1983 Annual Report

BPA

Bonneville Power Administration
U.S. Department of Energy

This annual report is dedicated to the memory of the late Sen. Henry M. Jackson of Washington, who made immense contributions to the people of the Pacific Northwest.

Sen. Henry M. Jackson's name is not only on the autograph books of the school children gathered near Bonneville Dam. It is on the acts of Congress that authorized many of the dams and on the appropriations bills that got them built. It is on the legislation that turned waste steam to useful kilowatts at Hanford, and which made possible the intertie lines to the Pacific Southwest. That same legislation protects the Northwest's first call on power produced here. Sen. Jackson's death on Sept. 1 is a profound loss to the Northwest and to BPA. Having initially been elected to Congress in 1940, his career in lawmaking and public service overlapped nearly all of BPA's existence. Sen. Jackson helped make possible nearly everything this Federal power marketing agency has been able to do for the people of the region.

Honorable Donald Paul Hodel
Secretary of Energy
Washington, D.C. 20585

Dear Mr. Secretary:

Events of the past two years have shaken the Northwest's electric utility community. Rapid growth in demand — the common assumption of the 1970s — fell victim to the harsh realities of the marketplace. Energy resources once thought to be urgently needed have now been delayed, posing tough financial problems and challenges to our planning skills.

For the Bonneville Power Administration, 1983 was a time of rollback from the initiatives of yesterday, and of preparation for a new and quite different tomorrow.

This retrenchment is not unique to BPA and Pacific Northwest utilities. In the 1970s, the nation faced dwindling supplies of domestic energy and deepening dependence on foreign oil. While the nation as a whole sought "energy independence," Northwest utilities moved in good faith to acquire more resources to satisfy the region's projected demand for electricity.

But the 1980s brought a revolution in the use of energy. We are using electricity much more efficiently than we thought we could ten years ago. Price is a much more potent incentive to conserve than we previously believed. Demand failed to climb as projected. Large nuclear generating projects were delayed or terminated, straining the finances of Bonneville and some key Northwest utilities.

Even the Northwest Power Act, passed in 1980 to help the region deal with expected shortages of electricity, has been affected. Resource acquisitions under the Act now lack the aura of urgency that prevailed just a few years ago. Fortunately, the Act should be flexible enough to bridge the gap between present power surpluses and future needs.

For BPA, 1983 was a year of strong responses — a "year of defense" in a very positive sense. Our actions were aimed at preserving the strength of our organization and improving our ability to help the region out of its present difficulties.

The decisions of the past year have left BPA lean, efficient and in good position to take advantage of future opportunities. We expect in 1984 to make gains in several important areas — in power sales and building capability to do conservation, among others.

Sincerely yours,

Peter T. Johnson

Administrator

Bonneville Power Administration
Sam Moment Aluminum Library
Portland, Oregon

A key to BPA's strategy for meeting the energy needs of the region is the "best value" principle. BPA strives to improve its services by achieving the highest possible value for every ratepayer dollar spent. The gas-insulated substation equipment shown here enables the agency to improve the efficiency, safety and reliability of its transmission system. That's just one example. Throughout the organization, managers are constantly seeking ways to hold down costs and improve services.

The Year In Review

Chief among the external circumstances that influenced our financial condition were these:

- A troubled regional economy that remained sluggish well into the second half of the fiscal period;
- Climatic conditions that produced an abundance of water and unusually warm winter weather so that the region had surplus energy and low demand for electricity to heat homes;
- A distressed aluminum industry that operated at about 50 percent of capacity for much of the fiscal period;
- And a soft market for Pacific Northwest energy in the Southwest due largely to surplus power in other utility systems and availability of lower cost oil for generating electricity.

It was the worst of all operating worlds. As a gauge of the magnitude of the adverse circumstances, the warm winter weather alone meant that homeowners in the Pacific Northwest used about 900 average megawatts less electricity than would be expected in a normal year. That's roughly equivalent to the generation of a nuclear power plant.

At the same time, the region's aluminum producers, who buy electricity directly from BPA, consumed about 1000 average megawatts less than they require when the general economy is more vigorous and the demand for aluminum correspondingly greater.

Revenue falls short of projections in 1983

In early 1983, it was becoming clear that slack power sales would have a negative impact on BPA's financial performance. Rates and budgets established 18 months before were inadequate under the changed circumstances. We moved to adjust activities accordingly.

As our financial situation was tightening, we were entering the demanding process of establishing rates that would extend from the end of fiscal 1983 until June 30, 1985.

Initial analyses, relying on then-current operating assumptions, indicated that a priority firm power rate increase of about 45 percent would be required.

Early rate proposals deemed unacceptable

An increase of that magnitude was unacceptable in light of previous rate hikes and the sluggish regional economy. Accordingly, we commenced a major review to identify where costs could be prudently reduced.

The objectives were to generate enough revenue for the agency to continue only essential programs and to meet its obligations to the U.S. Treasury, but not impede the fragile economic recovery in the Pacific Northwest.

In addition, rate designers were asked to develop features that would, first, help protect the agency from the kind of economic buffeting experienced in 1983 and, second, provide flexibility under rapidly changing market conditions.

This reassessment would have been difficult under any circumstances. It was made doubly so by the pressure of time and the complexity of the rate-making process. But the work was done and the priority firm rate increase was held to 22 percent, a more manageable burden for the region's ratepayers.

Cost-reduction efforts

BPA's cost-cutting efforts in 1983 touched virtually all areas of the agency's operations. Initial program cost estimates for fiscal years 1984 and 1985 totaled about $6.8 billion. These estimates included external financing for conservation. As a result of BPA's cost-cutting efforts, program estimates were reduced to $6.2 billion for the same period — a potential savings of $600 million.

Crews completed construction of the Colstrip transmission line from Townsend to Garrison in western Montana. Construction also progressed on the 500 kV Colstrip transmission line from Garrison to Taft in western Montana. The new lines will be used to integrate the output of Colstrip generating units into the Northwest power grid when unit 4 goes on line in 1985. As part of the agreement to permit construction, the five utilities participating in Colstrip generating plants No. 3 and No. 4 have established a $1.6 million fund to enhance and protect the sport fishery and other natural resources in the corridor.

Several transmission projects were delayed or cancelled because of lower load forecasts. No new construction projects were included in the present budget period, but needed projects already underway — including the Garrison-Taft section of the Colstrip Project — are being completed on schedule.

In response to the need to hold down operating costs, the Regional Operations Office carefully reviewed its operational and maintenance activities to identify cost savings which would not erode safety and reliability standards. Greater automation of control system facilities has helped meet this need. So has sharp scrutiny of maintenance schedules and practices with an eye to extending maintenance intervals where possible. These actions in 1983 are expected to yield benefits for years to come.

The largest, single spending cuts are in the area of conservation — approximately $390 million over fiscal 1984-85. Investments in conservation were not eliminated; instead, program schedules were extended.

This action was prudent in view of present power supplies. The region is carrying a heavy inventory of surplus energy, and sizable surpluses are forecast for the next few years. However, the surplus will dwindle and finally disappear as demand overtakes supply, probably in the late 1980s. Conservation remains the preferred, least expensive resource for the future.

More than any other source of energy, conservation relies on what people do. People like Verne and Mildred Kuhl, whose home was the first to be weatherized in the Hood River Project. The energy conservation project dedicated at Hood River, Ore., near the end of the fiscal 1983 is one of the most ambitious that we know of, involving virtually the entire community. The two-year research program is designed to answer many questions about the potential savings from conservation programs and to develop solid information that can be used in communities throughout the region. This and other programs planned by BPA will help mine conservation out of hundreds of thousands of separate sites — the homes, offices, factories, schools, stores and other commercial buildings in every corner of the Northwest.

This short-term surplus condition could bring some benefits for conservation. It allows us to build our conservation resource in a deliberate, efficient manner. The new emphasis is on establishing capability to do conservation when it is needed.

New rate features spread the risks

Certain features of the new rates allow us to share with our customers some of the risks — and rewards — of changing economic and competitive circumstances.

For example, the new rates establish "availability" or "contract" charges for generating utilities and Direct Service Industry customers. These rate features require customers to pay for a portion of the power they contract for even if they don't use it.

This is important. In the past, the agency has had to bear the full responsibility of having power available — but customers had no reciprocal obligation to use and pay for the power they reserved under their contracts with BPA. Some utilities took advantage of this for short-term gains.

In short, the Bonneville Power Administration bore all the risk of a sluggish economy, of declining demand, or of the availability of cheap, surplus power.

The new rate features don't totally insulate the agency from those risks. They do, however, allow a sharing of risks in a way that still gives customers and the agency flexibility in making business decisions.

Conservation research forges ahead

Our defensive strategy involved reining in conservation program costs by pushing broad implementation programs 18 to 24 months into the future. But we will use this period to forge ahead with various pilot projects and research and development programs.

There are several benefits to this approach.

The first is that we can refine our program. Drawing on the knowledge gained from pilot projects and research, we can make them more efficient and cost effective.

Equally important, careful research now can help us identify the extent and availability of the region's conservation resource.

The most ambitious conservation research project currently underway is at Hood River, Oregon. Several thousand existing homes there will be involved in the program, and a wide variety of energy saving techniques will be tested.

Among the questions being asked: How will home owners respond to conservation programs? What levels of conservation are cost effective? How much energy can a community save in existing residences? How many houses can be upgraded to the level of insulation being planned?

Early reception of the project has been enthusiastic. It will cost $20 million and be carried out over two years.

The who and what of conservation

The nation is in the throes of an "energy efficiency revolution." We continue to find ways to do more work with fewer units of energy. Less energy use means lower capital investment in large central generating stations. Conservation is a principle that's here to stay.

Bonneville Power Administration and the electric utilities of the Pacific Northwest face the challenge of carrying out one of the nation's most progressive conservation programs during a period of temporary power surpluses.

BPA is proud of its record for operating and maintaining one of the most reliable high-voltage transmission systems in the world. The job gets done because of people like David Norgaard and Luis Alvarez, members of the Snohomish line crew in Western Washington. BPA now operates and maintains nearly 14,000 circuit miles of transmission line and 390 substations throughout the Northwest with a small but highly skilled group of workers.

The challenge is both large and clear: BPA is expected to continue existing programs, including a range of home weatherization services at reduced funding levels. At the same time, the agency will seek to enlist the participation of large generating utilities, which are not participating formally in the regional conservation program.

Bonneville's contribution to the regionwide conservation program began in November 1981 when the agency executed short-term contracts with 100 utilities in the Pacific Northwest. Results were impressive: 103,600 electrically heated homes weatherized, almost 860,000 electric hot water heaters wrapped with insulation and 1.7 million shower flow restrictors distributed. About 196,000 older and relatively inefficient street lighting fixtures were replaced.

Those initial, short-term contracts between BPA and the region's utilities lasted until fiscal year-end — September 30, 1983 — and were replaced by new, long-term contracts.

Of the 130 utilities offered long-term conservation contracts, 101 signed them on or before the deadline.

Some major utilities to go it alone

Among the 29 that did not sign are some of the region's largest utilities. They include all of the investor-owned utilities and the publicly owned utilities that serve Seattle and Tacoma.

Together, those 29 utilities represent about 60 percent of the region's residential customers who heat their homes with electricity.

BPA began adapting its data to a new computer, the IBM 308ID system, which went into operation in 1983. The obsolete and saturated CDC system formerly used by the agency was intended primarily for technical applications. But with the ever increasing size and complexity of other activities, it became obvious that expanded business capability was needed. The IBM will serve as the general purpose computer within BPA, serving materials management, financial management and engineering management. It will also serve as the central repository for financial information shared by future automated office support systems. The new computer was installed in July, and is expected to greatly improve the efficiency and productivity of BPA.

Their decisions not to sign will significantly increase the difficulty of carrying out a coordinated regional conservation program. But Northwest conservation goals can still be met.

BPA and the utilities that did sign contracts will press foward with existing programs and new ones as they are needed. BPA will also seek cooperative arrangements with nonsigning utilities; those utilities would pay their fair share of the costs on a project-by-project basis.

The success of these efforts is vital to the future of the Pacific Northwest under the conservation and electric power plan adopted April 27, 1983, by the Northwest Power Planning Council.

That plan, which extends 20 years, was adopted just one day before the deadline prescribed by the Pacific Northwest Electric Power Planning and Conservation Act — two years from the date the Council was established.

The Two-year Action Plan — A critical first step

We had advised the Council early in its deliberative process that, as implementor, BPA would be accountable for money spent to carry out the plan. We were therefore looking for a plan that would be fiscally sound, prudent from the standpoint of utility practice, and in compliance with provisions of the law.

The key element in the Council's long-term design is the first two-year action plan. It contains the 115 specific actions BPA is asked to take in order to build capability for acquiring cost-effective conservation and generating resources.

In developing its response to the Council, BPA accepted no item uncritically, nor was any rejected categorically. All were examined in terms of financial, organizational, policy and other criteria, including their practical value.

In all cases, we agree with the objectives of the Council. Our response was to seek ways to implement the action items directly, or, where we see problems, to propose other ways of meeting the same objectives.

BPA has established a solid working relationship with the Council and intends to be guided by its plan.

Quick action taken on majority of items

Before year-end, Bonneville was hard at work planning the implementation of 101 of 115 action items identified in the two-year plan.

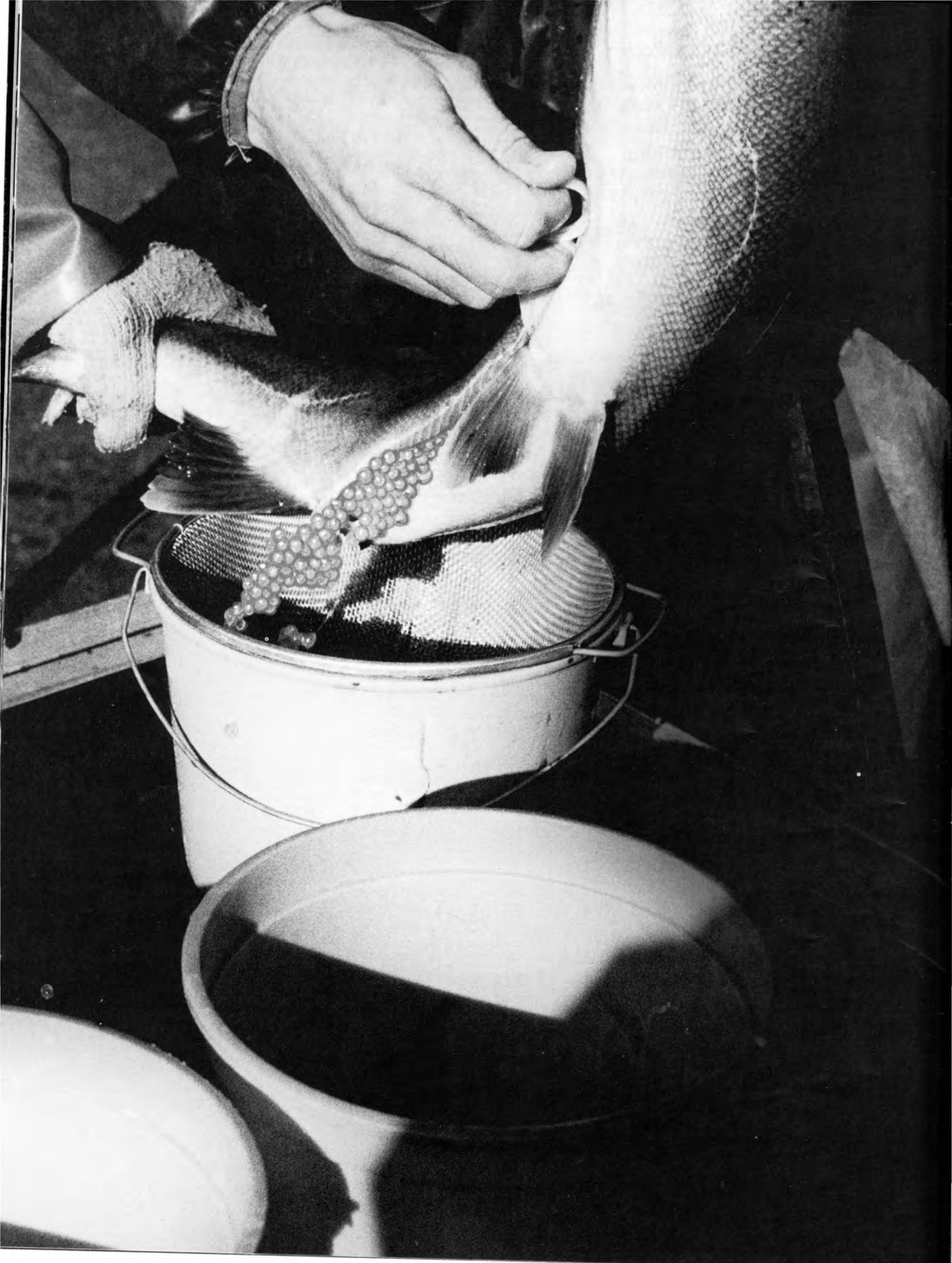
BPA agreed with the objectives of the remaining 14 items, but found that they posed implementing difficulties as described in the plan. Working with the Council and its staff, we are finding mutually acceptable means of achieving the objectives behind these action items without endangering BPA's fiscal well-being, acting beyond prudent utility practice, or compromising BPA's obligations and legal responsibilities.

