frame covered by this document is fiscal years (FYs) 1992 through 2001.

The purposes of the Financial Plan are to identify long-term financial issues facing BPA and to develop strategies that address the issues and enhance BPA's long-term rate predictability and competitiveness. Three key issues/areas were identified in developing the Financial Plan's scope: operating risk, capital funding, and customers' desire for a comprehensive review of aggregate program spending and related rate impacts. As development of the Financial Plan got underway, financial risk management and capital funding became the primary focus of BPA and the region. The Executive Summary below outlines the policies that BPA is adopting in the areas of financial risk mitigation and capital funding.

The Financial Plan's policies will be subject to further review and refinement during BPA's 1993 rate case. At the conclusion of that rate case, BPA will make a final decision on the Financial Plan. It is BPA's intent that the Financial Plan provide a broad and consistent set of policies that will guide BPA's decisions over successive rate periods. The consequence of BPA's final action in adopting the Financial Plan is that it will constitute precedent that BPA shall adhere to, absent a determination by the Administrator that the policies included in the Financial Plan should be modified to meet BPA's changing operating environment. Establishment of rates in any future rate proceeding in accordance with the elements of the Financial Plan will constitute substantial evidence that the rates are in accord with sound business principles.

II. EXECUTIVE SUMMARY

Financial Risk Mitigation

The Financial Plan's key objective is to design financial policies that will ensure BPA's ability to make its annual U.S. Treasury payments in full and on time, while also providing increased rate predictability. This financial objective helps ensure that all operating costs will be met, because by law, payments to the Treasury are made after other BPA costs are paid.

In order to meet this key objective, the primary focus of this first Financial Plan has been to determine the amount of financial reserves necessary to meet the uncertainties that exist in BPA's operating environment. To determine the required amount of financial reserves, it was necessary to quantify the types and related dollar amounts of operating risk and the effectiveness of alternative combinations of financial risk mitigation measures.

Developing the Financial Plan enabled BPA and its customers to improve our technical capabilities to quantify operating risks and to analyze alternative combinations of risk mitigation tools. A key issue in developing the Financial Plan was what level of financial reserves should be maintained by BPA sufficient to meet the target Treasury payment probability objective. These reserves can be achieved through a combination of measures, or "tools." The Financial Plan adopts three risk mitigation tools: (1) planned annual net revenues used to increase or maintain financial reserves; (2) an interim rate adjustment (IRA); and (3) program cost deferrals. The IRA and program cost deferrals will be implemented only if financial reserves fall below a predetermined level at the end of the first year of each 2-year rate period.

The following financial policies for risk mitigation have been adopted:

- First, as a long-term financial policy choice, BPA will set rates in each 2-year rate period to maintain a level of reserves sufficient to assure a 95 percent probability of meeting its U.S. Treasury payments in full and on time. During the FY 1994-95 rate test period, BPA is phasing in this standard, rather than meeting the standard within the

first rate period covered by the 10-year scope of the Financial Plan. This one-time only phase-in approach is being adopted to reduce the impact of the Financial Plan on rates in FYs 1994 and 1995.

- Second, BPA is adopting the IRA and program cost deferral mechanisms as integral components of its risk mitigation planning. The IRA is designed to result in an interim rate increase of no more than 10 percent, and to trigger with an estimated frequency of no more than 20 percent over the Financial Plan's 10-year period. If BPA's financial reserves fall below a specified level in the first year of a rate period, the IRA would be implemented in the second year. Before the IRA would be put into effect, BPA would implement cost deferrals of $25 million, with no more than $10 million occurring in the expensed program areas. The remainder of the reductions would occur in capital programs.

- Third, rates will be set to include recovery of any inherent downward bias in BPA's expected cash flow distribution, taking into account normal operating risks.

This combination of risk mitigation policies and tools is aimed at helping BPA meet the ordinary operating risks it faces.

In its next Financial Plan, anticipated to be prepared prior to the 1995 rate case, BPA will explore the adoption of a refund policy, such that when BPA's cash reserves exceed $800 million, 50 percent of the excess over $800 million would be rebated to customers. The other 50 percent would be returned to the Treasury by increasing amortization payments in excess of planned repayment levels or by reducing the levels of planned borrowing.

Capital Funding Plan

Over the next decade, BPA and the region need to finance Federal Columbia River Power System (FCRPS) capital investments exceeding a projected $7 billion for energy resource acquisition, transmission construction and replacements, and fish and wildlife projects. During development of the Financial Plan, BPA and its customers examined alternative sources for meeting the funding requirements for these investments. In addition, different approaches to restructuring BPA's existing debt were examined.

BPA developed a capital funding plan that continues the agency's traditional reliance on debt financing. An important part of the capital funding plan is BPA's intent to develop increased opportunities for third-party financing, especially tax-exempt debt. BPA bonds issued to the Treasury, and Congressional appropriations to fund Corps of Engineers (Corps) and Bureau of Reclamation (Bureau) improvements at the Federal dams, round out the Federal borrowing resources being adopted. Long-lived nuclear project capital investments at the Washington Public Power Supply System (Supply System) nuclear project WNP-2 will be funded through debt to the extent feasible. Current revenues will be used to finance those nuclear project capital improvements that are not financed with debt issued by the Supply System. The decision to continue the agency's traditional reliance on debt was based on the fact that debt financing continues to be a cost-effective means to fund new FCRPS capital investments.

This capital funding plan, with its emphasis on seeking increased opportunities for third-party financing arrangements, provides both an opportunity and a challenge for BPA and the region to reduce BPA's reliance on Treasury borrowing. Because there are significant levels of investment projected for FYs 1993-2001, BPA will continue to consider seeking an increase in its Federal borrowing cap and/or obtaining authority to enter the financial markets directly.

BPA believes that the proposed capital funding plan, along with the proposed risk mitigation measures, strike an appropriate balance between the region's desire to reduce upward pressures on rates and the region's commitment to maintain a level of financial reserves sufficient to assure a high probability of making Treasury payments and the credit worthiness necessary to support increased levels of third-party financing.

How Does This Financial Plan Compare to BPA's June Proposal?

With respect to risk mitigation, in the Proposed 10-Year Financial Plan (June 1992), BPA suggested that increasing BPA's levels of financial reserves and planned net revenues would be the best hedge against unpredictable operating risks. In subsequent discussions, customers indicated a preference for adopting interim rate period tools--the IRA and program cost deferrals--to be put into effect only if financial conditions so warranted. BPA has included similar rate adjustment mechanisms in previous rate decisions, but financial circumstances have not required their use. In addition, BPA's minimum year-end cash

working capital reserve level, which was set at $100 million in the June proposal, has been reduced to $50 million. This makes an additional $50 million of BPA's current financial reserves available to meet Treasury payments, if necessary.

The Financial Plan continues to rely on 100 percent debt financing for FCRPS investments coupled with an emphasis on achieving increased levels of third-party financing. The Financial Plan places greater reliance on debt financing for long-lived improvements at the Supply System's nuclear project WNP-2.

Table 1 on page 6 presents a comparison of these policies with the policies in the 1991 rate case Interim Long-Term Policy.

TABLE 1

How is the 10-Year Financial Plan Different Than the 1991 Rate Case Interim Long-Term Policy?

	1991 Rate Case Interim Long-Term Policy	10-Year Financial Plan
Risk Mitigation:		
Repayment Criteria	At least a 95 percent probability of making Treasury payments over the 2-year rate period.	BPA will establish rates sufficient to achieve a 95 percent Treasury payment probability in each 2-year rate period. Policy incorporates a more comprehensive risk assessment method.
Overall Capital Structure	Achievement of a 90 percent total-debt-to total asset ratio by the year 2001 using customer revenues in lieu of bonds issued to Treasury.	Rely fully on debt financing where feasible.
Planned Net Revenues	Required Net Revenues (excess of amortization payments over depreciation). Additional planned net revenues to: mitigate risk; increase debt management flexibility, including potential financing of BPA capital programs; and create 80 percent confidence of meeting annual expenses out of annual revenues.	Same. Additional planned net revenues to achieve the 95 percent repayment probability described above. Includes a "true-up" for the projected average downward cash flow bias.
Financial Reserves	No specified target reserve level.	Formula approach that defines level of target reserves to achieve 95 percent Treasury payment probability, through planned net revenues and risk mitigation tools.
Risk Mitigation Tools	None	Interim Rate Adjustment mechanism and cost deferrals implemented if reserves fall below an established level.
Sources of Capital:		
Third-Party Sources	No policy.	Use to the extent feasible to finance resource acquisitions and capital investments which traditionally have been financed with bonds issued to Treasury, as well as long-lived WNP-2 capital investments.
Bonds Issued to Treasury	Limited to incur no increase in Federal net debt.	Use to finance BPA capital program investments and Corps and Bureau capital investments, if timely and sufficient appropriations and/or third-party funding sources cannot be obtained.
Appropriations	No policy.	Use to finance Corps and Bureau capital investments.
Customer Revenues	Revenue finance BPA capital program investments to extent needed to avoid increase in net Federal debt. Also use for all nuclear project fuel acquisitions, replacements and capital additions.	Used to finance WNP-2 capital investments that are not debt financed.

39:DRF 1/10/93

III. BACKGROUND

At the Programs in Perspective (PIP) sessions in the fall of 1990, participants discussed financial goals and objectives proposed by BPA for FYs 1992 and 1993. At that time, BPA proposed to move the agency away from its total reliance on debt financing of capital investments by: (1) moving to a 90 percent total-debt-to-asset ratio by the year 2001; (2) financing from revenues approximately 35 percent of new Federal capital investments projected for the FYs 1992-2001 period; and (3) incurring no increase in outstanding BPA Federal debt over the same 10-year period. BPA proposed to implement its financial goals by setting rates to produce sufficient revenues in each year of the next decade to achieve those objectives.

Most of BPA's customers were unwilling to support this shift in capital investment funding policy and urged BPA to develop a long-range Financial Plan before making fundamental changes in financial policies. As part of the 1991 rate case settlement, and in recognition of BPA's then high level of projected financial reserves, BPA's objectives for the FY 1992-93 rate period were modified to include an average of $80 million per year in planned net revenues.

During the 1990 PIP meetings, BPA agreed to develop a long-term Financial Plan. In the spring of 1991, interviews were held with customers and other interested parties in the region to help define the scope and process for the Financial Plan. As a result of these meetings, work groups were established to focus on four principal subject areas. The work groups were made up of BPA staff, customer representatives, and members of the public.