We are convinced that the objectives behind questioned items can be accomplished more efficiently than described in the two-year plan. Consultations between BPA and Council staff have reduced the number of problem areas, and we have every reason to believe that mutually acceptable solutions will be found.

The Power Council — "Strong, effective, respected"

From the formative days of the Council, BPA asserted that the planning body should be strong, effective and respected. In all of our dealings with the Council, we have sought a constructive, supportive relationship.

The Council is to be commended for its work, for the professional and diligent way it has approached its very difficult tasks. It has brought a cooperative spirit and frankness to all our discussions.



The purpose of the Columbia River Basin Fish and Wildlife program, which BPA began implementing in 1983, is to improve the quality and quantity of fish and wildlife populations within the drainage system. Here eggs are stripped and culled to isolate those which contain a hereditary disease. Hopefully, diseases can be eliminated in future generations of hatchery fish by this means. Restoring fish habitat is also a major thrust of the enhancement program. Physical changes are made in streambeds and on shores to restore natural conditions conducive to spawning. Habitat restoration is in its infancy, but early monitoring indicates that salmon and steelhead populations can be increased by as much as 400 percent — and at about one-tenth of the cost of achieving similar results in a hatchery.

We intend to foster that spirit of cooperation while recognizing that each entity must exercise independence and carry out its duties assigned by law.

In the acquisition of resources, including conservation, and in the protection and enhancement of the fish and wildlife, our actions will be consistent with the Council's plan. The advent of the Council has had a profound effect. It has revised the electric utility order in the Northwest, and forged a new institutional equilibrium.

Fish enhancement gathers momentum

The recession and cost-cutting did not slow BPA's efforts to improve the Northwest fishery. Guided by the Council's plan for fish and wildlife, BPA moved aggressively to restore fish runs on the Columbia and its tributaries.

The "water budget" — allotting to migrating fish a portion of streamflow to help them find their way around dams — is now in effect. The water budget requires use of water that would otherwise generate electricity worth $58 million a year.

BPA funded 83 fishery projects in 1983. Twenty-five have since been completed. They include:

— $1.3 million to improve fish production at hatcheries by combating diseases.
— $1.3 million to improve spawning and rearing habitat for wild fish. These improvements to riverbeds could eventually increase production of young fish by 400 percent.
— $2.98 million to monitor young fish. In this area, a state-of-art communication chip has been developed for implantation in fish.
— $1.27 million to Indian tribes for rehabilitation of spawning areas on tribal lands.
— $1.5 million for investigations, mostly on the impacts of dams on resident game fish in areas where migratory runs no longer exist.

The most ambitious program launched in 1983 takes place in the Yakima River basin. More than $13 million will be spent there in coming years, if Congress approves, to install or repair fish ladders or screens at 15-20 locations. The program involves complex biological issues and the cooperation of many local, state and Federal agencies.

Construction delayed on Supply System Project 3

BPA recommended in May that the Washington Public Power Supply System delay construction on Washington Nuclear Project 3 (WNP-3), a generating plant being built at Satsop, west of Olympia, Wash. BPA owns 70 percent of the plant's generating capacity.

The reasons for the decision were clear: the project was running out of money; conventional financing could not be achieved; other financing alternatives were unavailable to the Supply System or imprudent.

The work on WNP-3 was progressing exceptionally well, with skilled, dedicated and highly productive workers moving the project toward completion under budget and ahead of schedule. The project was 75-percent complete. We were in the painful position of seeing this work brought to a halt by conditions similar to those which put Project 1 in a preservation mode a year earlier.

Wall Street, this time responding to legal controversies surrounding the Supply System, closed the door on further conventional bond financing. Banks offered a glimmer of hope that money could be borrowed, but that chance faded when it was determined that either Federal legislation or a court test was necessary to make the loan possible.

Among the alternatives considered to keep the project going was financing by the four investor-owned utilities which own 30 percent of the project.

Construction of Washington Public Power Supply System nuclear plant No. 2 at Hanford was completed shortly after fiscal 1983 ended. The plant moved into a pre-operational phase. Here, workers are loading fuel bundles into the core of the reactor. WNP-2 is one of three net-billed plants; the other two have been placed in a state of preservation until they're needed to meet regional power needs. A special Preservation Enhancement Program (PEP) was instituted in 1983 to review and streamline construction procedures so that the plants can be completed at the lowest possible cost, when the region's demand for power warrants.

Another option examined carefully was funding construction directly from BPA revenues. But this option would have increased rates greatly and undermined a fragile economic recovery.

From a prudent utility standpoint, BPA's studies showed the operational date of the plant could be put off until 1989 without posing a risk of regional power shortages. By extending construction, we were able to preserve the plant and even increase the odds of completing it on a cost-effective basis when it is needed by the region.

Accordingly, BPA advised the Supply System Executive Board on May 27 that the project should be placed in a preservation state for three years. This action would ensure that sufficient funds were on hand to cover the costs associated with an orderly preservation.

Projects remain valuable regional assets

While construction schedules on Projects 1 and 3 have been extended, it is important to stress that BPA's forecasts and those of the Northwest Power Council reaffirm that all three BPA-backed Supply System plants — Projects 1, 2 and 3 — will be needed to meet future demand for electricity. Analyses by both entities also continue to show that all three plants are cost-effective resources.

The delay of Project 3 means somewhat lower costs for ratepayers in the 1980s. After that it could mean somewhat higher costs than would have been incurred had construction gone ahead on schedule. On balance, extension of the construction schedule was the prudent and necessary decision.

Benefiting from a delay

Delay of Projects 1 and 3 gives the Supply System and BPA an opportunity to find ways to improve efficiency and reduce costs when construction resumes.

The Supply System is now pursuing the Preservation Enhancement Program (PEP), in which nuclear construction experts complete design work while construction sites are idle. Their goal is to streamline the complex process of restarting and finishing the plants. Efforts will be directed at improving design, engineering, scheduling, staffing and other construction activities. We believe this work will ultimately bring far better results than the "fast-track" design and construction techniques previously used.

The ultimate objective of this effort is to reduce risk and increase the likelihood of completing cost-effective resources. The effort has attracted the interest of the U.S. Department of Energy and the nation's nuclear industry. At a time when many other nuclear projects throughout the country have been mothballed, PEP could be valuable to the entire industry.

Construction completed on WNP-2

The Supply System substantially completed construction on Project 2 during fiscal 1983 and commenced activities related to starting the nuclear reactor. An operating license to load fuel was received from the Nuclear Regulatory Commission in December 1983.

More than two years ago, BPA urged the Supply System to focus its best efforts and resources on completing WNP-2 at Hanford, the flagship of the construction program. This project had previously been plagued by strikes and work stoppages stemming from regulatory problems. But the channeling of the Supply System's energies and resources to WNP-2 has paid off. The project should be producing electricity for commercial use in 1984.

Stormy legal and political waters

BPA and Northwest utilities continued this year to operate in a stressful political and legal environment. In June, the Washington State Supreme Court delivered a momentous decision. It freed public utilities in its jurisdiction from any obligation to repay the debt they incurred for WNP-4 and 5. Contracts that were used as the

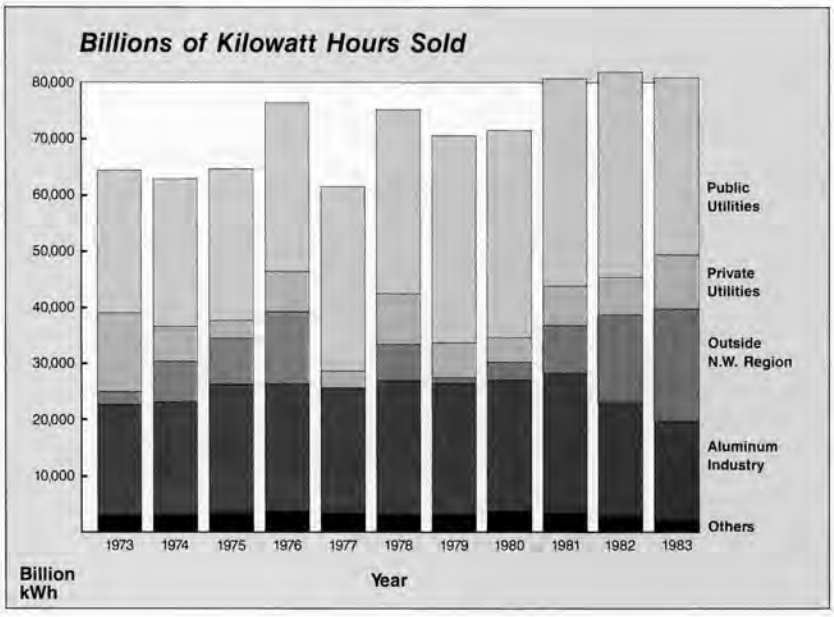
basis for borrowing to build the projects suddenly became null and void. The decision threw the region's utility community into a financial and legal quagmire.

(BPA has no financial involvement in Projects 4 and 5. BPA has acquired all of the generation of WNP-1 and 2, and 70 percent of the output of WNP-3. They are financed separately from terminated Projects 4 and 5 and are not affected by the State Supreme Court decision. See "Litigation" in the Financial Section, p. 46.)

BPA continues to support efforts to bring all parties together for a just settlement of the difficulties surrounding WNP-4 and 5 and the bond default on these projects. Chief among the efforts are the recommendations recently issued by a three-member panel appointed by the governors of Oregon and Washington. The panel's report could become a springboard to a solution.

The Washington Supreme Court ruling eclipsed other important litigation on Initiative 394 — the law that required voter approval of future bond financings for construction of large thermal generating projects in Washington State. A challenge to the Initiative on Constitutional grounds was successful; Federal courts held that the law did not affect WNP-1, 2 and 3.

Oregon Congressman Jim Weaver, perennial critic of the Supply System and of BPA's support for nuclear projects, became chairman of the "House Interior Subcommittee on Mining, Forest Management and the Bonneville Power Administration." BPA came under heavy criticism from Chairman Weaver during oversight hearings. The General Accounting Office also looked into several issues. We welcomed these inquiries because they gave us a second opinion on our activities.



Defensive strategies set up important gains

We directed much of our effort to defensive strategies during the year. In several cases, however, this strategy led to innovative programs to help turn the tide of economic recession.

BPA had low-cost energy available in the early spring. With loads down because of the warm winter and the suppressed economy, we looked for new ways to put surplus energy to work. The direct-service industries were a logical target for a special marketing program because of the nature of their loads — increased usage can be directly tied to expanded production. A special offer of this surplus power was made to DSI customers in late March. We had two objectives in making the temporary offer: First to generate revenue; second to give the aluminum industry in the region an incentive to increase production and employment.

It was a complete success.

BPA received about $31 million in revenue above the forecasted level absent the sale. Had this power not been sold to the aluminum companies, it would have been wasted in the form of water spilled over dams.

The aluminum industry estimates that some 1,500 employees returned to work sooner than they would have without the special offer. During the period of low-cost power, 13 potlines were restarted and Northwest aluminum production was increased by 356,000 tons. The offer was designed so that the low-cost power could be used only to activate additional lines — not to replace power on lines already operating.

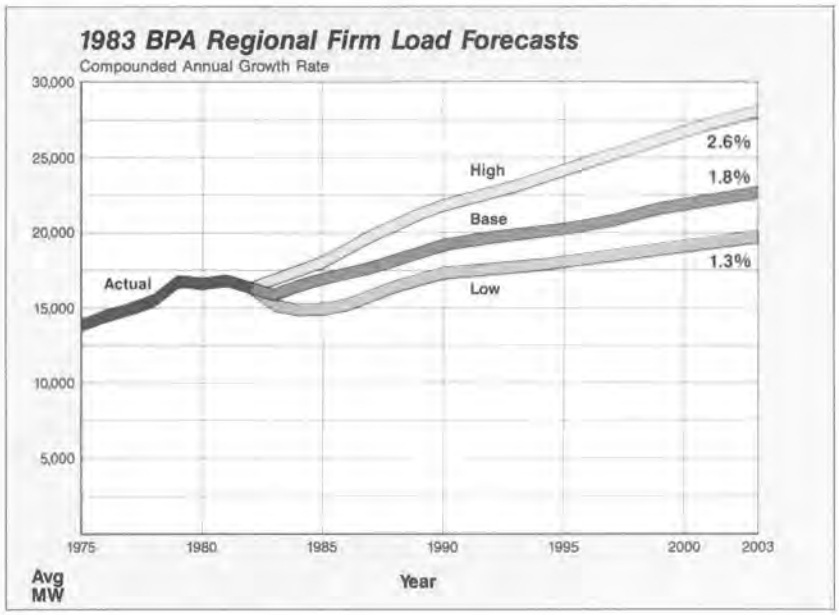
BPA specialists who monitor trends in the metals industry as part of the agency's planning and forecasting work anticipated a rise in world aluminum prices and predicted that an incentive rate would help the regional industry get into gear as prices moved up.

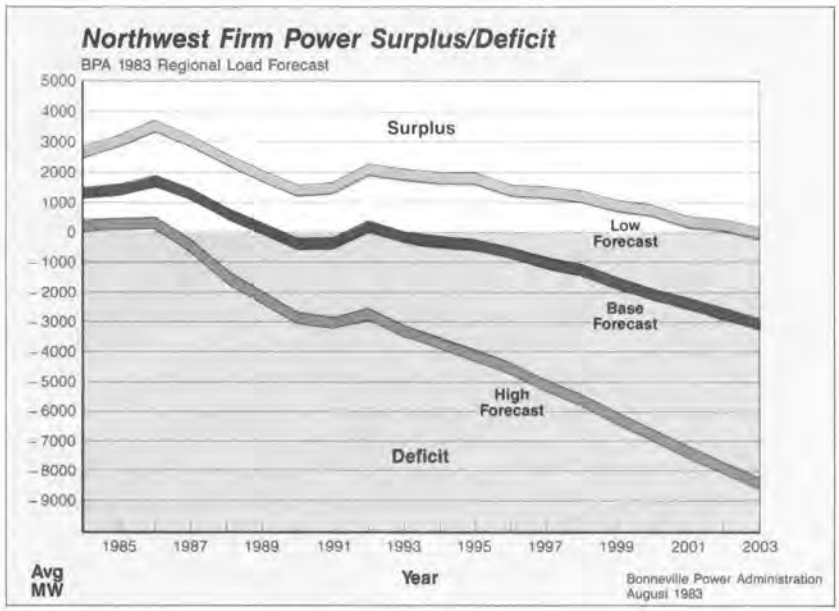
Projections prove accurate

When the offer was made, aluminum operations in other parts of the country were still idle, and there was considerable uncertainty in the Pacific Northwest about near-term prices for aluminum. Nevertheless, the aluminum companies responded well to the BPA offer.

When the contracts were signed, the U.S. market price for aluminum ingot was about 60 cents per pound; when the contracts expired on October 1, 1983, the price was above 70 cents and aluminum companies were beginning to restart potlines without the incentive of a price break.

BPA produced its first, independent 20-year load forecast in 1982 and its second in 1983. The 1983 forecast changed only slightly in 1983 due to a reassessment of the economic outlook for the Pacific Northwest. The process involved detailed study of key demographic factors and economic sectors within the region, with specialists devoting full time to key industries — metals, transportation, agriculture, forest products and food processing and electronics. The near term is considered in developing the long range forecast, permitting recognition of changing economic conditions. A study of the balance of loads and resources is also conducted. Resource planning is based on a range of load possibilities. Projections now indicate that resources in addition to those now planned will be needed by 1989. Conservation is expected to play a major role in meeting these future needs.





BPA made incentive energy available from March 22 through October 31 at 1.12 cents per kilowatt hour. That was less than half BPA's standard industrial rate at the time.

Carrying programs to customers

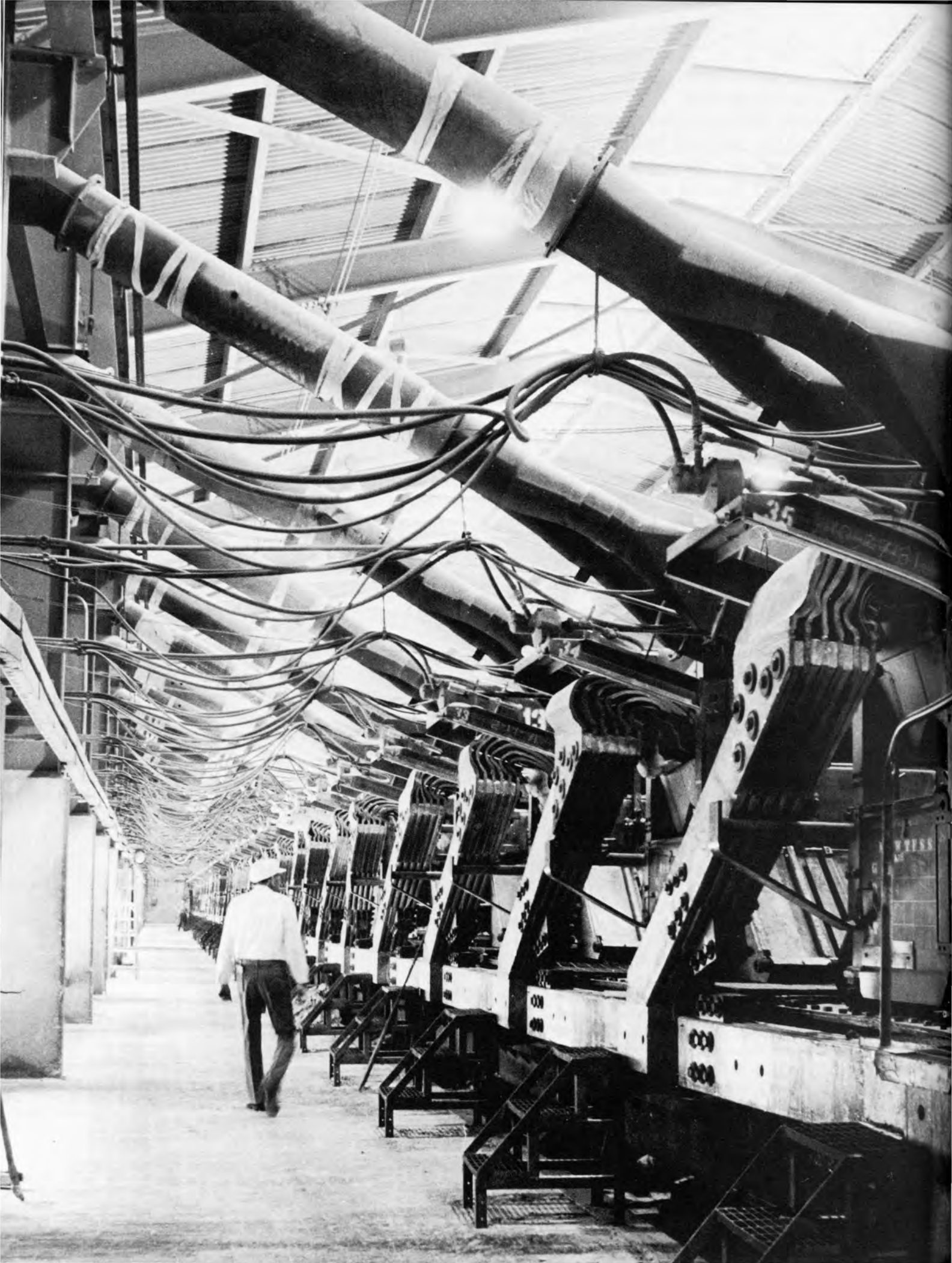
Along with the immediate benefits to the agency, the aluminum industry and the regional economy, the special incentive rate underscores the importance of grasping short-term opportunities.

There were other examples of innovative contracts that helped put the region's surplus power to work. These efforts were led by our Regional Operations field offices, whose staffs negotiated sales of nonfirm power to substitute for boiler fuel and to use during off-peak hours.

One was the sale of nonfirm energy to the Umatilla Electric Cooperative for three food processing plants with a combined load of more than 30 megawatts. The power was offered to the cooperative — and the food processors — at the spill rate (9 mills per kilowatt hour) from January until June 30. Use of this electricity in this case displaced the use of energy from oil or gas.

Four other PUD's purchased energy at a special offer from BPA. A total of 150 megawatts were sold at that rate during this period.

BPA's field offices were also heavily involved in devising incentives for bolstering irrigation loads, which have been depressed by economic conditions and ascending power costs.



BPA sold surplus power to Northwest aluminum companies at a low price in order to stimulate the restart of idle potlines. The strategy was to turn the power surplus to the advantage of the region and spark aluminum production out of its recessionary doldrums. It worked. Thirteen potlines were fired up and some 1,500 employees returned to work. This special sale, which ended Oct. 31, is an example of the price flexibility BPA must have to deal with fluctuations in economic and operating conditions. The aluminum industry enjoyed a better market for ingot late in the year, and production continued to improve without the price break.

In another case, BPA sold low-cost power to Hanna Mining Co.'s nickel smelter in Riddle, Ore. The smelter, located near Roseburg, had been idle since April 1982 because of the low price of nickel on the worldwide market. The Northwest Power Act made provision for such a sale. But it took a package of economic incentives from BPA, organized labor and the company to put 280 people back to work.

Engineering supports marketing program

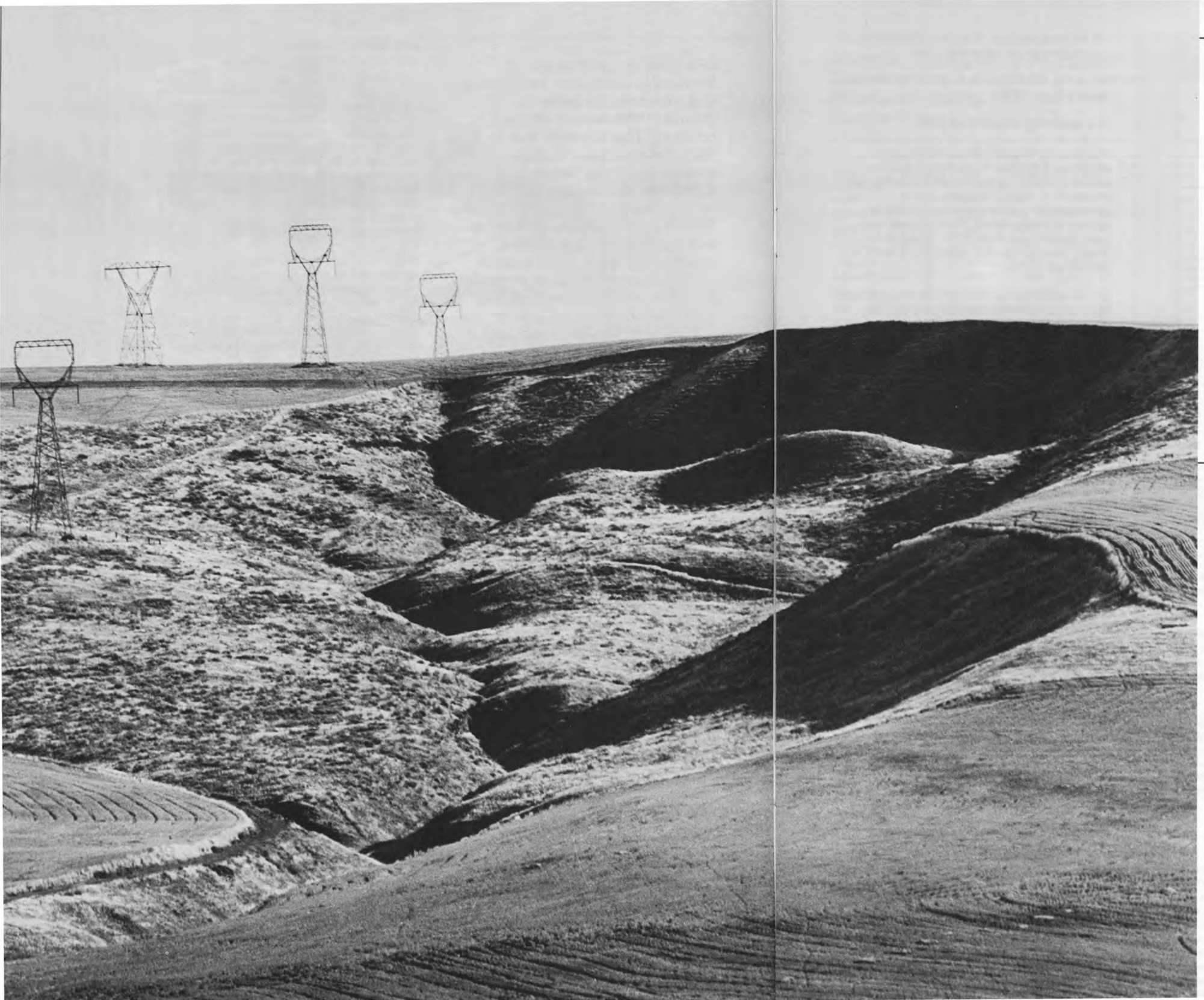
The section of high-voltage powerline between the Colstrip coal-fired generating plants in eastern Montana and the town of Garrison in western Montana began carrying energy in September 1983. The new line integrates the generation of Colstrip unit 3 into the Northwest power grid. Power from the plants is owned by several Northwest investor-owned utilities and the Montana Power Co. BPA's role in the project is to design and construct a powerline from Townsend in central Montana to Garrison, then on to the Spokane area.

The second section of the Colstrip line, from Garrison to Taft, a 157-mile stretch, moved into the construction phase in 1983. Linkage of the line from Taft to the Bell Substation near Spokane was delayed one year due to workload constraints. The second section is expected to be finished in 1985, when Colstrip unit 4 is scheduled to go into operation.

Other improvements to the Federal transmission system also enhanced the marketing effort. Energy began flowing on the Buckley-Summer Lake 500-kv line in Oregon in May. This line bolsters North-South delivery capacity and complements transmission facilities owned by Pacific Power & Light Co. in the area.

Elsewhere on the system, BPA designed, tested and installed new master control systems for the Celilo and Sylmar Converter stations, at each end of the Pacific Northwest-Pacific-Southwest Intertie. This effort is part of an upgrading of the HVDC (high-voltage, direct-current) intertie from 1,600 megawatts to 2,000 megawatts. The improvements are unique and again demonstrate BPA's ability to put technology to work to help meet the region's power needs.

Garrison - Spokane 500 kV Transmission Project



The DC leg of the Pacific Northwest-Pacific Southwest Intertie is being upgraded from 1,600 to 2,000 megawatts with the installation of new valves at the Celilo Substation in Oregon — the Northern terminus of the high-voltage line. The upgrading will be finished when Los Angeles Department of Water and Power completes similar modifications on its segment of the intertie. BPA is now seeking firm surplus power sales in the Southwest. The agency is also in the process of formulating a policy for access by other generating utilities to the intertie, which has a total capacity of about 4,000 megawatts on the AC and DC segments.

Turning to new initiatives

Actions taken in 1983 should give us a higher degree of control over our future:

— In a preserved state, Supply System Projects 1 and 3 are stable, viable assets, and Project 2 is headed for commercial operation.

— Most of the costs of the nuclear generating projects are already imbedded in our rates; new rates are in effect and no new rates will take effect until July 1, 1985.

— The flexibility built into the new rates should help stabilize revenues even if the economy becomes turbulent.

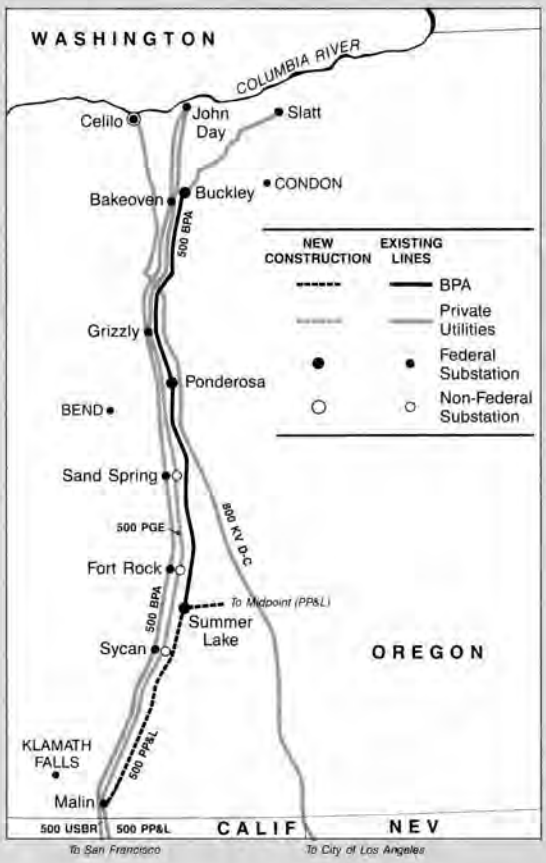
— The Power Council's two-year action plan is not only on the table, but also being implemented with only a few issues unresolved.

— Planned expenditures in all areas have been cut, and new strategies devised for a surplus power market.

In short, the storm may not be over, but our institution is stable and moving on course.

Looking ahead, we believe there will be opportunities for the Bonneville Power Administration to seize the initiative in the coming year.

Pacific Intertie



For the immediate future — a time of energy surplus in the region — much of our attention will be devoted to marketing issues.

At year's end Bonneville was working on a sale of surplus firm power to the Western Area Power Administration's Sacramento area. And negotiations were continuing with several large utilities outside the Pacific Northwest for other sales.

We will be assessing the feasibility of further expanding intertie capacity, by modifying existing equipment. A new intertie to Central or Southern California is also being considered by utilities in the region. Such expansions could make mutually advantageous inter-regional power sales possible for 1990 markets.

We will do more.

In the years ahead, we will continue to re-examine the agency's role in the Northwest power system. Decisions made in the last decade, and the relationships forged among the region's utilities because of them, must continually be reassessed in the light of changed circumstances. We will find new ways of accomplishing our mission. For example, a new policy for access by Northwest utilities to the Pacific Intertie will set the stage for longer-term power sales to the Southwest.

The region depends on BPA's economic stability. It is imperative for the Bonneville Power Administration to conduct itself in the new, more competitive environment in ways that preserve the agency's fiscal integrity.

The evolving mission of BPA

The decisions of fiscal 1983, and subsequent actions, were reached in response to dynamic external conditions, many of them unexpected and unpredictable. But our decisions form a comprehensive pattern rather than a series of isolated, disjointed events. That's because each major decision was made in the context of a central strategy and was carefully considered in terms of a well-defined mission.

Our mission statement was first published two years ago and has been imbedded so deeply in our decision-making processes that it has become a vital element in our daily operations. The statement, as modified by top management during planning sessions in fiscal 1983, is this:

BPA will act as a catalyst for defining and achieving the electric power and conservation objectives of the Pacific Northwest. We will work to assure the region an adequate, economical, reliable, efficient and environmentally acceptable power supply. We will do so in an open and businesslike way, consistent with our responsibilities to fish and wildlife and with our obligations as a Federal agency, and responsive to citizens' concerns for their well-being and the quality of their environment. BPA will provide leadership in the region, fulfilling our responsibilities with professional excellence.

In carrying out BPA's strategic plans next year, the BPA staff will emphasize the "best value principle." The pursuit of best value requires a competitive state of mind. We ask the question:

"If I had a tough and creative competitor trying to capture my market, what steps would I take to do BPA's job more efficiently and deliver higher value for the same or lower cost?"