The Issue Identification/Option Evaluation Work Group defined financial issues and developed criteria for evaluating options. The Scenario/Risk/Rates Analysis Work Group explored the risks facing BPA, developed scenarios and models for 10-year risk analysis, and analyzed the rate impacts of various capital financing options. The Capital Budget/Program Impacts Work Group examined hypothetical program budget levels in conjunction with alternative scenarios of BPA's business environment. The Financing/Sources of Capital Work Group evaluated alternative sources of capital to finance future FCRPS investments and the financial and rate effects of alternative capital structures, given capital budget requirements. Work group efforts led to the first version of the Financial Plan, the "Staff Comment Draft," which BPA circulated for public comment in April 1992.

Customer and public comment on the Staff Comment Draft of the Financial Plan were solicited at informal meetings throughout the region and at a public comment meeting in April 1992. A second draft of the Financial Plan entitled "Proposed 10-Year Financial Plan," dated June 1992, was prepared taking into account the comments received.

During the PIP meetings held in July 1992, BPA's Administrator and other senior officials engaged the region in discussions of proposed programs and their costs, rate levels, and the Proposed 10-Year Financial Plan. Thereafter, customers and interested parties in the region submitted written comments on BPA's proposed financial policies. The financial policies in this Financial Plan reflect consideration of the concerns of BPA's customers and other interested parties that were raised during the 2-year planning process, including during PIP.

IV. FINANCIAL RISK MITIGATION

A. SUMMARY OF BPA POLICY

The Financial Plan's risk mitigation policy is made up of the following elements:

- **Long-Term Financial Policy Choices**

  Probability of Meeting Treasury Payments - BPA shall establish rates to maintain a level of financial reserves sufficient to achieve a 95 percent probability of making its U.S. Treasury payments in full and on time for each 2-year rate period.

  - Rates will be set to include recovery of any inherent downward bias in BPA's expected cash flow distribution, taking into account normal operating risks.

  - **Interim Rate Adjustment** - BPA shall establish rates to include an IRA that will result in an interim rate increase in the second year of the rate period of up to 10 percent if at the end of the first year reserves fall below a specified trigger level, with an expected frequency of occurrence of no greater than 20 percent.

  - **Program Cost Deferrals** - Prior to implementing the IRA, BPA shall defer $25.0 million of program costs, with no more than $10.0 million of the deferral occurring in operating expenses, and the remainder in capital programs.

- **Near Term FY 1994-95 Implementation**

  - In the FY 1994-95 rate period, BPA will implement the 95 percent Treasury payment standard through a one-time phase-in approach, rather than meeting the standard within the first rate period. The phase-in will be accomplished by targeting an ***average*** 95 percent probability for each of the 2 years of the rate period, rather than for the 2-year rate period as a whole. This one-time only phase-in approach reduces the impact of the Financial Plan on rates in FYs 1994 and 1995.

BPA's 1993 rate case initial proposal will establish rates based on a target level of financial reserves of $380 million. To achieve this target level of reserves, the Tool Kit model results in planned net revenues for risk totaling $42 million over the FY 1994-95 rate period. For the initial 1993 rate proposal, planned net revenues for risk of $25 million over the FY 1994-95 rate period are included in revenue requirements, recognizing that additional cash flow for risk is projected to be available in FY 1995.

- The IRA will be implemented in the second year of the 2-year rate period if reserves at the end of the first year are projected to drop below a trigger point of $245 million.

- Planned net revenues for risk, target reserve levels, and the IRA trigger point may be revised during the 1993 rate case (based on specific factors that will be reviewed in BPA's 1993 rate case) to reflect changes in projected ending reserves for FY 1993 and operating risk conditions.

- **Long-Term Implications**

  - Consistent with the long-term policy choices outlined on page 9, BPA expects to maintain a target range of financial reserves of about $535 million on average during the remainder of the 10-year period. This higher level of target reserves in future rate periods is explained by the increased cost recovery risk to BPA when aluminum prices are in the normative range, rather than the depressed levels projected for FY 1994-95. This is explained in greater detail in Section E, "Determining the Target Level of Financial Reserves," which begins on page 22.

  - When beginning reserves are below $535 million (or the amount required to achieve a 95 percent probability standard of paying the Treasury in full and on time), planned net revenues for risk will be incorporated into BPA's revenue requirements which, together with the IRA and program cost deferral tools, will meet the 95 percent Treasury payment probability during each rate period.

- The long-term target level of financial reserves and the risk mitigation parameters will change from rate case to rate case to reflect changes in the levels of operating risk attributable to changes in BPA's environment.

This combination of risk mitigation measures is designed to provide the financial resources sufficient to meet the ordinary operating risks present in BPA's operating environment while promoting BPA's objectives of improving financial and rate stability. Figure 1 on page 12 graphically depicts BPA's historical financial reserves, and the expected target reserve levels and IRA trigger points, for both the near term (FY 1994-95) and the long term (FY 1996 and beyond), given the current modeling results.

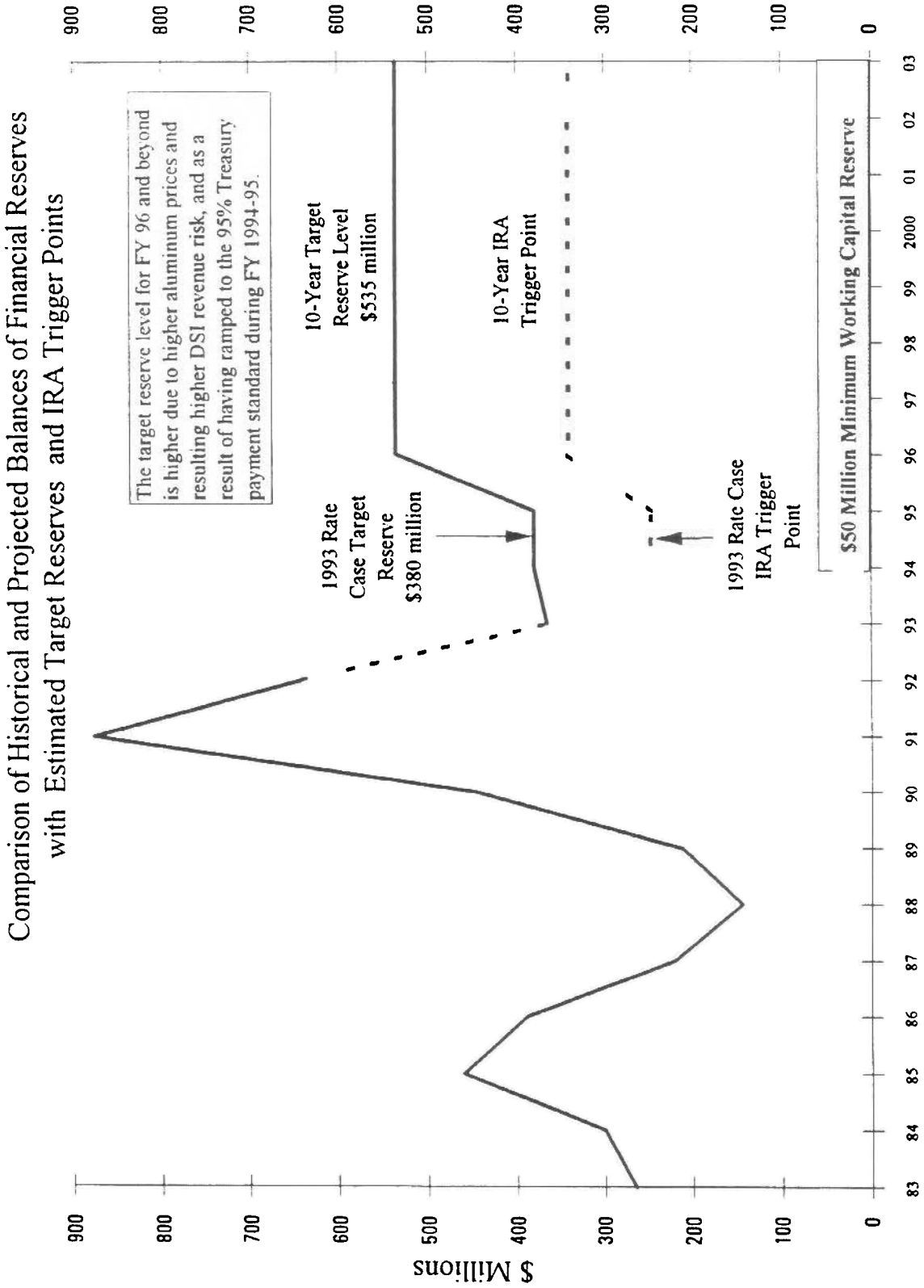
B. QUANTIFYING OPERATING RISKS

A key component of BPA's Financial Plan is the analytical approach used to evaluate and quantify risk. BPA's annual financial performance is subject to many kinds of operating risk that can cause BPA's revenues to fluctuate significantly from planned levels. In order to increase BPA's financial stability, the maintenance of adequate financial reserves along with adequate rate adjustment mechanisms are essential. BPA's financial reserves consist of available/projected cash balances and deferred Treasury borrowing. Deferred Treasury borrowing represents capital program expenditures temporarily financed with cash from revenues instead of with Treasury borrowing.

STREAM Model

BPA's Financial Plan process advanced the agency's ability to quantify normal operating risks. This was achieved through the development of a simulation model, the Short-Term Risk Evaluation and Analysis Model (STREAM). STREAM was developed cooperatively by BPA and its customers. The STREAM model takes into account the probability of occurrence of different outcomes for BPA's normal operating risk factors, including weather and its affect on annual hydro streamflow and heating/cooling loads, the price of aluminum for BPA's variable industrial rate customers, regional economic conditions, thermal plant performance, and the supply and demand for electrical energy in the Northwest and Pacific Southwest, which are particularly affected by the cost of competing fuels such as natural gas.