The degree to which we succeed in answering that question positively and imaginatively will greatly influence our success in meeting the challenges of the next few years. Adhering to the best value principle will help us seize opportunities to build a better future for the Pacific Northwest.

Federal Columbia River Power System

General Specifications of Projects Existing, Under Construction, Authorized or Licensed, and Potential Nameplate Rating of Installations

December 31, 1983

						Existing		Under Construction		Authorized-Licensed		Potential		Project Total	
Project	Type	Operating Agency[1]	State	Stream(IF H) City(If Fuel)	Initial Date In Service	Number of Units	Nameplate Rating-kw	Number of Units	Nameplate Rating-kw	Number of Units	Nameplate Rating-kw	Number of Units	Nameplate Rating-kw	Number of Units	Nameplate Rating-kw
Minidoka	H	BR	Idaho	Snake	May 7, 1909	7	13,400	-	-	-	-	-	-	7	13,400
Boise River Div.	H	BR	Idaho	Boise	May 1912	3	1,500	-	-	-	-	-	-	3	1,500
Black Canyon	H	BR	Idaho	Payette	Dec 1925	2	8,000	-	-	-	-	-	-	2	8,000
Bonneville	H	CE	Ore-Wash	Columbia	Jun 6, 1938	18-2	1,076,600	-	-	-	-	-		18-2	1,076,600
Grand Coulee	H	BR	Washington	Columbia	Sep 28, 1941	24-3	6,163,000	-	-	-	-	6	4,200,000	30-3	10,363,000
Anderson Ranch	H	BR	Idaho	S Fk Boise	Dec 15, 1950	2	40,000	-	-	-	-	1	13,500	3	40,500
Hungry Horse	H	BR	Montana	S Fk Flathead	Oct 29, 1952	4	285,000	-	-	-	-	-	-	4	285,000
Detroit	H	CE	Oregon	N Santiam	Jul 1, 1953	2	100,000	-	-	-	-	-	-	2	100,000
McNary	H	CE	Ore-Wash	Columbia	Nov 6, 1953	14	980,000	-	-	6	645,000[2]	-	-	20	1,625,000
Big Cliff	H	CE	Oregon	N Santiam	Jun 12, 1954	1	18,000	-	-	-	-	-	-	1	18,000
Lookout Point	H	CE	Oregon	M Fk Willamette	Dec 16, 1954	3	120,000	-	-	-	-	-	-	3	120,000
Albeni Falls	H	CE	Idaho	Pend Oreille	Mar 25, 1955	3	42,600	-	-	-	-	-	-	3	42,600
Dexter	H	CE	Oregon	M Fk Willamette	May 19, 1955	1	15,000	-	-	-	-	-	-	1	15,000
Chief Joseph	H	CE	Washington	Columbia	Aug 28, 1955	27	2,069,000	-	-	-	-	13	1,573,000	40	3,642,000
Chandler	H	BR	Washington	Yakima	Feb 13, 1956	2	12,000	-	-	-	-	-	-	2	12,000
Palisades	H	BR	Idaho	Snake	Feb 25, 1957	4	118,750	-	-	-	-	2	135,000	6	253,750
The Dalles	H	CE	Ore-Wash	Columbia	May 13, 1957	22-2	1,807,000	-	-	-	-	-		22-2	1,807,000
Roza	H	BR	Washington	Yakima	Aug 31, 1958	1	11,250	-	-	-	-	-	-	1	11,250
Ice Harbor	H	CE	Washington	Snake	Dec 18, 1961	6	602,880	-	-	-	-	-	-	6	602,880
Hills Creek	H	CE	Oregon	M Fk Willamette	May 2, 1962	2	30,000	-	-	-	-	-	-	2	30,000
Cougar	H	CE	Oregon	S Fk McKenzie	Feb 4, 1964	2	25,000	-	-	1	35,000	-	-	3	60,000
Green Peter	H	CE	Oregon	Middle Santiam	Jun 9, 1967	2	80,000	-	-	-	-	-	-	2	80,000
John Day	H	CE	Ore-Wash	Columbia	Jul 17, 1968	16	2,160,000	-	-	4	540,000	-	-	20	2,700,000
Foster	H	CE	Oregon	South Santiam	Aug 22, 1968	2	20,000	-	-	-	-	-	-	2	20,000
Lower Monumental	H	CE	Washington	Snake	May 28, 1969	6	810,000	-	-	-	-	-	-	6	810,000
Little Goose	H	CE	Washington	Snake	May 19, 1970	6	810,000	-	-	-	-	-	-	6	810,000
Dworshak	H	CE	Idaho	N Fk Clearwater	Sep 18, 1974	3	400,000	-	-	3	660,000	-	-	6	1,060,000
Grand Coulee PG	PG	BR	Washington	Columbia	Dec 30, 1974	5	250,000	1	50,000	-	-	-	-	6	300,000
Lower Granite	H	CE	Washington	Snake	Apr 15, 1975	6	810,000	-	-	-	-	-	-	6	810,000
Libby	H	CE	Montana	Kootenai	Aug 29, 1975	4	420,000	1	105,000	3	315,000[3]	-	-	8	840,000
Lost Creek	H	CE	Oregon	Rogue	Dec 1, 1977	2	49,000	-	-	-	-	-	-	2	49,000
Libby Reregulating	H	CE	Montana	Kootenai		-	-	-	-	3	76,400	-	-	3	76,400
Strube	H	CE	Oregon	S Fk McKenzie		-	-	-	-	1	4,500	-	-	1	4,500
Teton	H	BR	Idaho	Teton		-	-	-	-	3	30,000	-	-	3	30,000
Total Number of Units and Nameplate Rating						202-7	19,347,980	2	155,000	24	2,305,900	22	5,921,500	250-7	27,717,380
Total Number of Projects							30		0		3		0		33

[1]CE - Corps of Engineers, BR - Bureau of Reclamation.
[2]McNary Second Powerhouse estimates includes 6 units at 107,500 kw each.
[3]Libby Units 6, 7, 8 at 105,000 kw each have been deferred.

BPA - Branch of Generation Planning
December 31, 1983

Fiscal Highlights

(In Thousands)

	1983	1982	Percentage Increases
Sales of Electric Energy (in thousands of kwh)	103,061,347	101,711,378	1%
Operating Revenues	$ 1,845,382	$ 1,336,803	38%
Operation and Maintenance Expense	219,646	208,410	5%
Purchase Power Expense	706,341	517,071	37%
Residential Energy Purchased	549,469	428,371	28%
Depreciation Expense	63,857	60,607	5%
Net Interest Expense	292,031	251,800	16%
Net Revenues (Expense)	$ 14,038	$ (129,456)	211%

The Financial Year

Bonneville Power Administration's annual report on the Federal Columbia River Power System covers fiscal 1983, and presents the results of BPA's action to secure the fiscal integrity of the Federal Columbia River Power System. These results, along with a number of hard-won specific achievements and general "belt tightening" initiatives described earlier, provide BPA reason for optimism in presenting this 46th annual report.

These initiatives are reflected in fiscal year 1983 operating results and in the continuing financial integrity of BPA. In fiscal year 1983, revenues increased $508 million or 38% over fiscal year 1982 to a total of $1,845 million. This increase is attributable primarily to the rate increase that went into effect October 1, 1982, and to increased revenue from the residential energy exchange program. Expenses increased to $1,831 million from $1,466 million or by 25%.

Purchase and exchange power expense increased to $706 million or $189 million over the prior year. This change was due primarily to increased Washington Public Power Supply System costs associated with the decisions to place Project 3 in a delayed construction state and to finance Project 2 construction costs from BPA revenues.

Residential energy purchased increased $121 million over 1982 to a total of $549 million in 1983. The change was due to three factors: First, the percentage of residential power allowed to be exchanged under the Regional Act increased 10% in 1983; second, 1983 was the first full year of participation by many of the exchanging utilities; and third, several additional customers began participating in the program in 1983.

Capital facilities in the amount of $500.7 million were added to the system in fiscal 1983. These included $181.0 million for new transmission facilities, $115.6 million for Corps of Engineers (Corps) and Bureau of Reclamation (Bureau) generating facilities, and $204.1 million for programs to conserve electric energy.

Interest expense for 1983 amounted to $292 million, an increase of $40 million from 1982. The increase was the result of new borrowings for the transmission construction and conservation programs, and additional appropriations for the construction of generating facilities.

Cost reduction measures instituted by BPA management were the major factors which resulted in operation and maintenance expense increasing only 5 percent or $12 million over 1982 for a total of $220 million in 1983.

New transmission system and generating project Plant placed in service in 1983 resulted in depreciation expense increasing by $3 million over 1982 to a total for 1983 of $64 million.

Increased revenue recovery and stabilizing expenses resulted in $14 million of net revenues over expenses on a cost accounting basis in 1983, reversing the trend over the past few years. This represents a substantial improvement over FY 1982 when BPA reported an excess of expense over revenue of $129.5 million.

BPA continues to return significant amounts to the U.S. Treasury for operation, maintenance and interest expense of the Corps and Bureau and for BPA interest expense. These payments amounted to $318.9 million in 1983 and $285.7 million in 1982.

To meet the demands of BPA's increasingly complex and competitive role in the region, the agency is installing an improved financial information system, developing new tools to support financial decision making, and improving existing financial methodologies and practices. These efforts bolster BPA's abiding commitment to provide its customers the best value in electricity services.

Financial Section

Basis for Financial Reporting

BPA prepares financial statements for the FCRPS on a cost accounting basis to assess its financial condition from the viewpoint of a commercial enterprise. The financial statements are independently audited by the firm of Arthur Andersen & Co., Certified Public Accountants, in accordance with generally accepted auditing standards. The complete financial statements with the auditors' opinion appear on pages 35 through 47. A graphic portrayal of financial results on this basis appears on pages 30 and 31. Power rates, however, are not set to recover costs as determined on the cost accounting basis, but are based upon the FCRPS Revenue Requirement Study (Table 4, pages 32 and 33).

The cost accounting financial statements present historical financial results. In contrast, the Revenue Requirement Study schedules the projected FCRPS obligations to be recovered from rates. The Revenue Requirement Study presented on pages 32 and 33 considers BPA's obligation to recover costs and establishes a revenue level sufficient to meet those obligations through FY 1985. Costs scheduled to be recovered include operation and maintenance, purchase and exchange power, and interest and amortization related to the FCRPS investment in power generating, conservation and transmission facilities. The two sets of financial reports measure two different things, historical financial results in the cost-accounting statements and projected financial obligations in the Revenue Requirement Study.

There are significant differences between the cost accounting financial statements and the Revenue Requirement Study. The cost accounting financial statements include depreciation of the power facilities over their expected useful lives, which extend up to 100 years in some cases. The repayment policy (see page 31), however, requires that the investment in all power facilities be fully repaid within 50 years of each facility being placed in service.

Another major difference between the two is that prior to December 20, 1979, estimated net billing advances were included as annual costs in the Revenue Requirement Study while on the cost accounting statements these costs were shown as deferred expenses. However, beginning December 20, 1979, net billing advances were charged to expense on a current basis for cost accounting purposes.

Also, conservation expense that is included in operation expense in the financial statements is scheduled for recovery as amortization in the Revenue Requirement Study.

Revenue Requirement Study

The Revenue Requirement Study included in this report (Table 4, pages 32 and 33) is the Final Revenue Requirement Study which is based on the current rates as developed in the 1983 Wholesale Power and Transmission Rate Filings. Adjustment lines have been added to this study to reflect the actual cumulative results through FY 1983, and the planned amortization payments in FY 1985.

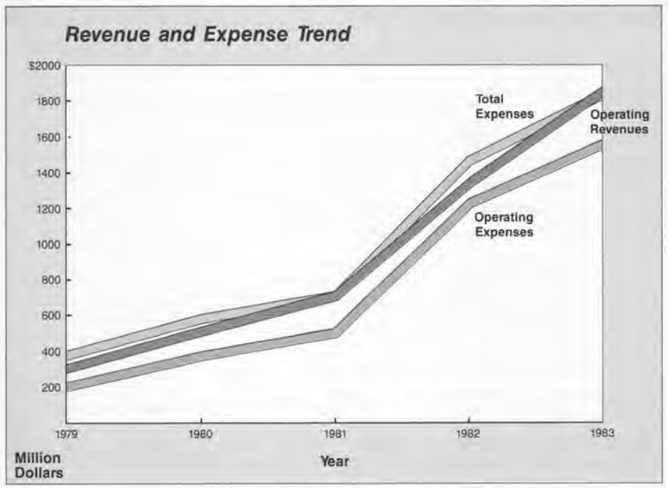
On October 26, 1983, the Federal Energy Regulatory Commission (FERC) voted to permit the proposed wholesale electric rate increases on an interim basis effective November 1, 1983. On January 25, 1984, FERC gave BPA approval to raise its transmission rates February 1, 1984, for a four-month grace period while BPA prepares a new rate case. BPA is attempting to comply with FERC's requirement for accounting information to clarify that transmission revenues and costs are only transmission related and transmission revenue surpluses or deficiencies are allocated properly.

To comply with the requirements of Public Law 89-448 for an annual report to the President and the Congress which includes all authorized Federal Power facilities, a note to the Revenue Requirement Study (page 34) lists the authorized projects not specifically included in the Revenue Requirement Study, together with pertinent data thereof.

Electric Energy Account — Table I

Fiscal Year 1983

Energy Received (Millions of kilowatt hours)	
Energy Generated for BPA (Excludes Residential Exchange):	
Bureau of Reclamation	23,524
Corps of Engineers	63,375
Hanford Steamplant (NPR)	3,733
Centralia Thermal Project	513
Trojan Nuclear Plant	1,159
Other Generation	670
Power Interchanged In	43,128
Total Received	136,102
Energy Delivered (millions of kilowatt-hours)	
Sales (Excludes Residential Exchange)	80,830
Power Interchanged Out	51,378
Used by Administration	68
Total Delivered	132.276
Energy Losses in Transmission	3,826
Total	136,102
Losses as Percent of Total Received	2.8
Maximum Demand on Generation (kilowatts) (Date & Time)	17,312
Load Factor February 4, 1983, 0800	61.3



Generation by the Principal Electric Utility Systems of the Pacific Northwest[1]

Fiscal Year 1983 **Table 2**

Utility	Kilowatt Hours (Billions)	of Total Gen (Percent)
Publicly Owned:		
Federal Columbia River Power System[2]	93.2	53.0
Grant County PUD	10.3	5.9
Chelan County PUD	9.4	5.3
Seattle City Light	6.5	3.7
Douglas County PUD	4.1	2.3
Tacoma City Light	2.9	1.6
Eugene Water & Elec. Board	0.5	0.3
Pend Oreille County PUD	0.5	0.3
Total Publicly Owned	**127.4**	**72.4**
Privately Owned:		
Pacific Power & Light	14.4	8.2
Idaho Power Company	14.6	8.3
Montana Power Company	6.0	3.4
Portland General Electric Co.	5.7	3.2
Washington Water Power Co	4.9	2.8
Puget Sound Power & Light Co.	3.0	1.7
Total Privately Owned	**48.6**	**27.6**
Total Generation	**176.0**	**100.0**

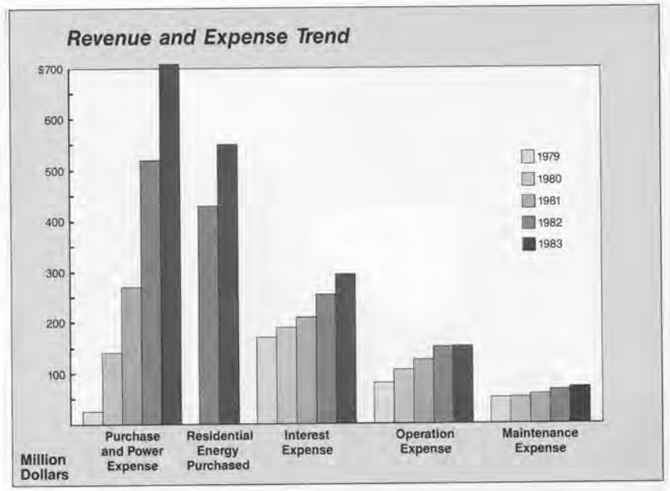
[1]*Generation shown is for members of the Northwest Power Pool plus Pend Oreille County PUD and Washington Public Power Supply System. Utah Power & Light Co., British Columbia Hydro and Power Authority, West Kootenay Power and Light and Trans Alta Utilities, who are members of the Power Pool, are not included because their service areas lie outside the Pacific Northwest.*

[2]*Includes generation from the Washington Public Power Supply System's Hanford steamplant (NPR), Okanogan PUD's share of Wells, the municipalities of Forest Grove, McMinnville, and Milton-Freewater share of Priest Rapids and Wanapum, the Kittitas share of Priest Rapids, the Federal and Snohomish Shares of the Centralia steamplant and the Federal share of the Trojan Nuclear Plant.*

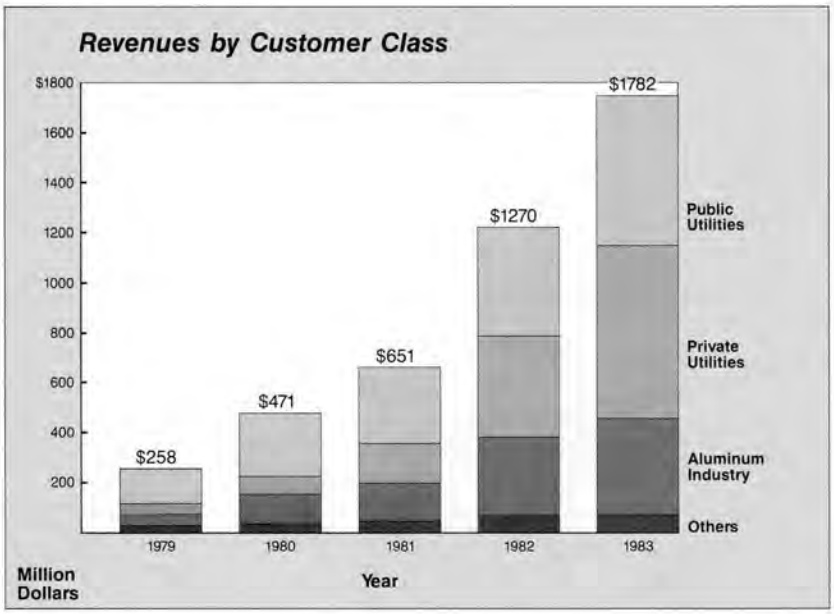
Sales of Electric Energy **Table 3**

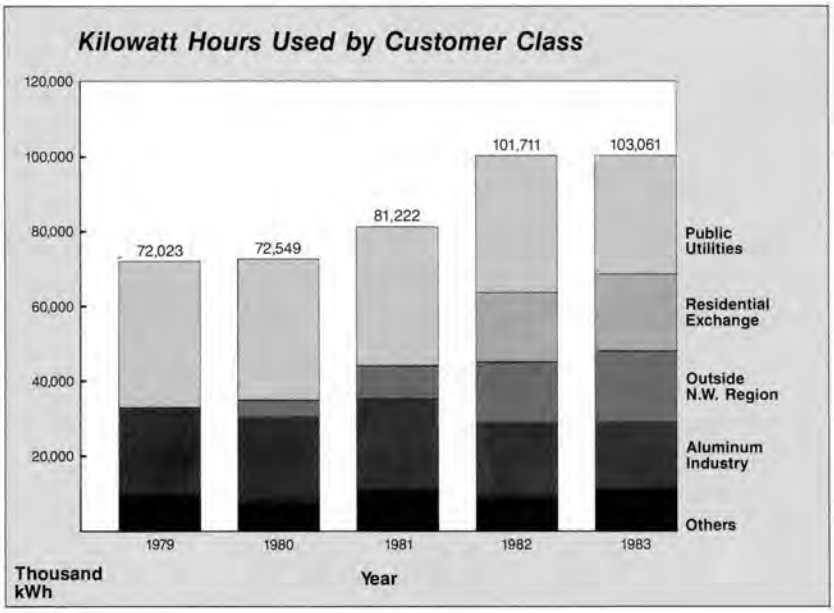
Customer	MWH	Revenue
Northwest Region Municipalities		
Albion, Idaho	3,197	$ 63,877
Ashland, Oregon	125,901	2,394,200
Bandon, Oregon	48,475	945,073
Blaine, Washington	40,340	765,508
Bonners Ferry, Idaho	22,279	552,402
Burley, Idaho	108,328	2,026,539
Canby, Oregon	93,217	1,851,701
Cascade Locks, Oregon	23,802	466,333
Centralia, Washington	102,842	2,195,347
Cheney, Washington	90,311	1,724,575
Consolidated Irrigation District, Washington	1,924	39,988
Coulee Dam, Washington	15,402	284,974
Declo, Idaho	2,992	58,048
Drain, Oregon	22,893	434,833
Eatonville, Washington	15,397	305,947
Ellensburg, Wasington	147,805	2,724,926
Eugene, Oregon	925,515	16,961,842
Fircrest, Washington	41,467	803,841
Forest Grove, Oregon	31,814	392,091
Heyburn, Idaho	66,662	1,236,452
Idaho Falls, Idaho	486,332	9,189,210
McCleary, Washington	34,226	676,843
McMinnville, Oregon	236,878	4,212,276
Milton, Washington	28,534	570,948
Milton-Freewater, Oregon	[11,674]	[383.153]
Minidoka, Idaho	1,121	21,345
Monmouth, Oregon	48,686	964,777
Port Angeles, Washington	584,842	10,001,119
Richland, Washington	474,589	9,054,692
Rupert, Idaho	72,009	1,381,809
Seattle, Washinigton	1,066,547	18,569,959
Springfield, Oregon	627,925	11,683,337
Steilacoom, Washington	36,669	718,049
Sumas, Washington	7,492	141,229
Tacoma, Washington	1,395,738	27,518,513
Vera Irrigation District, Washington	129,492	2,499,246
Washington Public Power Supply System, Washington	44,183	788,380
Total Municipalities (37)	7,194,152	$133,837,076
Public Utility Districts		
Benton Co. PUD. #1	1,221,382	$22,343,508
Central Lincoln PUD	1,205,983	21,478,907
Chelan Co. PUD #1	165,187	2,880,245
Clallam Co. PUD #1	354,639	6,959,118
Clark Co. PUD #1	2,253,327	42,031,766
Clatskanie PUD	710,980	11,894,567
Cowlitz Co. PUD #1	3,173,296	52,292,832
Douglas Co. PUD #1	9,415	235,480
Ferry Co. PUD #1	55,707	965,708
Franklin Co. PUD #1	509,214	9,306,832
Grant Co. PUD #2	62,633	1,541,718
Grays Harbor PUD #1	1,040,241	18,943,034
Kittitas Co. PUD #1	24,686	408,429
Klickitat Co. PUD #1	211,458	3,723,228
Lewis Co. PUD #1	592,026	10,497,170
Mason Co. PUD #1	48,013	926,437
Mason Co. PUD #3	365,376	7,025,970
Northern Wasco Co. PUD	204,576	3,744,678
Okanogan Co. PUD #1	305,632	5,304,375
Pacific Co. PUD #2	217,777	4,219,643
Pend Oreille PUD #1	0	0
Skamania Co. PUD #1	91,794	1,669,120
Snohomish Co. PUD #1	4,207,068	79,238,991
Tillamook PUD	299,850	5,827,502
Wahkiakum Co. PUD #1	34,251	615,530
Whatcom Co. PUD #1	132,889	2,248,713
Total Public Utility Districts (26)	17,497,400	$316,323,501

Customer	MWH	Revenue
Cooperatives		
Alder Mutual Light	1,927	$36,551
Benton Rural Elec. Assn.	260,281	4,551,767
Big Bend Coop.	335,103	5,415,995
Blachly-Lane Coop.	99,131	1,826,824
Central Elec. Coop.	249,596	4,383,208
Clearwater Power Co.	131,950	2,352,421
Columbia Basin Coop.	93,176	1,573,753
Columbia Power Coop.	22,712	389,832
Columbia Rural Elec.	161,577	2,605,060
Consumers Power	287,757	5,122,650
Coos-Curry Elec. Coop.	209,832	3,650,160
Douglas Elec. Coop.	112,968	1,994,635
East End Mutual Elec.	13,888	250,288
Elmhurst Mutual P&L	176,360	3,453,104
Fall River Elec. Coop.	111,960	1,961,748
Farmers Elec. Co.	3,829	76,829
Flathead Elec. Coop.	121,910	2,108,640
Glacier Elec. Coop.	154,975	2,609,174
Harney Elec. Coop.	123,891	1,993,946
Hood River Elec. Coop.	80,790	1,481,025
Idaho Co. L&P Coop.	31,660	554,591
Inland Power & Light	403,006	7,173,408
Kootenai Elec. Coop.	134,395	2,339,190
Lakeview Light & Power	215,645	4,067,854
Lane Elec. Coop.	205,473	3,880,179
Lincoln Elec. Coop - Mont.	57,078	1,007,979
Lincoln Elec. Coop - Wash.	88,805	1,413,501
Lost River Elec. Coop.	54,797	924,624
Lower Valley P&L	290,231	5,268,545
Midstate Elec. Coop.	187,555	3,247,427
Missoula Elec. Coop.	101,764	1,770,337
Nespelem Valley Elec. Coop.	34,929	629,556
Northern Lights	200,017	3,348,973
Ohop Mutual Light Co.	29,989	569,076
Okanogan County Coop.	26,035	463,617
Orcas Power & Light	94,661	1,689,325
Parkland Light & Water	92,389	1,778,545
Peninsula Light Co.	284,644	5,642,266
Prairie Power Coop.	9,269	163,158
Raft River Elec. Coop.	141,624	2,293,029
Ravali Elec. Coop.	67,306	1,191,352
Riverside Elec. Co.	12,342	240,341
Rural Elec. Co.	73,478	1,388,409
Salem Elec.	244,169	4,637,479
Salmon River Coop.	87,385	1,482,475
South Side Elec. Lines	29,638	510,141
Surprise Valley Elec.	102,481	1,712,851
Tanner Elec.	21,566	397,244
Umatilla Elec. Coop.	580,815	8,782,914
Unity Light & Power	55,800	1,054,401
Vigilante Elec. Coop.	102,270	1,714,202
Wasco Elec. Eoop.	88,496	1,574,528
Wells Rural Elec.	73,929	1,266,670
West Oregon Coop.	57,732	1,028,539
Total Cooperatives (54)	7,034,986	$123,044,336
Federal Agencies		
U.S. Department of Energy	483,232	$8,692,316
U.S. Bureau of Mines	4,850	107,586
Fairchild Air Force Base	27,283	508,456
U.S. Bureau of Reclamation	2,424	29,869
U.S. Bureau of Indian Affairs	157,076	3,103,162
U.S. Navy	325,903	5,880,830
Total Federal Agencies (6)	1,000,768	$18,322,219



Customer	MWH	Revenue
Outside Northwest Region		
Alameda, California-Public	0	$0
Bountiful, Utah - Public	8,685	87,724
Burbank, California - Public	355,408	3,634,257
B.C. Hydro - Public	0	0
Glendale, California -	375,787	3,898,737
Healsburg, California - Public	0	0
Lodi, California - Public	0	0
Lompoc, California - Public	0	0
Los Angeles, California - Public	3,745,614	35,006,075
Pasadena, California - Public	230,656	2,313,928
Sacramento, California - Public	0	0
Santa Clara, California - Public	0	0
Ukiah, California - Public	0	0
Cominco, Ltd., B.C. - Private	0	36,450
Pacific Gas & Elec. Co. - Private	6,440,861	76,204,218
Public Service Co. - Public	351	2,282
San Diego Gas & Elec. - Private	770,618	7,035,566
Sierra Pacific Power - Private	17,598	171,649
So. California Edison Co.-Private	5,724,594	53,619,912
State of California - Public	16,658	149,922
WAPA-Upper Colorado Region-Fed.	0	0
WAPA-Upper Missouri Region-Fed.	0	0
WAPA-Mid Pacific Region-Fed.	2,113,919	29,501,174
Total Outside Northwest Region (23)	19,800,749	$211,661,894
Privately Owned Utilities		
California Pacific Utilities Co.	34,343	$309,087
Idaho Power Co.	120,559	1,894,962
Montana Power Co.	950,042	9,518,681
Pacific Power & Light Co.	3,246,503	47,681,572
Portland General Elec. Co.	2,969,702	53,272,903
Puget Sound Power & Light Co.	933,748	13,626,371
Utah Power Co.	881,481	6,980,496
Washington Water Power	419,686	6,667,782
Total Privately Owned Utilities (8)	9,556,064	$139,951,854





Customer	MWH	Revenue
Aluminum Industries		
Alcoa (Combined)[3]	2,510,180	$50,676,987
Anaconda/Arco Alum. Co.	1,453,153	33,697,928
Intalco Aluminum Co.	3,814,039	87,146,750
Kaiser Aluminum (Combined)[3]	3,350,840	75,212,354
Martin Marietta Co. (Combined)[3]	3,337,276	75,563,535
Reynolds Metals Co. (Combined)[3]	3,466,451	76,025,862
Total Aluminum Industries (6)	17,931,939	$398,323,416

[1]*Includes capacity sales.*
[2]*Financial transactions resulting from exchanges of capacity and energy.*
[3]*See table, amounts estimated.*

Customer	MWH	Revenue
Other Industries		
Carborundum Co.	1,433	$224,089
Crown Zellerbach	100,655	2,449,301
Georgia Pacific Corp.	160,771	2,895,954
Hanna Nickel Shelting	1,780	41,558
Oregon Metallurgical	41,822	1,001,548
Pacific Carbide	60,266	1,379,568
Pennwalt Corportation	447,206	9,927,848
Stauffer Chemical	0	0
Stewart Elsner	4	473
Union Carbide (Elkem)	520	18,762
Total Other Industries (10)	814,457	$17,939,101
Total Sales Northwest Region 147	61,029,766	$1,147,741,503
Total Sales Excluding Residential Exchange (170)	80,830,515	$1,359,403,397

Customer	MWH	Revenue
Residential Exchange		
Blachley-Lane Coop.	26,832	$592,197
California-Pacific Utilities Co.	185,822	4,305,117
Central Elec. Coop.	122,472	2,977,296
Clark County PUD #1	99,951	2,132,954
Clearwater Power	10,435	258,793
Coos Curry Coop. Inc.	131,711	2,131,254
Idaho Power Co.	3,216,959	67,757,721
Lower Valley Power & Light	109,972	2,541,162
Montana Light & Power	4,353	118,227
Montana Power	367,344	6,323,383
Portland General Electric	4,320,905	132,228,043
Pacific Power & Light	4,917,673	151,218,048
Puget Power	5,744,680	106,247,530
Raft River Coop.	88,035	2,052,822
Umatilla Elec. Coop.	37,413	719,833
Utah Power	649,988	27,326,471
Washington Water Power	2,196,287	40,543,509
	22,230,832	$549,474,360
Total Sales of Electric Energy	103,061,347	$1,908,877,757[4]

[4]*Based on actual billings, not including Cost Accounting Accruals.*

Pro Rata Breakdown by Plant Location
(relates to footnote 3)

Customer	MWH	Revenue
Aluminum Co. of America		
Addy	264,322	$5,335,287
Vancouver	1,021,894	20,630,601
Wenatchee	1,223,964	24,710,099
Kaiser Alum. & Chem. Corp.		
Spokane Reduction	1,612,089	36,184,664
Spokane Rolling	441,641	9,912,988
Tacoma Reduction	1,297,110	29,114,702
Reynolds Metals Co.		
Longwiew	2,708,685	59,406,609
Troutdale	757,766	16,619,253
Martin Marietta		
Washington	2,370,467	53,672,779
Oregon	966,809	21,890,756

Repayment Policy

The basis on which BPA establishes its revenue requirements, and hence its rate level, is the repayment policy. This policy, which is based upon the Department of Energy's interpertation of statutory requirements, provides that FCRPS revenues from power sales, wheeling service, and other miscellaneous sources must be sufficient to satisfy the following criteria:

1. Pay the cost of obtaining power through purchase and exchange agreements.

2. Pay the cost of operating and maintaining the power system.

3. Pay interest on and amortize the outstanding revenue bonds sold to the Treasury to finance transmission system construction.

4. Pay interest on the unamortized investment in power facilities financed with appropriated funds. (Federal hydroelectric projects are all financed with appropriated funds. BPA transmission facilities constructed prior to BPA authorization to finance its construction program with sales receipts and revenue bonds were financed with appropriated funds.)