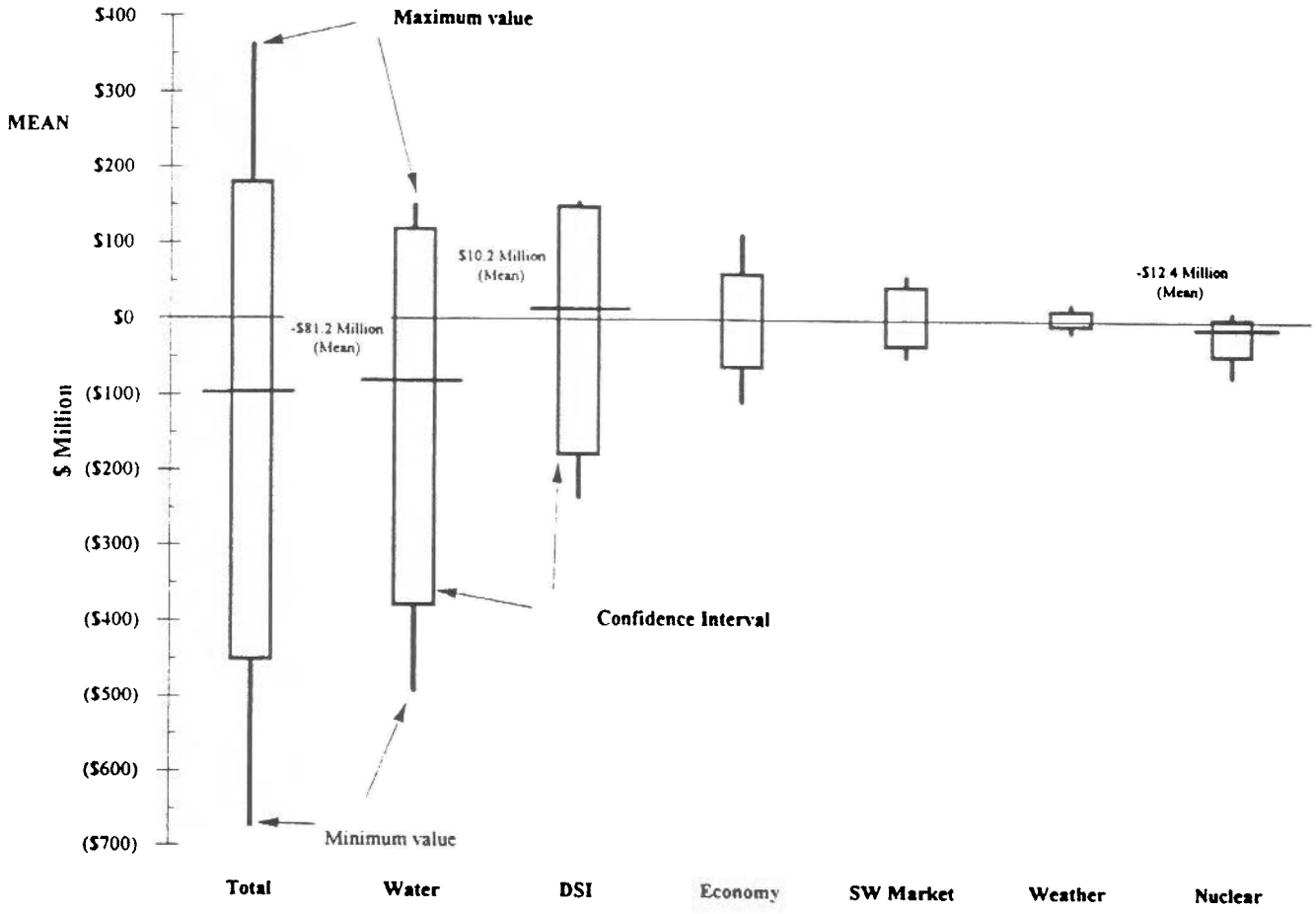
FIGURE 1


Comparison of Historical and Projected Balances of Financial Reserves
with Estimated Target Reserves and IRA Trigger Points
$ Millions
Year
900
800
700
600
500
400
300
200
100
0
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
2000
01
02
03
The target reserve level for FY 96 and beyond is higher due to higher aluminum prices and resulting higher DSI revenue risk, and as a result of having ramped to the 95% Treasury payment standard during FY 1994-95.
10-Year Target Reserve Level $535 million
1993 Rate Case Target Reserve $380 million
10-Year IRA Trigger Point
1993 Rate Case IRA Trigger Point
$50 Million Minimum Working Capital Reserve

Two primary risk factors explain most of the variability in BPA's annual net cash flows. The first is annual hydro system streamflows, which affect sales of nonfirm power and power purchases. The second is the market price of aluminum, which, through the variable rate to BPA's aluminum smelter customers, affects the annual amount of Direct Service Industry (DSI) revenues. Figure 2 below shows what the range of magnitude of each of the major operating risk factors would be if considered separately.

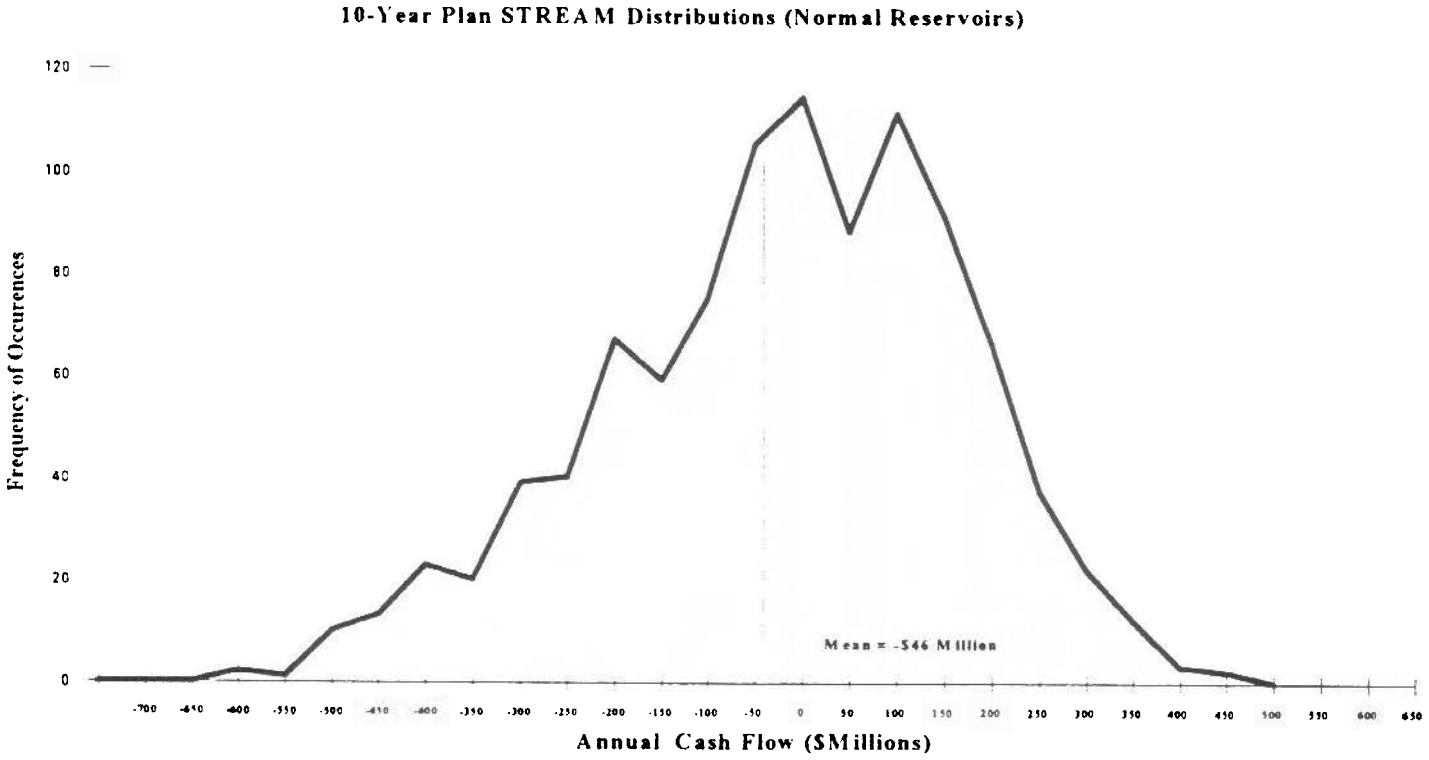
FIGURE 2

Analysis of Risk Factors as Reflected in 10-Year STREAM Distribution
Maximum Value, Minimum Value, Mean, and Confidence Interval



The STREAM model provides a more accurate specification of risks and the interaction among risk factors than previous methods and generates a more complete representation of the distribution of projected cash flows. The STREAM model projects the expected variation in BPA's annual cash flows by systematically combining and analyzing variations in the risk factors to determine the frequency, duration, and impact of these interactions on BPA's net cash flows. Figure 3 below depicts the 10-year distribution of cash flows that are representative of BPA's operating environment.

FIGURE 3



The analysis from the STREAM model shows that, in setting rates based on a single "median" or base case forecast for the future, there is an inherent downward bias in BPA's expected annual cash flow distribution, derived from the many possible outcomes for those future rate periods. This means that there is a greater probability that BPA's net cash flows will be lower than those planned at the end of any given year. As shown on Figure 3 above, based on a 10-year analysis, this downward bias is $46.4 million.

The size of this annual cash flow bias, or "true-up," will depend on the specific risk factor assumptions used in the median, or base case revenue forecast against which it is measured and upon which rates are based. The existence of this cash flow bias has been largely acknowledged by the region in reviewing the analyses conducted throughout development of the Financial Plan, and the region has been supportive that the true-up amount be included in determining BPA's rates. The specific mechanics of how the true-up is included are explained in the next section.

How STREAM is Used

The STREAM is used for two distinct purposes: first, to analyze the distribution of risk over a 10-year planning horizon, and second, to analyze the distribution of the same risk factors over the near-term 2-year rate period. In analyzing the 10-year planning horizon, the beginning of each 10-year simulation was "reset" to "***normal***" conditions. The 10-year STREAM analysis provides a "normative case" upon which to evaluate the alternative risk mitigation tools and observe their performance over a simulated 10-year period. In conducting the 2-year rate period STREAM analysis, initial conditions for each of the major operating risk factors are "reset" to ***current*** conditions for each 2-year simulation. This 2-year STREAM analysis is used specifically to develop the cash flow distribution for the 2-year rate period, because it reflects the most current near-term estimates for each of the operating risk factors consistent with the base case revenue forecast.