5. Repay, with interest, any outstanding unpaid annual expenses. (See discussion of deferral below.)

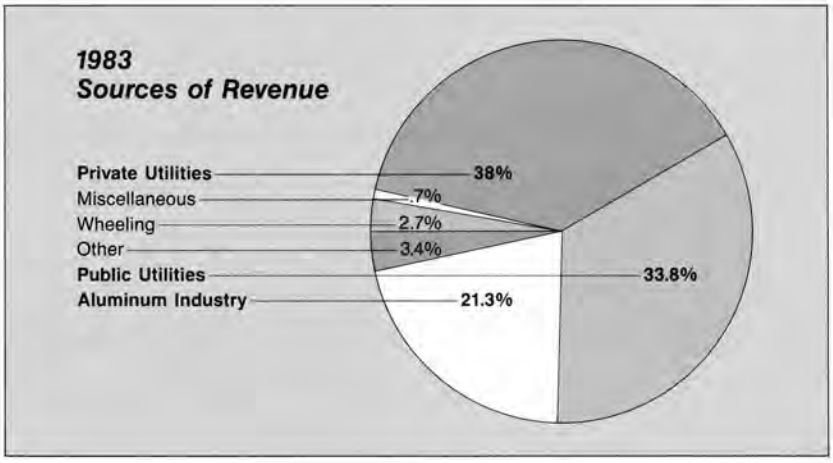
6. Repay each increment of the power investment in the Federal hydroelectric projects within 50 years after such increment becomes revenue-producing.[1]

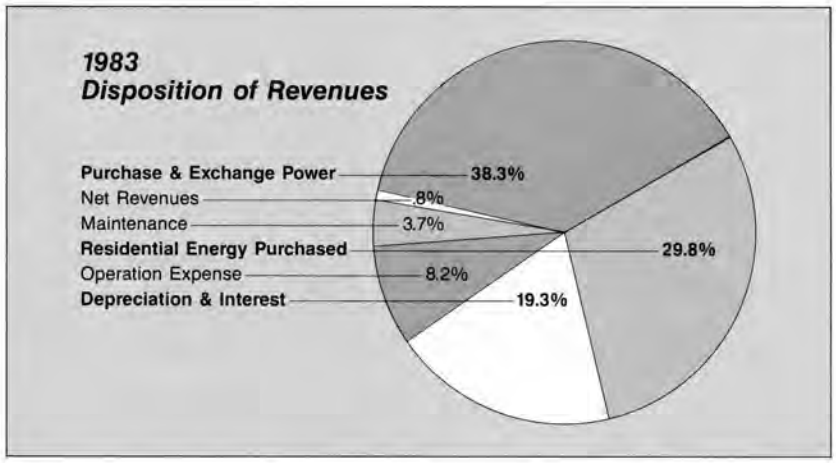
7. Repay each annual increment of the investment in the BPA transmission system previously financed with appropriated funds within the average service life of the transmission facilities (currently 35 years).

8. Repay each annual increment of financing for conservation within the average service life (currently 20 years).

9. Repay the investment in each replacement of a facility at a Federal hydroelectric project within its service life. (In repaying the investment financed with appropriated funds, the investment bearing the highest interest rate will be amortized first to the extent possible while still completing repayment of each increment of investment within its prescribed repayment period.)

[1]*Except for the Chandler Project, which has a legislated amortization life of 66 years and Lost Creek Project, which has a legislated amortization life of 60 years.*





10. Repay the portion of construction costs at Federal reclamation projects which is beyond the ability of the irrigation water users, and which is assigned for repayment from commercial power revenues, within the same overall period available to the water users for making their repayments. These periods range from 40 to 66 years with 60 years being applicable to most of the irrigation repayment assistance.

Repayment of Deferral

BPA's actual cumulative deferral as of September 30, 1983, amounted to $217.6 million. BPA made an administrative decision to increase revenues in FY 1984 and FY 1985 to a level which is sufficient to fully repay the total $217.6 million deferral plus amortization of $225 million to the U.S. Treasury.

As discussed in the section on Repayment Policy, all deferrals must be fully repaid before any amortization can be made. Therefore, actual payments to the Treasury will be applied first to deferrals until they are fully repaid. However, for the purpose of making allocations in the Cost of Service Analysis, the deferral is allocated over the 2 years.

Federal Columbia River Power System

1983 Wholesale Rate Filing Final Revenue Requirement Study

Table 4

Adjusted to Incorporate the 1983 Actual Results *(All Amounts in $1,000)*

Fiscal year Ending Sept. 30	Revenue Requirement	Annual Obligations	Purchase and Exchange Power	Interest Expense	Amortization	Irrigation Amortization	Surplus Revenues	Annual Expense Deferred
Cumulative								
1983	8,015,979	1,952,847	3,179,654	2,462,804	638,309			-217,635
Adjust[2]	193,437	66,602	116,766	28,367				-18,298
1984	2,739,683	360,948	1,858,548	366,787				153,400
1985	3,073,792	357,146	2,002,533	405,706	225,874			82,533
Adjust[3]		-21,154			21,154			
1986	2,833,848	335,992	2,009,833	395,703	92,320			
1987	2,833,848	335,992	2,011,033	387,042	99,781			
1988	2,833,848	335,992	2,012,833	372,916	112,107			
1989	2,833,848	335,992	2,012,733	367,149	117,974			
1990	2,833,848	335,992	2,015,033	364,480	118,343			
1991	2,833,848	335,992	2,014,733	354,295	128,828			
1992	2,833,848	335,992	2,014,133	355,516	128,207			
1993	2,833,848	335,992	2,009,533	350,955	137,368			
1994	2,833,848	335,992	2,008,933	349,517	139,406			
1995	2,833,848	335,992	2,008,833	345,508	143,515			
1996	2,833,848	335,992	2,014,233	336,273	147,350			
1997	2,833,848	335,992	2,029,633	329,519	120,002	18,702		
1998	2,833,848	335,992	2,028,033	329,623	140,200			
1999	2,833,848	335,992	2,028,233	322,293	147,330			
2000	2,833,848	335,992	2,028,033	320,781	149,042			
2001	2,833,848	335,992	2,028,033	324,862	134,670	10,291		
2002	2,833,848	335,992	2,020,033	331,098	146,725			
2003	2,833,848	335,992	1,996,433	335,552	165,871			
2004	2,833,848	335,992	1,997,633	340,829	158,613	781		
2005	2,833,848	335,992	1,996,833	347,045	153,978			
2006	2,833,848	335,992	1,996,833	353,838	147,185			
2007	2,833,848	335,992	1,991,233	360,543	146,080			
2008	2,833,848	335,992	1,991,633	367,184	136,088	2,951		
2009	2,833,848	335,992	1,991,633	373,995	125,930	6,298		
2010	2,833,848	335,992	1,991,633	381,253	124,970			
2011	2,833,848	335,992	1,991,633	389,293	116,930			
2012	2,833,848	335,992	1,892,733	390,492	214,128	503		
2013	2,833,848	335,992	1,892,733	397,707	169,239	38,177		
2014	2,833,848	335,992	1,892,733	389,785	173,198	42,140		
2015	2,833,848	335,992	1,892,733	386,992	171,515	46,616		
2016	2,833,848	335,992	1,892,733	383,260	155,670	66,193		
2017	2,833,848	335,992	1,800,733	378,878	262,283	55,962		
2018	2,833,848	335,992	1,619,533	367,794	490,046	20,483		
2019	2,833,848	335,992	1,502,033	326,684	606,206	62,933		
2020	2,833,848	335,992	1,502,033	314,985	652,551	28,287		
2021	2,833,848	335,992	1,502,033	279,602	697,102	19,119		
2022	2,833,848	335,992	1,502,033	232,693	743,765	19,365		
2023	2,833,848	335,992	1,502,033	151,912	837,785	6,126		
2024	2,833,848	335,992	1,502,033	129,516	848,081	18,226		
2025	2,833,848	335,992	1,502,033	106,771	878,146	10,906		
2026	2,833,848	335,992	1,502,033	86,794	887,362	21,667		
2027	2,833,848	335,992	1,502,033	65,349	926,977	3,497		
2028	2,833,848	335,992	1,502,033	41,495	817,287	22,702	114,339	
2029	2,833,848	335,992	1,502,033	23,492	153,628	4,029	814,674	
2030	2,833,848	335,992	1,502,033	23,299	120,215	2,458	849,851	
2031	2,833,848	335,992	1,502,033	24,302	173,603	11,223	786,695	
2032	2,833,848	335,992	1,502,033	25,163	200,342		770,318	
2033	2,833,848	335,992	1,502,033	24,254	121,391		850,178	
2034	2,833,848	335,992	1,502,033	24,809	136,669	11,165	823,180	
2035	2,833,848	335,992	1,502,033	25,092	132,208	29,484	809,039	
Totals	155,715,291	19,515,989	97,815,351	17,051,846	14,933,547	580,284	5,818,274	

[1]The cumulative revenues for the repayment study are on a cash basis. The financial statements are on an accrual basis and as such are different by $217,635,000.

[2]The adjustments line represents the difference between 1983 actual results and the 1983 estimates originally included in the repayment study. Repayment study estimates are based upon the presumption of average conditions. The effect of the differences over the long run can be expected to be offset by the occurrence of some above-average years at some time within the repayment period.

	INVESTMENT PLACED IN SERVICE					IRRIGATION ASSISTANCE		
Initial Project Thru 9-30-83	Replace-ments	Cumulative Amount in Service	Amorti-zation	Unamortized Investment	Term Schedule	Cumulative Amount in Service	Amorti-zation	Unamortized Amount
7,630,703		7,630,703	638,309	6,992,394	7,513,689	663,051		663,051
246,160		246,160		246,160	272,828	11,281		-11,281
468,283		8,345,146		7,706,837	8,245,272	688,118		688,118
376,310		8,721,456	247,028	7,836,119	8,591,347	695,467		695,467
	58,550	8,780,006	92,320	7,802,349	8,629,591	706,278		706,278
	99,060	8,879,066	99,781	7,801,628	8,701,062	744,921		744,921
	63,598	8,942,664	112,107	7,753,119	8,696,068	765,143		765,143
	80,273	9,022,937	117,974	7,715,418	8,731,242	919,325		919,325
	96,273	9,119,210	118,343	7,693,348	8,802,223	959,597		959,597
	76,038	9,195,248	128,828	7,640,558	8,784,750	1,008,678		1,008,678
	244,037	9,439,285	128,207	7,756,388	8,968,081	1,045,789		1,045,789
	76,633	9,515,918	137,368	7,695,653	8,973,214	1,078,439		1,078,439
	120,965	9,636,883	139,406	7,677,212	9,041,761	1,104,674		1,104,674
	85,819	9,722,702	143,515	7,619,516	9,116,715	1,138,297		1,138,297
	142,177	9,864,879	147,350	7,614,343	9,236,316	1,172,067		1,172,067
	124,117	9,988,996	120,002	7,518,458	9,324,081	1,206,123	18,702	1,187,421
	91,545	10,080,541	140,200	7,569,803	9,367,788	1,235,599		1,216,897
	111,096	10,191,637	147,330	7,533,569	9,433,171	1,265,202		1,246,500
	92,204	10,283,841	149,042	7,476,731	9,480,201	1,289,043		1,270,341
	143,247	10,427,088	134,670	7,485,308	9,527,743	1,312,986	10,291	1,283,993
	129,531	10,556,619	146,725	7,468,114	9,511,779	1,331,373		1,302,380
	98,624	10,655,243	165,871	7,400,867	9,194,155	1,349,838		1,320,845
	121,005	10,776,248	158,613	7,363,259	8,886,628	1,368,667	781	1,338,893
	110,249	10,886,497	153,978	7,319,530	8,407,786	1,388,148		1,358,374
	112,572	10,999,069	147,185	7,284,917	8,352,073	1,407,997		1,378,223
	157,493	11,156,562	146,080	7,296,330	8,321,394	1,431,686		1,401,912
	117,751	11,274,313	136,088	7,277,993	8,202,868	1,455,473	2,951	1,422,748
	126,864	11,401,177	125,930	7,278,927	8,185,097	1,479,066	6,298	1,440,043
	172,307	11,573,484	124,970	7,326,264	8,192,163	1,502,756		1,463,733
	161,334	11,734,818	116,930	7,370,668	8,259,009	1,523,607		1,484,584
	165,662	11,900,480	214,128	7,322,202	8,173,012	1,544,248	503	1,504,722
	171,420	12,071,900	169,239	7,324,383	8,341,183	1,564,973	38,177	1,487,270
	129,381	12,201,281	173,198	7,280,566	8,274,304	1,588,458	42,140	1,468,615
	120,723	12,322,004	171,515	7,229,774	8,272,230	1,612,038	46,616	1,445,579
	217,928	12,539,932	155,670	7,292,032	8,311,143	1,635,713	66,193	1,403,061
	157,834	12,697,766	262,283	7,187,583	8,189,265	1,668,208	55,962	1,379,594
	153,567	12,851,333	490,046	6,851,104	8,103,098	1,684,520	20,483	1,375,423
	124,968	12,976,301	606,206	6,369,866	7,763,170	1,709,387	62,933	1,337,357
	188,694	13,164,995	652,551	5,906,009	7,700,825	1,734,273	28,287	1,333,956
	165,810	13,330,805	697,102	5,374,717	7,656,360	1,751,875	19,119	1,332,439
	209,416	13,540,221	743,765	4,840,368	7,755,739	1,769,477	19,365	1,330,676
	121,488	13,661,709	837,785	4,124,071	7,473,173	1,798,764	6,126	1,353,837
	138,320	13,800,029	848,081	3,414,310	7,519,547	1,828,051	18,226	1,364,898
	143,764	13,943,793	878,146	2,679,928	7,120,635	1,850,509	10,906	1,376,450
	234,784	14,178,577	887,362	2,027,350	6,813,003	1,872,967	21,667	1,377,241
	163,049	14,341,626	926,977	1,263,422	6,701,344	1,894,818	3,497	1,395,595
	128,376	14,470,002	817,287	574,511	6,389,957	1,916,669	22,702	1,394,744
	155,995	14,625,997	153,628	576,878	6,158,803	1,938,520	4,029	1,412,566
	122,588	14,748,585	120,215	579,251	5,993,939	1,959,764	2,458	1,431,352
	176,003	14,924,588	173,603	581,651	5,943,404	1,981,008	11,223	1,441,373
	202,805	15,127,393	200,342	584,114	5,503,462	2,002,252		1,462,617
	123,974	15,251,367	121,391	586,697	5,265,600	2,023,648		1,484,013
	139,367	15,390,734	136,669	589,395	5,178,855	2,045,044	11,165	1,494,244
	135,035	15,525,769	132,208	592,222	5,150,491	2,065,984	29,484	1,485,700
8,721,456	6,804,313		14,933,547				580,284	

[3]BPA plans to make amortization payments of $225.874 million by the end of FY 1985. These amortization payments were determined by the Revenue Requirement Study. However, the rates filed with the Federal Energy Regulatory Commission provide additional revenues of $21.154 million by the end of FY 1985. The amortization amount for FY 1985 is adjusted to reflect the revenues generated by the filed rates.

Note to Federal Columbia River Power System Revenue Requirement Study.

(Table 4, pages 32 and 33)
Section 2 of Public Law 89-448 (80 STAT 200) requires the submission to the President and the Congress of an annual financial statement which includes all projects authorized by Congress as components of the FCRPS Revenue Requirement Study in its Annual Report and transmitting copies thereof to the President and the Congress. Through FY 1978 the FCRPS Revenue Requirement Study included the estimated costs of all authorized projects even though some were not yet in service or in some cases were not yet under construction. In determining revenue requirements for the purpose of establishing power rates, however, objections were raised by customers to the inclusion of projects in the Revenue Requirement Study which would not be in service during the period in which the power rates would be in effect. During preparation of the wholesale power rate increase which took effect December 20, 1979, the BPA General Counsel issued an opinion concluding that whereas P.L. 89-448 does, in fact, require the inclusive of all authorized projects in the annual financial statement to be submitted to the President and the Congress, the Revenue Requirement Study used as a basis for establishing rate levels should properly include only those projects which will be in service during the rate period. The Revenue Requirement Study in this annual report includes only those Federal power facilities expected to be in service during the cost evaluation period.

The estimated capital cost in 1983 dollars and the estimated completion dates of those authorized projects not included in the new Revenue Requirement Study are set forth in the table below.

These projects will be included in future Revenue Requirement studies for rate purposes only when they are completed and placed in service.

Cougar Unit No. 3		$ 30 million
Strube Unit No. 1		$ 57 million
McNary Second Powerhouse	Aug. 1990	$715 million
John Day additional units	July 1997	$146 million

Auditors' Report

To the Administrator of
Bonneville Power Administration,
United States Department of Energy:

We have examined the statement of assets and liabilities of the Federal Columbia River Power System (FCRPS) as of September 30, 1983, and the related statements of revenues and expenses, changes in federal investment and source and use of funds for the year then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. The financial statements of FCRPS for the year ended September 30, 1982 were examined by other auditors whose report dated December 3, 1982 was qualified with respect to interim power rate increases; as discussed in Note 2, final approval for substantially all of these power rate increases was received from the Federal Energy Regulatory Commission without any effect on previously recorded revenues.

As more fully discussed in Note 1 to the financial statements, the FCRPS financial statements have been prepared in accordance with the accounting practices prescribed by applicable legislation and executive directives of government agencies. These practices differ in some respects from generally accepted accounting principles. Accordingly, the financial statements do not purport to present financial position and results of operations in conformity with generally accepted accounting principles.

As discussed in Note 11, pending and threatened litigation surrounding the Washington Public Power Supply System (the Supply System), including litigation relating to the Supply System's default on $2.25 billion of bonds relating to nuclear projects Nos. 4 and 5 for which FCRPS has no obligation, may have a significant impact on FCRPS. The cases and legal issues involving the Supply System have not been fully developed and the ultimate impact on FCRPS, if any, presently cannot be determined. Also as discussed in Note 11, FCRPS is involved in litigation relating to 1981 and 1982 rate schedules, and management is unable to predict the likelihood of an adverse decision in such litigation, or the impact on the FCRPS financial statements of an adverse decision.

In our opinion, subject to the effect of any adjustments that might have been required had the outcome of the contingencies mentioned in the preceding paragraph been known, the financial statements referred to above present fairly the assets and liabilities of FCRPS as of September 30, 1983, and its revenues and expenses, changes in federal investment and source and use of funds for the year then ended, in conformity with the accounting principles described in Note 1 applied on a basis consistent with that of the preceding year.

Our examination was made for the purpose of forming an opinion on the basic financial statements taken as a whole. The Schedule of Amount and Allocation of Plant Investment as of September 30, 1983 (Schedule A) is presented for purposes of additional analysis and is not a required part of the basic financial statements. The information in Schedule A has been subjected to the auditing procedures applied in the examination of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Portland, Oregon
December 16, 1983

ARTHUR ANDERSEN & CO.

Federal Columbia River Power System

Statement of Revenues and Expenses

for the years ended September 30, 1983 and 1982

	1983	1982
	(Thousands of Dollars)	
OPERATING REVENUES (Notes 1, 2 and 7):		
Sales of electric power-		
Publicly owned utilities	$ 624,236	$ 463,630
Privately owned utilities	702,164	418,487
Federal agencies	44,966	30,428
Aluminum industry	393,240	330,970
Other industry	17,733	26,065
	1,782,339	1,269,580
Other operating revenues-		
Wheeling	50,533	45,405
Other	12,510	21,818
	63,043	67,223
Total operating revenues	1,845,382	1,336,803
OPERATING EXPENSES:		
Operation	151,394	146,317
Maintenance	68,252	62,093
Purchase and exchange power (Notes 1, 6 and 11)-		
Hanford	8,420	11,242
Trojan	38,920	40,818
WNP No. 1	201,450	173,362
WNP No. 2	269,682	168,047
WNP No. 3	161,875	40,000
Other	25,994	83,602
Residential energy purchased (Note 7)	549,469	428,371
Depreciation	63,857	60,607
Total operating expenses	1,539,313	1,214,459
Net operating revenues	306,069	122,344
INTEREST EXPENSE (Notes 3 and 5):		
Interest on federal investment-		
On appropriated funds	214,923	200,998
On Transmission System Act borrowings	113,825	85,525
Allowance for funds used during construction	(36,717)	(34,723)
Net interest expense	292,031	251,800
NET REVENUES (EXPENSES)	$ 14,038	$ (129,456)

The accompanying notes are an integral part of this statement.

Federal Columbia River Power System

Statement of Assets and Liabilities

September 30, 1983 and 1982

ASSETS	1983	1982
	(Thousands of Dollars)	
UTILITY PLANT (Notes 3 and 4):		
Completed plant	$7,166,969	$6,839,525
Accumulated depreciation	(659,646)	(602,004)
	6,507,323	6,237,521
Construction work in progress	586,395	623,400
Net utility plant	7,093,718	6,860,921
CURRENT ASSETS:		
Unexpended funds (Note 5)	144,049	125,386
Accounts receivable	20,236	7,533
Accrued unbilled revenues	86,687	75,759
Materials and supplies, at average cost	41,407	36,425
Total current assets	292,379	245,103
OTHER ASSETS AND DEFERRED CHARGES:		
Trust funds (Note 8)	8,907	5,952
Net billing advances, net of accumulated amortization ($22,769 in 1983 and $16,697 in 1982) (Note 1)	189,738	195,810
Investment in Teton and Libby reregulating dams (Note 10)	32,453	33,361
Deferred conservation program costs, net of accumulated amortization ($6,582 in 1983 and $1,418 in 1982) (Notes 1 and 3)	258,867	59,939
Other	35,610	24,112
Total other assets and deferred charges	525,575	319,174
	$7,911,672	$7,425,198
LIABILITIES AND FEDERAL INVESTMENT		
FEDERAL INVESTMENT:		
Net investment of U.S. Government (Note 3)	$7,611,482	$7,177,746
Accumulated net revenues	61,330	47,292
Irrigation assistance, $716 million and $677 million, respectively (Note 9)		
Total federal investment	7,672,812	7,225,038
COMMITMENTS AND CONTINGENCIES: (Notes 2, 3, 4, 6, 7, 9, 10, and 11)		
CURRENT LIABILITIES:		
Accounts payable	198,995	166,330
Employees' accrued leave	10,108	10,437
Total current liabilities	209,103	176,767
DEFERRED CREDITS:		
Trust fund advances (Note 8)	8,907	5,952
Other	20,850	17,441
Total deferred credits	29,757	23,393
	$7,911,672	$7,425,198

The accompanying notes are an integral part of this statement.

Federal Columbia River Power System

Statement of Changes in Federal Investment

for the years ended September 30, 1983 and 1982

	Balance September 30, 1981	Additions (Reductions)	Balance September 30, 1982	Additions (Reductions)	Balance September 30, 1983
			(Thousands of Dollars)		
Congressional appropriations (Note 3)	$7,215,285	$157,571	$7,372,856	$170,733	$7,543,589
U.S. Treasury transfers to Continuing Fund	7,005		7,005		7,005
Transfers from (to) other federal agencies, net	43,211	(2,644)	40,567	(1,799)	38,768
Federal Columbia River Transmission System Act borrowings (Note 3)	700,000	210,000	910,000	255,000	1,165,000
Interest on federal investment:					
On appropriated funds	2,236,993	157,271	2,394,264	149,477	2,543,741
On Transmission System Act borrowings	115,679	85,525	201,204	113,825	315,029
Unpaid annual expense (Note 3)	108,462	43,727	152,189	65,446	217,635
Less:					
Interest payments	(2,352,672)	(242,796)	(2,595,468)	(263,302)	(2,858,770)
Funds returned to U.S. Treasury	(1,261,960)	(42,911)	(1,304,871)	(55,644)	(1,360,515)
Net investment of U.S. Government	6,812,003	365,743	7,177,746	433,736	7,611,482
Accumulated net revenues	176,748	(129,456)	47,292	14,038	61,330
Total federal investment	$6,988,751	$236,287	$7,225,038	$447,774	$7,672,812

The accompanying notes are an integral part of this statement.

Federal Columbia River Power System

Statement of Source and Use of Funds

for the years ended September 30, 1983 and 1982

	1983	1982
	(Thousands of Dollars)	
SOURCE OF FUNDS:		
Operations-		
Net revenues (expenses)	$14,038	$(129,456)
Charges not requiring funds:		
Depreciation	63,857	60,607
Amortization of net billing advances	6,072	6,072
Amortization of deferred conservation program costs	5,164	1,418
Funds provided from operations	89,131	(61,359)
Increase in net investment of U.S. Government	433,736	365,743
Decrease (increase) in current assets-		
Unexpended funds	(18,663)	(33,499)
Receivables	(23,631)	(10,845)
Materials and supplies	(4,982)	(5,525)
Increase in current liabilities	32,336	79,945
Other sources (uses), net	(7,181)	42,052
Total funds provided	$500,746	$376,512
USE OF FUNDS:		
Investment in utility plant, net	$296,654	$315,155
Conservation program costs	204,092	61,357
Total funds used	$500,746	$376,512

The accompanying notes are an integral part of this statement.

Federal Columbia River Power System

Notes to Financial Statements

1. Basis of Preparation of Financial Statements and Summary of Significant Accounting Policies:

General

The Federal Columbia River Power System (FCRPS) includes the accounts of the Bonneville Power Administration (BPA), which purchases, transmits and markets power, and the accounts representing the Pacific Northwest generating facilities of the Corps of Engineers (Corps) and the Bureau of Reclamation (Bureau) for which BPA is the power marketing agency. Each entity is separately managed and financed, but the facilities are operated as an integrated power system with the financial results combined under the FCRPS title. Costs of multipurpose Corps and Bureau projects are assigned to the individual purposes through a cost allocation process. The portion of total project costs allocated to power is included in these statements as Utility Plant. BPA may acquire power resources but cannot own or construct generating facilities. BPA's resource acquisition priorities are: conservation, renewable resources, resources using waste heat or having high fuel conversion efficiency, other resources. Properties and income are exempt from taxation.

The accounts are kept in accordance with standards and principles prescribed by the Comptroller General of the United States and the uniform system of accounts prescribed for electric utilities by the Federal Energy Regulatory Commission (FERC). FCRPS accounting policies described herein also reflect requirements of specific legislation and executive directives issued by the involved government departments (BPA is a unit of the Department of Energy; the Bureau is a part of the Department of Interior and the Corps of the Department of Defense).

The FCRPS accounting policies differ from generally accepted accounting principles as follows:

1) Depreciation expense for power generating facilities is not matched with recovery of the related plant cost in revenues as required by generally accepted accounting principles.

2) Deferral of certain net billing advances is not in accordance with generally accepted accounting principles as no specific recovery of these costs will be included in future revenues.

   Both these policies are discussed in more detail under "Revenues" and "Thermal Plant Net Billing Advances and Amortization" below.

Revenues

Operating revenues are recorded on the basis of service rendered. Rates established under requirements of the Bonneville Project Act and related legislation are intended to provide sufficient cash to meet all required payments for system costs (including operating expenses, payment of the federal investment and interest thereon, and costs of net billed thermal projects and assigned irrigation costs — see Notes 3, 6, and 9).

The priority for application of revenues is as follows: net billing credits; additional payments required for net billed thermal projects and BPA operating expenses; debt service on Federal Columbia River Transmission System Act borrowings from the U.S. Treasury; Corps and Bureau operating expenses; interest on unpaid annual expense and on the federal investment in power facilities financed through appropriations; amortization of unpaid annual expense (see Note 3); amortization of the federal investment in power facilities financed through appropriations; irrigation repayment assistance. No irrigation repayment assistance is required until 1997. If insufficient cash is available to meet all planned payments, the priority order for the application of revenues will be used in reverse order to determine what payments will be deferred. There is no fixed annual requirement for payment of the power investment or assigned irrigation costs, the only requirement being that repayments be completed within prescribed periods. Payments to repay an investment bearing a higher rate of interest may be scheduled ahead of other investments bearing a lower rate to the extent that this is possible while still complying with prescribed repayment periods.

The rates are intended to provide for recovery of the capital investment in transmission facilities within their average, estimated useful service lives and within 50 years for power generating facilities. As set forth below, these assets are being depreciated in the accounts on a compound interest method over their estimated useful lives, which currently average approximately 35 years for transmission facilities and 85 years for generating facilities. Thus, annual depreciation charges are not matched with the recovery of the related capital costs and will, in the case of generating facilities, continue beyond the period within which such costs will have been recovered through revenues.

Rates in effect during fiscal year 1983 were intended to recover approximately $224.1 million for payment of the September 30, 1982 unpaid annual expense and amortization of federal investment. However, due to a considerable revenue shortfall, these payments were not made and an additional $65.4 million of unpaid annual expense was incurred in fiscal year 1983.

Regulatory Authority

Effective July 1, 1982, FERC has sole authority to approve both interim and final rates.

Utility Plant and Depreciation

Utility plant is stated at original cost. Cost includes direct labor and materials, payments to contractors, indirect charges for engineering, supervision and similar overhead items, and an allowance for funds used during construction. The cost of additions, renewals and betterments is capitalized. Repairs and minor replacements are charged to operating expenses. The cost of utility plant retired, together with removal costs and less salvage, is charged to accumulated depreciation when it is removed from service.

Depreciation of utility plant is computed based on the estimated service lives of the various classes of property using the compound interest method (rates from 2-1/2% to 5-5/8%). Service lives currently average approximately 35 years for transmission plant and 85 years for generating plant.

Depreciation provisions recorded in the accounts, expressed as a percent of the average cost of plant in service, approximated 2.0% in 1983 and 1982 for transmission plant and 0.4% in each such year for generating plant. The compound interest method results in increasing depreciation charges in the later years of service lives.

Allowance for Funds Used During Construction

The allowance for funds used during construction (AFUDC) represents capitalization of the interest on federal investment applicable to utility plant under construction. AFUDC results in a noncash reduction of interest expense with a corresponding increase in utility plant, in accordance with accounting requirements of FERC.

AFUDC capitalization rates used are based upon interest rates stipulated for certain generating projects (2.5% to 9.5%) and rates approximating the cost of borrowings from the U.S. Treasury for other construction (11.6% in 1983 and 15.8% in 1982).

Energy Conservation Costs

Energy conservation program expenditures are deferred and amortized over twenty years, which is the planned revenue recovery period and the term of related borrowings from the U.S. Treasury. Conservation amortization was $5,164,000 and $1,418,000 for 1983 and 1982, respectively.

Thermal Plant Net Billing Advances and Amortization

Net billing agreements provide that BPA make payments and/or grant billing credits prior to a nuclear project's date of commercial operation. Payments and billing credits totaling $189.7 million at September 30, 1983 made prior to December 20, 1979 for Washington Public Power Supply System Nuclear Project (WNP) No. 2 are included as deferred charges under the caption "net billing advances" in the accompanying statement of assets and liabilities and are being amortized over 35 years. No specific recovery of these costs will be included in future revenues. Similar payments and billing credits made since December 20, 1979 have been charged directly to Purchase and Exchange Power expense, which coincides with their recovery on a current basis in rates.

Research and Development

Research and development costs, including depreciation of the cost of facilities constructed for research and development activities, are charged to expense. Costs charged to expense totaled approximately $13.1 million in 1983 and $13.7 million in 1982.

Retirement Benefits

Substantially all employees engaged in FCRPS activities participate in the federal government's Civil Service Retirement Fund, a contributory pension plan. Retirement benefit expense is equivalent to 7% of eligible employee compensation.

Reclassifications

Certain reclassifications of prior year amounts have been made to conform to 1983 financial statement presentation.

2. Revenues Subject to Refund:

On December 20, 1979, July 1, 1981 and October 1, 1982 increased power rates were placed into effect on an interim basis. Wheeling rates charged for transmission of nonfederal power were placed into effect on July 1, 1981 on an interim basis. On June 1, 1983, FERC issued an order confirming and approving on a final basis the 1979 rate changes. On June 15, 1983, FERC issued an order confirming and approving on a final basis the 1981 and 1982 rate changes with the exception of rates for power sales to nonfirm customers outside the Pacific Northwest region but within the United States. FERC found that it could not determine whether the revenue level proposed to be collected or the bases upon which the rate schedules were designed were appropriate. FERC has set hearings in early 1984 to address these matters. In the opinion of BPA management, the rates placed into effect on an interim basis in 1981 and 1982 for power sales to nonfirm customers outside the Pacific Northwest region but within the United States will be those finally approved. BPA has implemented new power sales rates effective November 1, 1983. These rates have been approved on an interim basis by FERC.