The STREAM cash flow data provides inputs to the risk mitigation Tool Kit Model which tests different combinations of risk mitigation "tools" to meet a given probability of making Treasury payments on time and in full over each 2-year rate period. These risk mitigation tools include alternative levels of annual planned net revenues for risk, different IRA levels and their frequency of occurrence, and the level of program cost deferrals.

C. RISK MITIGATION AND THE DEVELOPMENT OF RATE TOOLS

The issue of financial risk mitigation is concerned with BPA's ability to address the uncertainties of its operating environment. While BPA cannot eliminate all risks, it must find ways to mitigate its operating risk in its long-range financial planning. The ability of BPA to mitigate operating risks is a direct function of the maintenance of adequate levels of financial reserves.

Since BPA typically reviews its rates every 2 years, financial reserves must be sufficient, at a minimum, to mitigate against the probability of 2 successive years of poor financial results within any rate period. Because BPA's actual financial results can be quite different from its planned results, due to the operating risk factors previously discussed, adequate levels of financial reserves are necessary to assure BPA can make its Treasury payments. Thus, risk mitigation is predicated on the answer to two key questions:

1. How high should the annual probability be that BPA will make its Treasury payments in full and on time?

2. Given the desired probability of meeting Treasury payments, how much money does BPA need in reserves and/or other risk mitigation tools to protect against the low probability of 2 successive years of poor financial results within any rate period?

What Is the Acceptable Probability of Making Treasury Payments?

BPA's financial reserves could be set at a sufficiently high level to ensure nearly a 100 percent probability that the agency could make Treasury payments on time and in full. Achieving 100 percent certainty could require substantial wholesale rate increases to provide the needed up-front funding of reserves. The acceptance of modest amounts of Treasury payment risk reduces the amount of required reserves.

Comments received during the development of the Financial Plan have consistently supported the notion that BPA should plan to achieve a very high probability of meeting its Treasury payments. Many comments supported the 95 percent probability standard proposed by BPA. At the same time, however, comments indicated serious concern about the level of reserves and the rate increase that could

result from pursuing this standard, given BPA's current financial circumstances and increased program requirement rate pressures. BPA has addressed this concern by implementing the 95 percent probability standard using a one-time phase-in approach during the FY 1994-95 rate period.

Risk Mitigation Tools

The risk mitigation tools that have been considered and evaluated during development of the Financial Plan can be classified into two general categories: up-front funding and delayed risk funding. Up-front funding refers to the collection of net revenues in each year of a rate period to maintain or increase BPA's financial reserves. Delayed risk funding depends on the contingent collection of additional revenues in the second year of a rate period through the use of the IRA, and program cost deferrals. Delayed risk funding mechanisms are designed to "trigger" if financial reserves fall below a predetermined point at the end of the first year of a 2-year rate period.

Up-front Funding of Reserves. Over the FY 1984-93 period, BPA has included an operating margin (planned net revenues) averaging about $100 million in its rates. Planned net revenues provide an operating reserve to mitigate the impacts of net revenue shortfalls and therefore increase the assurance that BPA will be able to make Treasury payments on time and in full. The amount of planned net revenues included in rates has not previously been explicitly linked to a target level of financial reserves. In the current FY 1992-93 rate period, planned net revenues were included in rates for the additional purpose of reducing the growth in BPA's debt, and thereby increasing BPA's financial flexibility. Table 2 on page 18 outlines the planned versus actual increase in financial reserves over the FY 1984-93 period.

Delayed Risk Funding. In developing the Financial Plan, BPA and its customers evaluated the effectiveness of two delayed risk funding tools, the IRA and program cost deferrals. Delayed funding provides protection against Treasury deferrals only in the second year of a rate period. In the first year of a 2-year rate period, the only protection against a Treasury deferral is the beginning balance of financial reserves and the amount of planned net revenues included in BPA's revenue requirement for

TABLE 2

PLANNED VS ACTUAL INCREASE IN RESERVES

The planned and actual changes in BPA's reserves over the FY 1984-93 period are outlined below. The planned increase of $949 million in reserves over the 10-year period results from BPA's policy of planning for about $100 million in planned average annual net revenues. This table also shows the actual and projected change in BPA's reserve balance, beginning with the year-end reserve balance of $265 million at the end of FY1983.

CHANGES IN BPA RESERVES LEVELS
PLANNED VS ACTUAL
FY 1984-93
($ Millions)

	Planned Increase	Actual Change	Delta	Year end Reserve Balance
FY 1983				265
FY 1984	18	35	17	300
FY 1985	38	160	122	460
FY 1986	70	(71)	(141)	389
FY 1987	108	(170)	(278)	219
FY 1988	114	(75)	(189)	144
FY 1989	134	67	(67)	211
FY 1990	144	233	89	444
FY 1991	138	433	295	877
FY 1992	120	(236)	(356)	641
Projected 1/				
FY 1993	65	(276)	(341)	365
FYs 1984-93 Total	949	100	(849)	
Restated 2/				
FYs 1984-93 Total	949	(307)	(1,256)	

1/ Source: BPA Fourth Quarter Review, November 1992.
2/ BPA's reserves at the end of fiscal year 1991 would have been $407 million lower than they actually were, if BPA had not refunded high interest Supply System bonds.

This table shows that the policy of planning for net revenues to generate cash for risk mitigation has contributed to BPA's ability to make its annual Treasury payments in the face of many years with low streamflows and low aluminum prices.

This table also demonstrates some of the uncertainty in BPA's financial performance that has been modeled in the STREAM. In 5 out of the 10 years of this period, the actual change in reserves has differed from planned by more than $180 million.

the first year. However, because delayed funding tools provide some coverage for the second year of the rate period, their use allows BPA to reduce its reliance on up-front funding, while still achieving the desired Treasury payment probability.

Interim Rate Adjustment. BPA's adoption of the IRA, a delayed risk funding tool, has received support throughout the region. The IRA is a 1-year rate adjustment, implemented in the second year of a rate period, if the level of financial reserves at the end of the prior year are projected to fall below a specified level.

Program Cost Deferrals. Program cost deferrals, another delayed risk funding tool, were consistently supported by customers in developing the Financial Plan. If triggered, the cost deferral mechanism would occur in conjunction with the IRA and would trigger reductions in BPA's program levels during the rate period. Program deferrals would total $25 million, with up to $10 million occurring in expense programs and the remainder in capital programs.

While the use of these delayed risk funding tools reduced the amount of annual planned net revenues for risk, it did not eliminate the need for annual planned net revenues to augment financial reserves. This up-front funding rate tool is discussed next.

Annual Planned Net Revenues For Risk Formula. The determination of the amount of annual planned net revenues for risk necessary to obtain the desired Treasury payment probability is expressed in the formula below. This formula is based on two key components: the estimated annual cash flow bias, or "true-up," and the difference between the target cash reserves and the estimated beginning reserve balance at the start of the rate period.

$$\text{Annual Planned Net Revenues for Risk} = \text{Annual Cash Flow Bias (True-up)} + \frac{\text{(Target Reserves-Beginning Reserves)}}{2}$$

The target reserves level is determined through a series of repetitive testing of various combinations of up-front funding (net revenues for risk) and delayed risk funding (cost deferrals and IRAs) until the desired Treasury payment probability and frequency of IRA implementation targets are obtained. In the formula above, annual planned net revenues for risk is a function of the beginning reserve level, the target reserve balance, and true-up. A decrease in the size, frequency, or elimination of delayed funding tools will necessitate an increase in the target reserve balance and resultant net revenues for risk in order to maintain the desired Treasury payment probability. Conversely, increasing the size or frequency of delayed funding tools results in a reduction in the target reserve level and net revenues for risk amount in order to maintain the same Treasury payment probability.

The cash flow bias, or true-up, component of the formula reflects the expectation that, on average, BPA's annual cash flow will fall short of the base forecast by this amount. In cases where BPA's beginning reserves are below the target level, the second component of the formula is based on the collection of one-half of the difference between the beginning financial reserves and the target level of financial reserves in each year of the 2-year rate period. One would then expect that, on average, BPA would achieve the target level of reserves by the end of the rate period, provided the true-up adjustment is also included in setting rates.

Inherent in BPA's annual planned net revenues for risk formula approach is the fact that the annual amount of planned net revenues for operating risks will vary from one rate case to the next. This is due to variations in BPA's projected beginning reserve balance; changes in the annual cash flow bias ("true-up"), based on the assumed initial conditions of each risk factor for each rate case; and changes in the overall cash flow distribution resulting from changes in base case revenue forecast assumptions. The interaction between planned net revenues for risk and the other risk mitigation factors is discussed further in Section E.

D. BPA'S YEAR-END CASH WORKING CAPITAL RESERVE

In calculating the 95 percent Treasury payment probability, BPA previously had assumed that $100 million of its reserves at fiscal year-end would be reserved to meet near-term cash operating requirements and would therefore not be available for making Treasury payments. Customers encouraged BPA to re-examine its assumption about its minimum year-end cash working capital reserve and consider other alternatives. One of the alternatives suggested was that BPA rely on its short-term borrowing arrangement with the Treasury to meet short-term cash operating requirements associated with funding BPA's capital program outlays, if financial conditions so warranted.

Based on discussions with some of the Financial Plan work group participants, BPA estimated that, under adverse financial circumstances, $50 million in year-end financial reserves would be sufficient to cover its expense program outlays, and that BPA could rely on short-term borrowing from Treasury to temporarily finance its near-term capital program outlays. Thus, BPA revised the year-end cash working capital reserve assumption for this Financial Plan to $50 million, and the Tool Kit model analyses contained herein assume that Treasury deferrals occur when financial reserves at the end of any year are less than $50 million.

E. DETERMINING THE TARGET LEVEL OF FINANCIAL RESERVES

The target level of financial reserves that BPA needs to maintain depends on the following five principal factors. The discussion below explains the key relationships which influence the levels of BPA reserves needed to meet various Treasury payment probabilities.

1. Target Treasury payment probability;
2. Treasury deferral point;
3. IRA and cost deferral mechanisms;
4. Beginning reserves; and
5. Amount of risk assumed in BPA's base revenue forecast.

Target Treasury Payment Probability. The higher the desired probability of making Treasury payments on time and in full, the greater the level of financial reserves BPA needs at either the start of a rate period, or to be collected during the rate period.

Treasury Deferral Point. The lower the amount of minimum year-end cash working capital BPA reserves at year-end to pay its bills, the lower the amount of target reserves. As discussed above, Treasury deferrals are modeled to occur when year-end reserves drop below $50 million.

Interim Rate Adjustment And Cost Deferral Mechanisms. The IRA and program cost deferrals are delayed risk funding tools that provide funding based on decreases in reserves during the first year of a rate period. Increasing the size and frequency of the IRA, i.e., the expected recovery of funds from this tool, makes it possible to maintain lower levels of BPA reserves, given a specific Treasury payment probability objective.

Beginning Reserves. The higher the beginning reserves, the less likely it will be that a very poor first year of a rate period will result in a deferral of planned Treasury payments. Therefore, higher beginning BPA reserves allow for more reliance on the delayed funding tools, such as the IRA, and conversely, lower initial reserves require that higher levels of planned net revenues for risk be collected during the rate period, with less reliance placed on the IRA.

Amount of Risk Assumed in Base Revenue Forecast. The fundamental issue in determining a target level of reserves is quantifying how much risk exists that BPA's future revenues will differ from the base revenue forecast. Clearly, larger levels of potential deviations between the base revenue forecast and other possible revenue outcomes require larger amounts of financial reserves. The two most dominant risk factors are streamflow assumptions and the impact of projected aluminum prices on BPA's DSI revenues.

For the FY 1994-95 base revenue forecast used in BPA's initial 1993 rate case proposal, BPA is assuming low aluminum prices, with the Variable Rate at its lowest value. The level of revenue risk associated with DSI revenues is therefore low and thus requires a lower level of target reserves. In contrast, over the 10-year

"normative case," the base assumption for aluminum prices projects the Variable Rate to be on the "plateau" (meaning more average conditions), which presents greater downside revenue risk, therefore requiring a higher level of target reserves.

F MODELING RESULTS AND IMPLEMENTATION ISSUES

10-Year STREAM and Tool Kit Results

The results of the STREAM and Tool Kit analyses over the 10-year period reflect a "normative case." The 10-year analyses are conducted assuming that for each simulation, initial conditions for each of the operating risk factors are "reset" to "***normal***" conditions that are more representative of long-term conditions that have the greatest probability of occurrence. The "normative case" allows an evaluation of the performance of the individual tool kit measures over an extended period, and also provides 10-year average statistics for key risk and Tool Kit parameters.

The 10-year STREAM analysis results in a cash flow distribution with an average negative bias of $46 million. Reflected in this result is the amount of risk inherent in the "normal" level of risk exposure assumed in the STREAM. Based on the 10-year "normative case," the average level of target reserves is $535 million, with average annual planned net revenues for risk of approximately $70 million. The IRA, designed to increase rates up to a maximum of 10 percent with an average 20 percent frequency of occurrence, would trigger at an ending reserve balance of about $340 million. Program deferrals would occur at the same trigger point as the IRA.

2-Year STREAM and Tool Kit Results -- FY 1994-95 Implementation

For the FY 1994-95 rate period, BPA conducted 2-year STREAM and Tool Kit analyses. These results incorporate the most current estimates available to BPA at the time the analyses were prepared for each of the operating risk factors. Currently, these estimates reflect unusually low aluminum prices as well as the phase-in of the long-term Treasury payment standard. The inclusion of the current unfavorable conditions in BPA's near-term base revenue forecast and the phase-in of the Treasury payment standard has a direct effect on the 2-year STREAM and Tool Kit results. Since much of the operating risk related to low aluminum prices

is already captured in the base revenue forecast, the 2-year STREAM distribution results in a smaller negative bias of $28 million relative to the $46 million in the 10-year "normative case."

For the 2-year rate period, estimates prepared for BPA's 1993 initial rate proposal result in target reserves of $380 million, with average annual planned net revenues for risk of $21 million. The IRA would trigger if reserves were reduced to $245 million at the end of the first year of the 2-year rate period. These results are subject to change during BPA's 1993 rate case as risk conditions are updated prior to BPA preparing its final rate proposal.

Because previous rate adjustment tools included in BPA rate schedules have never been triggered, the region will be exploring new frontiers in the implementation of the IRA. Some of the procedures for its implementation and administration may eventually be modified after the region gains some experience with it.

Refund Mechanism

BPA will be considering a refund policy such that when reserves exceed $800 million, 50 percent of the excess would be rebated to customers. The other 50 percent would be returned to the Treasury by increasing amortization payments above the levels contained in the repayment plan or by reducing the levels of planned borrowing. This refund policy is anticipated to be developed prior to BPA's 1995 rate case.

V. FEDERAL COLUMBIA RIVER POWER SYSTEM CAPITAL FUNDING

A. SUMMARY OF BPA POLICY

BPA's policy concerning the sources of funds used to finance capital investments of the FCRPS will be to pursue the least-cost sources of funding, while trying to minimize the use of BPA bonds issued to the Treasury. This financial policy will be accomplished by adopting the following capital funding plan:

- To reduce pressure on its Treasury borrowing cap, BPA will seek to increase the use of third-party sources of capital to the greatest extent feasible. Priority will be given to tax-exempt third party sources to minimize interest expense. Third-party sources (including taxable sources) that are more costly than BPA's Treasury bond rate will be utilized when they are cost-effective, i.e., when the overall economics of a resource proposal provides greater net benefits than competing proposals utilizing lower interest rate sources of capital.

- BPA capital investments that cannot be funded through third-party financing will continue to be financed with bonds issued to the Treasury. BPA will consider requesting an increase in its $3.75 billion Treasury borrowing cap.

- Corps and Bureau capital investments of the FCRPS will be primarily funded through appropriations to avoid added pressure on BPA's Treasury borrowing cap. BPA will, however, use bonds issued to the Treasury for critical generating capability and reliability investments of the Corps and Bureau, for which timely and sufficient appropriations cannot be obtained.

- Capital additions and replacements with asset lives in excess of 10 years for Supply System nuclear projects WNP-2 will be funded to the extent feasible by third-party financing sources. Remaining WNP-2 capital investments will be funded through current revenues.

- Opportunities for joint and multiparty development of transmission and energy resource investments will be pursued when they are mutually beneficial.

BPA's capital funding policy objective of increasing the use of the third-party financing will be difficult to achieve. As outlined on Table 5 on Page 37, $720.4 million in investments are currently projected to be funded through third-party financing arrangements. This represents just 10 percent of the total projected funding requirements of $7,224.0 million (per Table 3) over the Financial Plan period (FY 1992-2001).

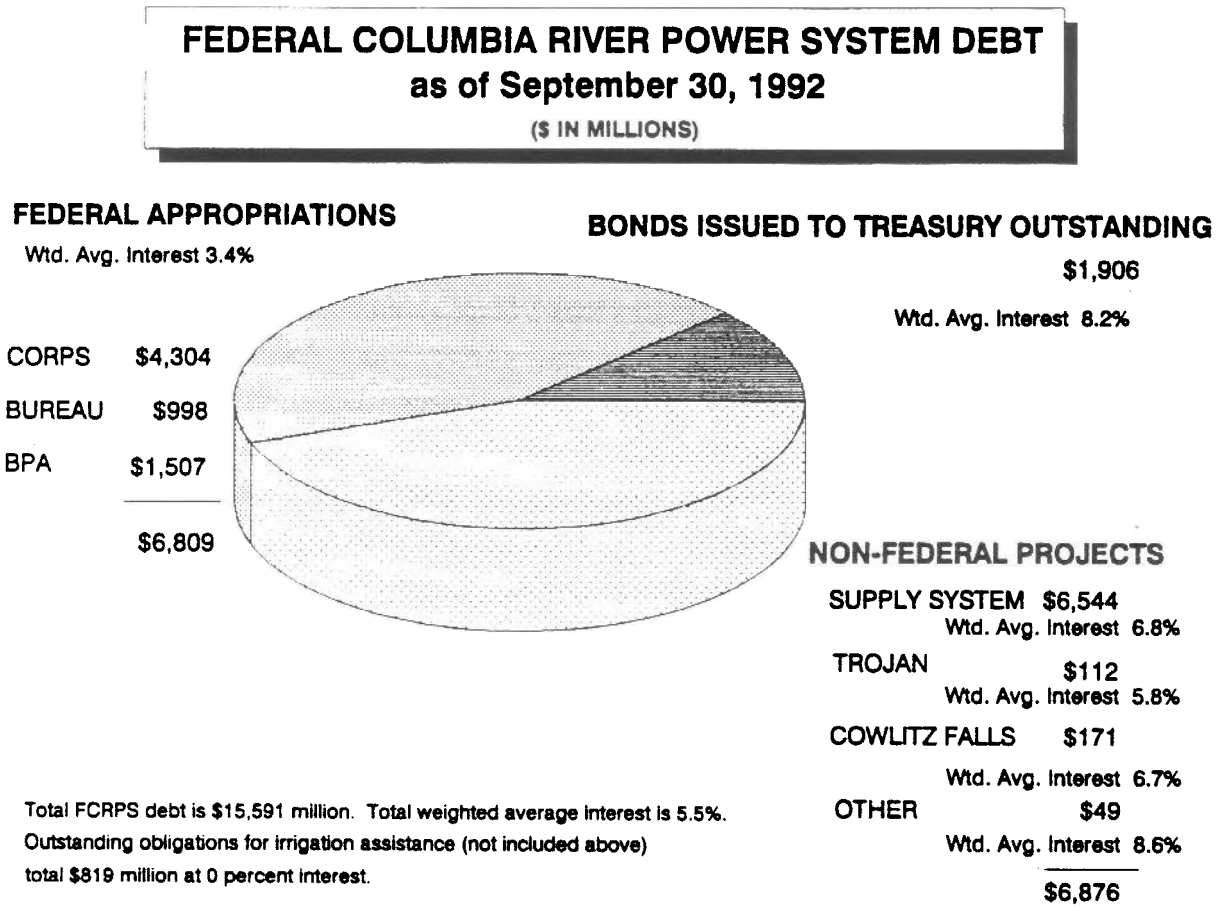
Transmission system development and replacements, along with capital equipment investments, make up $3,636.3 million, or 50 percent, of the total FCRPS projected funding requirements during the 10-year period. These transmission system investments have been traditionally financed with BPA bonds issued to the Treasury. To reduce the level of Federal borrowing, BPA will identify and consider opportunities for increased use of joint ownership and multiparty development of proposed investments to increase the level of third-party financing.

Even with increased third-party financing efforts, the magnitude of the projected investment of $7.2 billion over the FY 1992-2001 period indicates that BPA needs to obtain an increase in its current $3.75 billion Treasury borrowing cap, or adopt other sources of funding, such as direct market access authority and current revenues, or both.

B. FCRPS EXISTING DEBT STRUCTURE

BPA's capital investments have historically been financed in full with debt, using three primary sources: (1) bonds issued by BPA to the Treasury; (2) Federal appropriations; and (3) non-Federal third-party sources. At the end of FY 1992, BPA's outstanding long-term debt obligations totaled $15.6 billion. Of this amount, $8.7 billion was owed to the Treasury, and $6.9 billion was owed to bondholders secured through contractual agreements between BPA and non-Federal project owners. (See Figure 4 on the following page.) The weighted average interest rate on BPA's total outstanding obligations was 5.5 percent as of September 30, 1992.

FIGURE 4



C. PROJECTED FCRPS FUNDING REQUIREMENTS

Over the next decade, BPA and its customers must finance a high level of planned FCRPS capital investments for energy resource acquisitions, transmission construction and replacements, and fish and wildlife projects. These capital investments are intended to meet the region's increasing demand for power, provide reliable and responsive transmission services, and help in restoring and enhancing fish runs. Current FCRPS capital investment projections exceed $7.2 billion through FY 2001 (see Figure 6 and Table 3 on pages 29 and 30).

D. CAPITAL FUNDING SOURCES

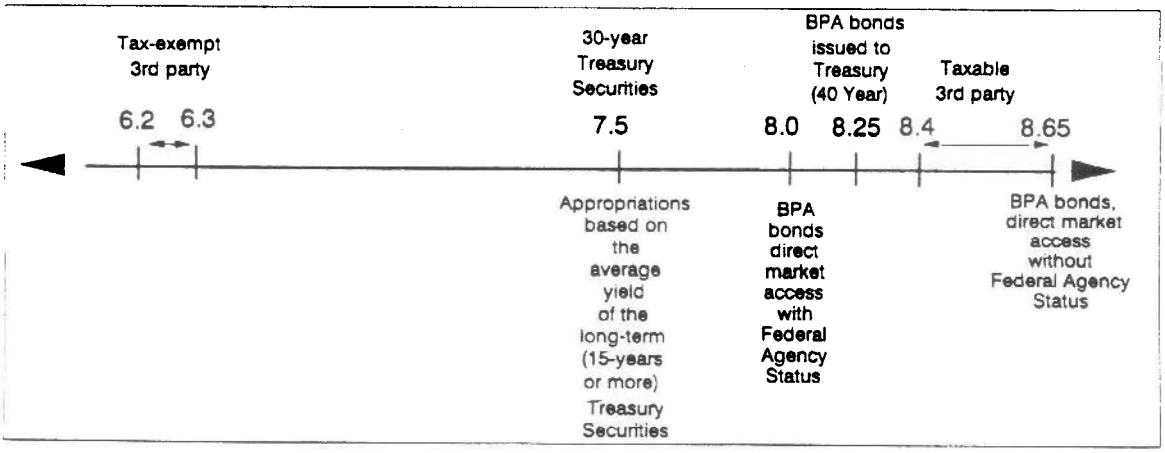
Sources of capital available to the FCRPS fall into four main categories:

- Federal sources, including Federal appropriations for Corps and Bureau projects and bonds that BPA issues to Treasury;
- Third-party debt, both tax-exempt and taxable;
- Current revenues; and
- Direct capital market access, an option that would require new legislation authorizing BPA to sell bonds in the public market.

These sources of capital differ in terms of legal authorities required, terms, conditions, benefits, and costs. A primary factor in any form of debt financing is the rate of interest charged. Figure 5 below presents a continuum of current interest rates as of December 1992, associated with these sources. Issuance costs associated with tax-exempt and taxable third-party sources (estimated at 0.5 to 1.5 percent of bonds, depending on the size of the offering sold), and the potential for bonds sold by BPA directly to public markets (0.75 percent) are not included. Such issuance costs increase the effective interest cost of these sources.

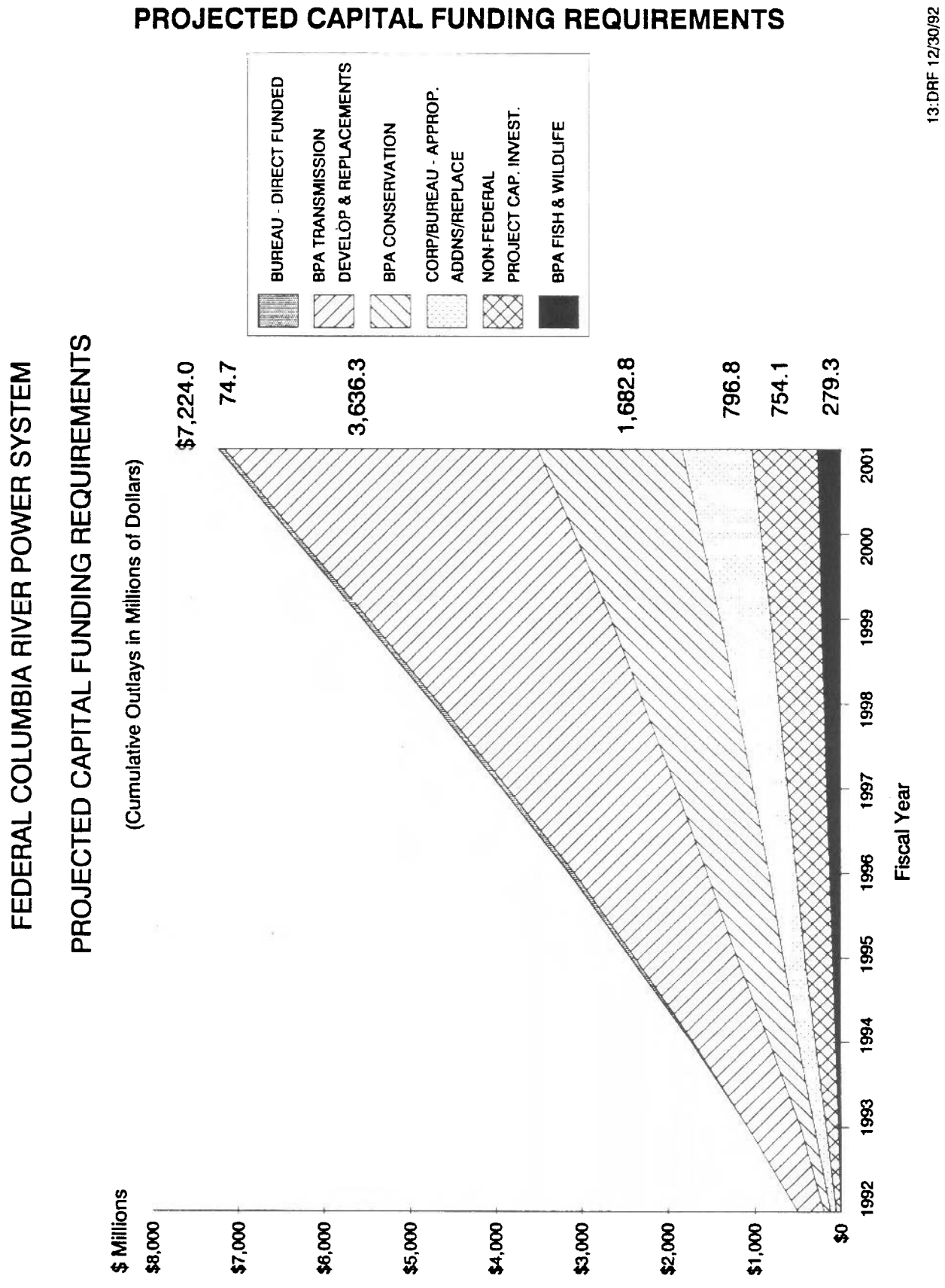
FIGURE 5

INTEREST RATE CONTINUUM
ALTERNATIVE SOURCES OF CAPITAL
(Interest Rate in %)



Based on market interest rates as of December 1992. Actual interest rate spreads may change based on a variety of credit market factors. Since BPA has neither issued bonds in public markets nor backed taxable 3rd party issued debt, interest rates for these financings are only estimates; actual experience could be significantly different.

FIGURE 6


PROJECTED CAPITAL FUNDING REQUIREMENTS
FEDERAL COLUMBIA RIVER POWER SYSTEM
PROJECTED CAPITAL FUNDING REQUIREMENTS
(Cumulative Outlays in Millions of Dollars)
BUREAU - DIRECT FUNDED
BPA TRANSMISSION DEVELOP & REPLACEMENTS
BPA CONSERVATION
CORP/BUREAU - APPROP. ADDNS/REPLACE
NON-FEDERAL PROJECT CAP. INVEST.
BPA FISH & WILDLIFE
$7,224.0
74.7
3,636.3
1,682.8
796.8
754.1
279.3
$ Millions
$8,000
$7,000
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$0
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
Fiscal Year
13:DRF 12/30/92

FEDERAL COLUMBIA RIVER POWER SYSTEM (FCRPS)
PROJECTED CAPITAL FUNDING REQUIREMENTS
(Annual Outlays in Millions of Dollars) 1/

	FY 92	FY93	FY94	FY95	FY96	FY 97	FY98	FY 99	FY 2000	FY 2001	Total FYs 92-2001
BPA Capital Funding Requirements											
Transmission System Development 1/	203.1	206.0	160.1	200.8	253.6	315.4	326.6	324.3	294.6	268.6	2,553.1
System Replacements	87.3	83.1	84.9	89.1	89.6	88.3	92.0	95.5	108.5	112.9	931.2
Capital Equipment	11.0	14.0	17.5	14.9	16.3	14.9	14.6	14.9	16.6	17.3	152.0
	301.4	303.1	262.5	304.8	359.5	418.6	433.2	434.7	419.7	398.8	3,636.3
Energy Conservation - BPA Financed 2/	80.2	79.5	109.9	126.4	116.5	117.2	119.9	123.8	133.4	142.9	1,149.7
Energy Conservation - Potential Third-Party Debt Financed 2/	0.0	0.0	59.2	68.0	62.8	63.1	64.6	66.6	71.8	77.0	533.1
	80.2	79.5	169.1	194.4	179.3	180.3	184.5	190.4	205.2	219.9	1,682.8
Fish and Wildlife	11.2	20.8	37.4	34.6	38.1	32.1	28.2	24.7	25.6	26.6	279.3
Bureau Investments - Direct Funded by BPA 3/	0.0	0.0	30.3	27.4	11.7	3.6	1.7	0.0	0.0	0.0	74.7
	11.2	20.8	67.7	62.0	49.8	35.7	29.9	24.7	25.6	26.6	354.0
TOTAL BPA CAPITAL FUNDING REQUIREMENTS	392.8	403.4	499.3	561.2	588.6	634.6	647.6	649.8	650.5	645.3	5,673.1
Corps & Bureau Cap. Invest. Funded by Approp.											
Additions/Replacements	63.4	77.6	59.6	45.3	67.0	81.4	89.3	97.4	104.2	111.6	796.8
TOTAL FEDERAL CAPITAL FUNDING REQUIREMENTS	456.2	481.0	558.9	606.5	655.6	716.0	736.9	747.2	754.7	756.9	6,469.9
Non-Federal Project Capital Investments											
WNP-2 - Third Party Debt Financed Capital Additions/Replacements 4/	0.0	31.6	32.7	29.4	1.6	0.0	0.0	0.0	0.0	0.0	95.3
WNP-2 - Revenue Financed Capital Additions/Replacements	50.4	37.5	36.4	39.3	39.4	43.4	40.7	46.2	60.3	40.8	434.4
WNP-2 - Fuel (Capitalized, Revenue Financed)	0.0	21.7	24.9	21.4	20.4	20.8	21.7	23.5	29.9	40.1	224.4
Idaho Falls/Cowlitz Falls Additions/Replacements	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL NON-FEDERAL CAPITAL FUNDING REQUIREMENTS 5/	50.4	90.8	94.0	90.1	61.4	64.2	62.4	69.7	90.2	80.9	754.1
TOTAL FCRPS FUNDING REQUIREMENTS 5/	506.6	571.8	652.9	696.6	717.0	780.2	799.3	816.9	844.9	837.8	7,224.0

FOOTNOTES:

1/ BPA capital funding requirements and non-Federal project capital investments for FYs 1993-2001 are compatible with program levels in the Programs in Perspective (PIP) Closeout Letter of September 11, 1992, except as noted in footnote 2. BPA capital funding requirements are stated on an outlay, rather than on a budget obligation basis. Corps and Bureau investments, including those funded directly by BPA , reflect capital expenditure estimates submitted by these agencies for FYs 1992-95. For FYs 1996-2001, FY 1995 amounts have been escalated by 3 percent per year. Preliminary unaudited actuals are shown for FY 1992.

2/ Assumes that starting in FY 1994, 35 percent of the BPA capital conservation program levels in the PIP Closeout Letter will be financed through third parties. Capitalization policy results in additional $1.6 million investment per year starting in FY 1994.

3/ Reflects investments that the Bureau has proposed for direct funding in BPA's FY 1994-95 budget process.

4/ Program levels in the PIP Closeout Letter assumed that capital expenditures totalling $26.3 million ($8.6 in FY 1993, $9.7 in FY 1994, $6.4 in FY 1995) for megawatt improvement projects are debt-financed by the Supply System beginning in FY 1993. Additional $23 million per year to be funded with third party debt for FYs 1993-95.

5/ Excludes capital investments, if any, for Trojan.

14: DRFA-1/6/93

The Financial Plan work groups analyzed and evaluated the four alternative funding sources for:

- Cost-effectiveness;

  Impact on BPA rates in both the short- and long-term;

- Reliability, so that BPA is sure to meet its FCRPS capital funding needs;

- Impact on the current $3.75 billion Treasury borrowing cap; and

- Impact on BPA's debt service coverage ratios.

A summary of this analysis and evaluation is discussed below for each funding source. In addition, Table 4, "The View from Wall Street," on page 32, summarizes factors that the financial community would consider in evaluating utility capital structures and credit worthiness.

Bonds Issued to the Treasury. BPA plans to use this source to finance BPA capital program investments that are not financed with third-party sources. In addition, bonds issued to the Treasury will be used to finance Corps and Bureau investments that are critical to generating capability and reliability if timely and sufficient appropriations cannot obtained. Based on the capital investment projections shown on Table 5, on page 37, investments totaling $5,243.1 million during the FYs 1992-2001 period will be financed with this funding source. (The $5,243.1 million consists of: transmission construction of $3,753.4 million, fish and wildlife improvement of $312.1 million, and conservation, direct application renewable, and generating resource investments of $1,177.6 million.)

BPA's Treasury borrowing is legislatively capped at $3.75 billion of bonds outstanding. Of this total, $2.50 billion is for transmission and other Federal capital investment purposes, including fish and wildlife and conservation and renewable resources. The remaining portion, $1.25 billion, is reserved for conservation, direct application renewable, and resource purposes. At the end of FY 1992, bonds outstanding with Treasury totaled $1,905.6 million, with

TABLE 4

THE VIEW FROM WALL STREET

Bond rating organizations use a combination of several factors to rate a utility's credit-worthiness. Factors they consider include:

- The nature of the utility, including its powers, obligations and financial structure;
- The breadth and depth of the service area economy;
- The nature of demand and supply sides of system operations;
- The utility's financial and rate performance, such as rate structure, quality and quantity of revenue stream, percent of debt, and financial "cushions" provided to pay debt service;
- Ability of agency or utility to revise rates when necessary;
- A demonstration that the utility has planned for and/or mitigated potential financial risks; and
- A demonstration that the utility is committed to implementing its financial planning tools when needed.

Bond rating organizations have indicated that they look at generally the same financial ratios for BPA as they would for any utility. They would weight them differently, however. For example, debt service coverage would be treated as an important indicator, but a lower annual level may be acceptable for BPA given its ability to defer Treasury payments. (Deferrable Treasury payments include Corps and Bureau O&M, interest on Federal obligations, and planned principal payments on Federal debt.) In addition, the investment community has suggested that the total debt to asset ratio is a useful indicator of a utility's credit-worthiness. Results for this ratio indicate that BPA's capital structure is made up almost entirely of debt, and is indicative of BPA's "uniqueness" as compared to other utilities. The size of BPA's financial reserves is also viewed as playing an important role in determining BPA's financial strength.

The financial community generally agrees that full reliance on debt to finance Federal investments would not adversely affect public market access, but that continued market acceptance of 100 percent debt would be contingent on:

1. BPA maintaining significant debt repayment coverage;
2. Treasury borrowing capacity remaining at a significant level and appropriations remaining available for Corps and Bureau needs; and
3. Political pressures or other extraordinary risks not substantially increasing future financing needs.

$1,086.6 million still available under the transmission/other Federal capital investment portion of the cap, and $757.8 million available under the conservation, direct application renewable, and generating resources portion.

Interest rates on bonds issued by BPA to the Treasury are set at market interest rates comparable to securities issued by U.S. Government corporations. Typically, BPA's 40-year bonds that contain call provisions are priced by Treasury with a "markup" of about 70-80 basis points above 30-year Treasury bonds. (A basis point is one-one hundredth of 1 percent, i.e., .01.) As of September 30, 1992, the weighted average interest rate on outstanding bonds issued to the Treasury was 8.2 percent.

Reliance on this source of capital is not risk-free. Because of growing Federal deficit pressures, there have been repeated efforts during the Federal budget process to reduce BPA's borrowing. Congress has indicated in report language that BPA should reduce its reliance on Federal debt. As shown on Table 5, the current $2.50 billion transmission/other Federal capital investment portion of the Treasury borrowing cap is projected to be reached during FY 1997 on a cash basis. The $1.25 billion portion of the cap for conservation and renewable resource purposes is projected to be reached during FY 2002.

BPA will consider requesting an increase in the $3.75 billion Treasury borrowing cap to maintain Treasury bonds as a viable, cost-effective financing option. Attempts to raise the borrowing cap may be difficult to achieve due to growing Federal deficit pressures.

Federal Appropriations. BPA plans to continue the primary reliance on this funding source to finance Corps and Bureau capital investments of the FCRPS. Direct funding with bonds issued to the Treasury will be used, however, when timely and sufficient appropriations for these agencies' investments cannot be obtained. In recent years, the Corps and Bureau have faced growing difficulty obtaining appropriations sufficient to keep Federal hydroelectric resources operating efficiently. Newly enacted legislation clarifies BPA's authority to direct fund Corps and Bureau additions, replacements, and improvements, as well as operations and maintenance costs for power facilities. Interest rates on new appropriations are slightly less than interest rates on the bonds that BPA issues to

the Treasury. Based on the capital investment projections in Table 5, Federal appropriations for capital investments totaling approximately $938.1 million will be required over the 10-year period.

Third-Party Sources. BPA will pursue the use of third-party sources to the greatest extent possible, with priority given to tax-exempt third-party sources. If third-party financing is successful, it should reduce pressure on BPA's Treasury borrowing cap and, to the extent that tax-exempt sources are used, help minimize interest costs. BPA also plans to use third-party financing arrangements for new conservation and generating resource acquisitions that BPA would treat as capitalized contracts, and to finance, when feasible, long-term WNP-2 additions and replacements. Based on investment levels in Table 5, FCRPS investments totaling $720.4 million are targeted to be financed with this source through FY 2001.

Increased levels of third-party financing can be achieved only if BPA and its utility customers work together in partnership. The near-term challenge for BPA and its customers is to find new opportunities to structure the financing of new FCRPS investments through these types of arrangements.

Since the mid-1970s, BPA has borrowed through third-party sources to finance generation, conservation, and transmission projects. Third-party borrowing sources fall into two general categories that are key determinants of whether they quality for tax-exempt financing:

1. State and local agency: Issuers that exercise governmental authority of a state, including individual states, joint operating agencies, state authorities, municipalities, Public Utility Districts, and counties. Generally, debt issued by these entities could qualify for tax-exempt status.

2. Cooperatives and nonprofit and for-profit corporations: Private enterprises licensed by a state to conduct business. Such corporations have a legal identity of their own. Generally, debt issued by such entities would not qualify for tax-exempt status.

Third-party debt differs from Treasury debt in that entities other than BPA or the Treasury issue the debt. Ownership of transmission facilities financed through third-parties may be Federal or non-Federal. Because BPA is precluded by law from owning generating resources, generation facilities are owned either by non-Federal entities or the Corps or Bureau. In certain cases, BPA serves as guarantor or security for bonds that the third-party sells, with the effect likely to be wider market access and more favorable interest rates for the seller (i.e., bond ratings based on BPA's credit worthiness). BPA sets rates to recover total system costs. This includes BPA's payments for third-party obligations, and all other operating expenses which have priority over the $600-700 million that it plans and schedules to pay the Treasury each year. Because BPA's annual planned payments to Treasury are paid last, they are an important factor in evaluating the payment security to third-party entity bondholders.

Third-party sources of capital are particularly attractive if the issuer and the project qualify for tax-exempt financing. Currently, tax-exempt bonds backed by BPA would trade at approximately 220 to 245 basis points lower than taxable third-party bonds, and about 200 basis points lower than bonds that BPA issues to Treasury. Given the magnitude of energy resource investments projected through FY 2001, use of tax-exempt debt could reduce financing costs substantially.

Normally, bonds sold or backed by Federal agencies such as BPA would be taxable, not tax-exempt. However, Section 9(f) of the Pacific Northwest Electric Power Planning and Conservation Act enables BPA to acquire conservation, direct application renewable, and generation resources through public entities who finance these investments at tax-exempt rates, provided certain requirements and qualifications are met. Use of Section 9(f) is constrained primarily by post-1980 load growth of BPA's state and local government preference customers. To qualify, all or most all of the resource's capability must benefit tax-exempt entities.

Current Revenues. Current revenues have been used to temporarily fund a portion of BPA capital program expenditures. As of the end of FY 1992, some $196 million of BPA's financial reserves were held in the form of deferred borrowing capability. In other words, rather than borrow, BPA used $196 million in cash to temporarily fund BPA capital expenditures, which can be borrowed for at a later date. Deferred

borrowing capability can be accumulated and converted to cash through the issuance of bonds to the Treasury at a later date. This cash management flexibility enables BPA to time its borrowing to when interest rates are favorable.

Current revenues will be used to finance WNP-2 additions and replacements that are not financed with third-party debt. As shown on Table 5, this totals $658.8 million over the 10-year period.

BPA Direct Capital Market Access. Authority to sell bonds in the public market will continue to be evaluated for cost-effectiveness and as an alternative to increasing BPA's Treasury borrowing cap. BPA direct capital market access would require new Federal legislation providing BPA the authority to sell bonds in the public market.

Projected Debt Structure For FYs 1992-2001. The projected schedule of borrowings and amortization by funding source for FYs 1992-2001 is outlined on Table 5 on page 37. The composition of BPA's projected debt structure at the end of FY 2001 is depicted graphically on Figure 7 on page 38. A comparison of the changes in the composition of BPA's debt structure between FY 1992 and FY 2001 is also presented on Figure 7.

(1011R)

FEDERAL COLUMBIA RIVER POWER SYSTEM
PROJECTED SCHEDULE OF BORROWINGS AND AMORTIZATION (CASH BASIS)
Millions of Dollars

	FY 92 1/	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 2000	FY 2001	TOTAL FYs 92-2001
Transmission Construction & Fish & Wildlife Bonds Issued to Treasury ($2.5 Billion Cap)											
Beginning Debt Balance	1,234.6	1,413.4	1,607.8	1,801.9	2,010.1	2,213.6	2,508.7	2,830.8	3,104.6	3,386.5	**1,234.6**
Amounts Borrowed - Transmission Construction 2/ 3/	323.8	323.1	292.8	332.2	371.2	422.2	434.9	434.7	419.7	398.8	**3,753.4**
Amounts Borrowed - Fish & Wildlife	50.0	14.8	37.4	34.6	38.1	32.1	28.2	24.7	25.6	26.6	**312.1**
Amortization Payments	(195.0)	(143.5)	(136.1)	(158.6)	(205.8)	(159.2)	(141.0)	(185.6)	(163.4)	(110.0)	**(1,598.2)**
Ending Debt Balance	1,413.4	1,607.8	1,801.9	2,010.1	2,213.6	2,508.7 /4	2,830.8	3,104.6	3,386.5	3,701.9	**3,701.9**
Conservation and Renewable Resource Bonds Issued to Treasury ($1.25 Billion Cap)											
Beginning Debt Balance	437.0	492.2	489.5	594.5	654.9	721.4	743.9	805.8	929.6	1,046.4	**437.0**
Amounts Borrowed 3/	105.2	82.4	109.9	126.4	116.5	117.2	119.9	123.8	133.4	142.9	**1,177.6**
Amortization Payments	(50.0)	(85.1)	(4.9)	(66.0)	(50.0)	(94.7)	(58.0)	0.0	(16.6)	(0.6)	**(425.9)**
Ending Debt Balance	492.2	489.5	594.5	654.9	721.4	743.9	805.8	929.6	1,046.4	1,188.7	**1,188.7**
Federal Capital Appropriations											
Beginning Appropriated Balance	6,727.9	6,809.2	6,926.7	6,876.3	6,906.2	6,951.8	7,023.4	7,033.3	7,082.2	7,145.7	**6,727.9**
Amounts Appropriated 5/	84.7	135.3	78.3	83.5	86.0	88.6	91.2	94.0	96.8	99.7	**938.1**
Amortization Payments	(3.4)	(17.8)	(128.7)	(53.6)	(40.4)	(17.0)	(81.3)	(45.1)	(33.3)	(98.1)	**(518.7)**
Ending Appropriated Balance	6,809.2	6,926.7	6,876.3	6,906.2	6,951.8	7,023.4	7,033.3	7,082.2	7,145.7	7,147.3	**7,147.3**
Third-Party Sources of Debt											
Beginning Debt Balance	6,894.3	6,875.8	6,889.2	6,830.1	6,759.2	6,683.4	6,600.0	6,490.3	6,303.6	6,096.8	**6,894.3**
New Debt Issued (Net)	85.4	101.9	59.2	68.0	62.8	63.1	64.6	66.6	71.8	77.0	**720.4**
Principal Payments	(103.9)	(88.5)	(118.3)	(138.9)	(138.6)	(146.5)	(174.3)	(253.3)	(278.6)	(288.5)	**(1,729.4)**
Ending Debt Balance	6,875.8	6,889.2	6,830.1	6,759.2	6,683.4	6,600.0	6,490.3	6,303.6	6,096.8	5,885.3	**5,885.3**
TOTAL DEBT / APPROPRIATIONS BALANCE	15,590.6	15,913.2	16,102.8	16,330.4	16,570.2	16,876.0	17,160.2	17,420.0	17,675.4	17,923.2	**17,923.2**
Current Revenues /6											
Annual	50.4	59.2	61.3	60.7	59.8	64.2	62.4	69.7	90.2	80.9	
Cumulative	50.4	109.6	170.9	231.6	291.4	355.6	418.0	487.7	577.9	658.8	**658.8**

FOOTNOTES:

1/ FY 1992 Annual Report

2/ Includes direct funding for Bureau projects.

3/ Amounts for FYs 1994-2001 assume that BPA will borrow to full extent of each year's capital expenditures.

4/ Reflects the year in which this Treasury borrowing cap will be exhausted on a cash basis.

5/ Reflects Plant-in-Service, not expenditures as shown in Figure 4. While the Corps and Bureau receive their funds on an expenditure basis, BPA's obligation to repay does not begin until the plant is placed in service. Amounts for 1996-2001 reflect 3 percent escalation of 1995 projection.

6/ Reflects WNP-2 capital additions, replacements, and fuel financed with revenues rather than third party debt.

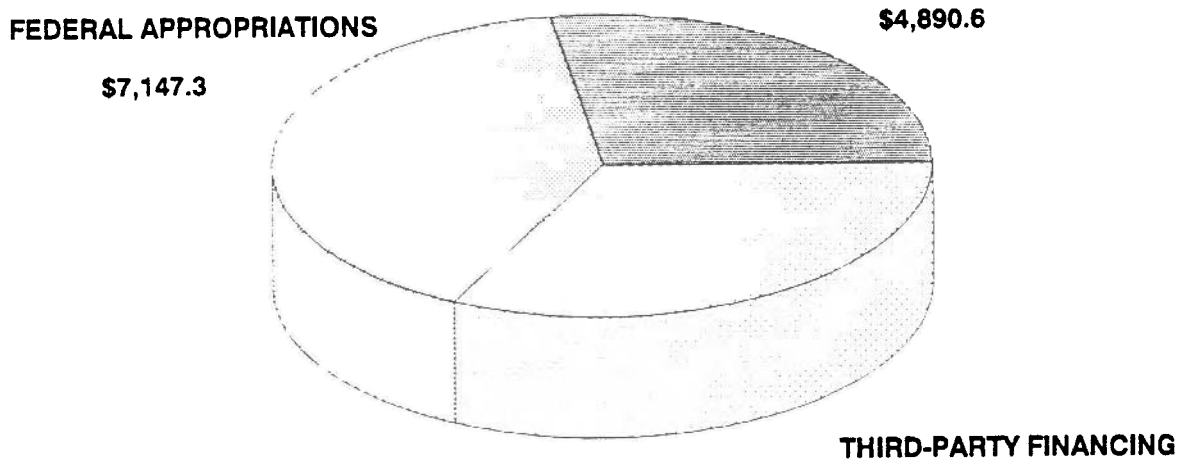
14:DRFA 1/4/93

FIGURE 7

FEDERAL COLUMBIA RIVER POWER SYSTEM
COMPOSITION OF PROJECTED DEBT STRUCTURE

SEPTEMBER 30, 2001

(CASH BASIS, $ IN MILLIONS)



Total FCRPS debt is $17,923.2 million. Outstanding obligations for irrigation assistance (not included above) total $819 million at 0 percent interest.

1/ This projected level of bonds issued to the Treasury exceeds BPA's existing borrowing cap of $3.75 billion by $1,140.6 million at the end of FY 2001.

Changes in the Composition of Debt - FYs 1992-2001

(Cash Basis)

	FY 1992		FY 2001	
	$ Millions	Percent	$ Millions	Percent
Federal Appropriations	6,809.2	44	7,147.3	40
BPA Treasury Bonds	1,905.6	12	4,890.6	27
Third-Party Financing	6,875.8	44	5,885.3	33
	$15,590.6	100	$17,923.2	100