3. Net Investment of U.S. Government:

In order to assist in financing the construction, acquisition and replacement of the transmission system, and energy conservation measures, renewable resources, and fish and wildlife programs, BPA is currently authorized under the Federal Columbia River Transmission System Act to issue to the U.S. Treasury and have outstanding at any time up to $3.75 billion of bonds, notes or other evidences of indebtedness bearing interest and having terms and conditions comparable to those prevailing in the market for similar bonds issued by government corporations. $1.25 billion of the $3.75 billion is reserved for conservation and renewable resource loans and grants. $140 million of this reserved amount and $1.025 billion of other borrowings were outstanding at September 30, 1983. Interest rates on these borrowings range from 8.95% to 16.60%.

BPA's energy conservation budget for fiscal year 1984 is approximately $159 million, which will be financed primarily by borrowing and for which substantial commitments have been incurred. BPA's construction budget for fiscal year 1984 is approximately $248 million, which will also be primarily financed by borrowing and for which substantial commitments have been incurred.

The financing of construction and replacement of power generating facilities by the Corps and Bureau is provided through annual Congressional appropriations. Such appropriations authorized by Congress for fiscal year 1984 are $47 million and $36 million for the Corps and Bureau, respectively. Interest rates on these appropriated funds range from 2.5% to 9.5% (the weighted average rate was approximately 3.3% in 1983 and 1982). The rates have been set either by law, administrative order pursuant to law, or administrative policies.

If, in any given year, revenues collected are not sufficient to cover all annual cash requirements, including interest, such deficiency becomes unpaid annual expense which is payable from subsequent years' revenues prior to any payment for amortization of the federal investment. As of September 30, 1983, the $217.6 million of unpaid annual expense consisted of $65.4 million, $43.7 million, and $108.5 million for fiscal years 1983, 1982, and 1981 and prior, respectively. The outstanding unpaid annual expense is scheduled to be collected in revenues during 1984 and 1985.

The federal investment in the power generating projects and the transmission system is required to be repaid to the U.S. Treasury within 50 and 35 years, respectively, from the time the facility is placed in service. The cumulative amount of federal investment amortized and repaid through September 30, 1983 was approximately $638.3 million, which exceeded the amount required to be repaid through such date by approximately $551 million. The following table indicates the planned and required repayment of the remaining net federal investment as of September 30, 1983. See Note 1 (Revenues) and Notes 9 and 10 for additional information concerning repayment requirements and policies.

	Investment Planned to be Repaid	Investment Required to be Repaid
	(Thousands of Dollars)	
1984	$ 153,400	$ -
1985	329,561	-
1986	92,320	-
1987	99,781	-
1988	112,107	273,132 (b)
1989	117,974	45,099
1990	118,343	25,292
1991-1995	622,107	210,018
1996-2000	331,707	114,197
2001-2005	735,061	1,098,776
2006-2010	674,236	840,930
2011-2015	408,777	615,805
2016-2020	521,734	1,093,859
2021-2025	2,258,791	882,892
2026-2030	898,588	1,442,713
2031-2035	-	805,094
After 2035	-	26,680
	$7,474,487(a)	$7,474,487(a)

(a) The difference between these totals and the net investment of U.S. government on the statement of assets and liabilities is primarily amounts funding construction work in progress which are not planned or required to be repaid until the related plant is placed in service. Such amounts are therefore not included in this table.

(b) Includes the total amount of unpaid annual expense at September 30, 1983, which is required to be repaid prior to repayment of any federal investment. Such amount is planned to be repaid during 1984 and 1985.

4. Cost Allocations:

Allocations of plant cost and operation and maintenance expenses between power and nonpower purposes for five Corps projects are presently based on tentative allocations. At September 30, 1983, total costs for these five projects approximated $1.5 billion, of which $1.2 billion was tentatively allocated to power and subject to adjustment. Any adjustments would involve joint (benefiting both power and nonpower uses) costs approximating $0.6 billion, of which $0.5 billion has already been tentatively allocated to power. Accordingly, management believes the amount of any adjustments that may be necessary when the allocations for these five projects become final would not be material to the FCRPS financial statements.

Under certain circumstances, final cost allocations can be changed, but Congressional approval may be required for any significant change. If a change in a final cost allocation were made, any related adjustments would most likely be prospective.

5. Unexpended Funds:

	1983	1982
	(Thousands of Dollars)	
Corps and Bureau unexpended appropriated funds	$ 48,050	$ 43,189
BPA cash balances with U.S. Treasury	95,999	82,197
	$144,049	$125,386

The Corps and Bureau receive credit for interest on unexpended appropriated funds in determining the required interest payable on federal investment. The Treasury gives BPA credit for its cash balances in determining its interest charges. The interest expense on Treasury borrowings reflects reductions of $8.5 million in 1983 and $13.8 million in 1982 arising from credits for cash balances.

6. Purchase and Exchange Power Expense and Commitments to Exchange Power and Acquire Project Capability:

BPA has acquired from a group of utilities (participants) under net billing agreements all or part of the generating capability of the nuclear power plants listed in the following table. The agreements require that BPA pay the participants' portions of the annual project budgets, which include debt service, whether or not the projects are completed or operable.

BPA's commitment period under the net billing agreements extends for the life of the projects. BPA's estimated annual project costs related to these projects for the next five years, the present termination commitments, and the additional estimated financing requirements to complete construction of WNP Nos. 1, 2 and 3 are presented in the following table.

Construction of WNP Nos. 1 and 3 has been delayed. While restart of construction and the need for additional financing will depend upon factors such as the forecasted power supply needs in the Pacific Northwest and the cost effectiveness of these projects relative to other available resources, the following table assumes restart of construction of WNP Nos. 1 and 3 in 1986 and 1985, respectively. See Note 11 for further discussion concerning the financing of these projects.

Project and % Capability Acquired	Projected in Service Date	Capacity in Megawatts	Present Termination Commitment (a)	Additional Estimated Financing Requirements (b)	Estimated BPA Portion	Estimated Annual Project Costs (c) 1984	1985	1986	1987	1988
				(Thousands of Dollars)						
Hanford Generating Project (50%)	Operational	430	$ 37,205		Operations	$ 34,200	$ 36,900	$ 39,188	$ 41,617	$ 44,240
Trojan Nuclear Project (30%)	Operational	339	140,360		Debt Service	11,650	11,650	11,650	11,650	11,650
					Operations	29,650	31,550	33,510	35,580	37,820
WNP No. 1 (100%)	June 1991	1,250	2,143,445	$2,564,400	Debt Service	206,600	207,300	235,700	308,600	408,200
WNP No. 2 (100%)	July 1984	1,100	2,314,860	104,000	Debt Service	216,200	217,600	221,600	221,100	221,100
					Construction	98.400	5,600	-	-	-
					Operations	80,500	131,300	139,400	148,100	157,400
WNP No. 3 (70%)	December 1989	868	1,598,320	1,445,400	Debt Service	156,700	159,900	199,700	258,500	305,900
					Preservation	63,400	31,200	-	-	-
			$6,234,190	$4,113,800		$897,300	$833,000	$880,748	$1,025,147	$1,186,310

(a) The "Present Termination Commitment" represents the outstanding debt issued to finance the projects as of September 30, 1983 (without inclusion of costs and credits which would be associated with termination of construction, salvage of assets and utilization of unspent construction funds) which would be payable over the varied financing repayment periods if the projects were terminated.

(b) These are estimates of amounts needed to complete construction as of September 30, 1983, based on information provided by the Washington Public Power Supply System. Construction of WNP Nos. 1 and 3 has been delayed.

(c) Debt service for BPA portion of Hanford Generating Project is paid by WNP No. 1 participants and therefore included in WNP No. 1 debt service. Amounts shown for WNP Nos. 1 and 3 debt service assume restart of construction and related financing beginning in 1986 and 1985, respectively. Estimated preservation costs during the delay period for WNP No. 1 are not shown separately because it is anticipated such costs will be funded by WNP No. 1 bond funds currently available.

BPA has also entered into an agreement with a group of utilities to exchange an agreed amount of power annually for their rights to a portion of the Canadian Entitlement (one-half of the additional power benefits realized by downstream U.S. projects from three Canadian Treaty dams for a 60-year period). The portion of the Canadian Entitlement was purchased for a 30-year period from the completion of each dam (the last dam was placed in service in 1973) by 4l Pacific Northwest utilities. BPA furnishes specified amounts of power to the utilities regardless of entitlement power generated. BPA's minimum average energy commitment to the utilities declines annually from approximately 520 megawatts currently to approximately 100 megawatts in the last year of the exchange agreement (2003).

7. Residential Energy Exchange:

As provided for in the Pacific Northwest Electric Power Planning and Conservation Act (Regional Act), Section 5(c), BPA entered into residential energy purchase and exchange sales contracts effective October 1, 1981 with several electric utilities. These contracts provide for sales of electric power to BPA not in excess of a portion of each utility's residential load (the load increases ratably from 50% to 100% over five years) at the average system cost of each utility's resources in each year. In exchange, BPA is required to sell to the utilities electric power not in excess of the utilities' residential loads at BPA's priority firm power rates. Purchases and sales of electric power by BPA during fiscal years 1983 and 1982 under these contracts were as follows:

	1983	1982
	(Thousands of Dollars)	
Residential energy purchased (included in operating expenses)	$549,469	$428,371
Residential energy sold (included in operating revenues)	400,071	211,778
Net residential exchange costs	$149,398	$216,593

The Regional Act provides that the net residential exchange costs projected to be incurred in each rate period prior to July 1, 1985 be included in the direct service industrial rates to the extent such costs are not allocated to rates applicable to other customers. Therefore, operating revenues include amounts covering net residential exchange costs to the extent such net costs have been projected and recovered in revenues.

The Regional Act also provides that, in the event an overall net revenue surplus or deficiency exists for the period ending June 30, 1985, the portion of such surplus or deficiency caused by (1) a difference between projected and actual power deliveries to the direct service industrial customers during that period and (2) an underrecovery or overrecovery of the net residential exchange costs resulting from such differences, be recovered from or repaid to customers, over a reasonable period of time, on the basis of sales of power during that period.

BPA personnel are currently developing a methodology for determining and allocating the amount to be recovered or repaid. In the opinion of BPA management, the cumulative amount of net residential exchange costs recovered in revenues does not exceed the cumulative amount of such net costs as of September 30, 1983.

8. Trust Funds and Trust Fund Advances:

These balance sheet amounts comprise funds received by BPA from customers and others for the purchase of nonfederal power for customers' benefit and for construction to be done for others.

9. Repayment Responsibility for Irrigation Costs:

Legislation requires that FCRPS net revenues will be used to repay to the U.S. Treasury that portion of the cost allocated to irrigation of any Pacific Northwest project authorized by Congress and determined by the Secretary, Department of Interior, to be beyond the ability of the irrigation water users to repay. The use of power revenues for such repayment represents a payment for irrigation assistance to the benefiting water users and, while paid by power ratepayers, such costs do not represent a regular operations cost of the power program and are not included therein. Irrigation assistance payments amounting to $716 million are returnable from future power revenues; no amounts for irrigation assistance will be collected from power rate payers until 1997, the year the first irrigation assistance payment is scheduled to be made.

10. Investment in Teton Dam and Libby Reregulating Dam:

On June 5, 1976, before the project had been completed and turned over for the use of FCRPS, a breach occurred in the Teton Dam and the project was extensively damaged. The total investment in the project at September 30, 1983 (excluding interest totaling approximately $2.2 million subsequent to June 1976 which has been charged to expense) was approximately $79.2 million. The amount of investment allocated to power was approximately $13.8 million, and the amount of investment allocated to irrigation but repayable from power revenues was approximately $47.1 million. Disposition of the project's costs and final decision as to the repayment obligation are dependent upon Congressional action. If repayment is not required, the costs associated with the investment in power facilities (and recovery of the related $2.2 million of interest) will be charged off against the investment of the U.S. Government. Should FCRPS be directed to repay, the costs will be recovered through rates. Until a decision is made, the investment allocated to power is included as a deferred charge in the statement of assets and liabilities and the cost of applicable irrigation assistance is included in the total of other irrigation costs described in Note 9.

On September 8, 1978, the Corps was enjoined from continuing construction of a reregulating dam at Libby, Montana because of a lack of specific Congressional authority. Subsequent appeals by the Corps for removal of the injunction were denied. The total investment in the reregulating dam was approximately $18.6 million at September 30, 1983. If authority to complete the dam is not granted by Congress and repayment is not required, the federal investment will be reduced by the unrecovered amount of the investment. Should FCRPS be directed to make repayment, the investment will be recovered through rates. Until a decision is made, the investment is included as a deferred charge in the statement of assets and liabilities.

11. Contingencies:

Litigation Involving the Regional Act

BPA is currently involved in litigation concerning various Regional Act matters. This litigation includes cases brought by (a) public preference customers of BPA alleging that certain provisions of BPA's power sales contracts with direct service industrial customers violate the preference and priority provisions of the Regional Act; (b) an agency of the State of California contending that certain provisions of BPA's power sales and residential exchange contracts are illegal and void because they conflict with requirements of the Regional Act and result in practices discriminatory to California utilities; and (c) an organization alleging that the power sales and residential exchange contracts offered by BPA are subject to requirements of the National Environmental Policy Act (NEPA), and that BPA has violated NEPA by failing to provide an Environmental Impact Statement on the issuance of such contracts. While the outcome of these individual cases is uncertain, in the opinion of BPA General Counsel and management, the ultimate resolution of such cases will not have a material adverse effect on these FCRPS financial statements.

The Regional Act litigation also includes cases brought by public preference and direct service industrial customers of BPA alleging violations of certain statutory provisions in the level and design of BPA's 1981 and 1982 rate schedules, and denial of meaningful due process and protection guaranteed by the Regional Act and the Administrative Procedure Act. Petitioners seek remanding of the rates to BPA for reformulation, enjoining collection of revenues based on the rates, and refunding of any excess revenues. While FERC has given final approval to substantially all of the 1981 and 1982 rates (see Note 2), BPA General Counsel and management are unable to predict the likelihood of an adverse decision in these cases or the financial statement impact of such a decision. The effect on the FCRPS financial statements could be material if BPA is required to refund a significant amount, which is a possible result of an adverse decision. BPA would expect to ultimately recover the amount of any refunds in future rates.

Certain other cases have been filed against BPA involving Regional Act matters. With respect to such cases, in the opinion of BPA General Counsel and management, either the likelihood of success by the filing party is remote or the ultimate outcome will not have a material adverse effect on these FCRPS financial statements.

Litigation Involving the Washington Public Power Supply System (the Supply System)

On January 22, 1982, the Supply System terminated construction of two nuclear projects: WNP No. 4 at Hanford and WNP No. 5 at Satsop. Subsequent to the termination, the Supply System defaulted on $2.25 billion of outstanding bonds relating to WNP Nos. 4 and 5 for which FCRPS has no obligation, and delayed construction of WNP Nos. 1 and 3. The above actions of the Supply System have precipitated a number of lawsuits which involve BPA. The lawsuits range from a motion filed to compel BPA to provide funding for completion of WNP No. 3 to tort claims exceeding $2.4 billion. Additionally, because of the net billing agreements discussed in Note 6, which require BPA to pay the participants' portion of the annual project costs for WNP Nos. 1, 2 and 3, BPA might be required to fund judgments affecting the terminated projects.

The major issues resulting from the termination of WNP Nos. 4 and 5 that directly or indirectly involve BPA are as follows:

1. WNP Nos. 1 and 4 and WNP Nos. 3 and 5 share certain common facilities, the costs of which are shared on an equal basis. Subsequent to the termination of WNP Nos. 4 and 5, the participants in these projects have demanded that the heretofore equitably shared costs be reallocated retroactively so that a portion of such costs are absorbed by WNP Nos. 1 and 3. If the participants are successful, these two projects could be required to assume from $192 million to $400 million in additional costs. The net billing agreements covering WNP No. 1 and WNP No. 3 could require BPA to reimburse WNP No. 4 for 100% of any costs reallocated to WNP No. 1, and to reimburse WNP No. 5 for 70% (BPA's share) of any costs reallocated to WNP No. 3.

2. Various suits have been filed alleging BPA negligently forecasted the need for WNP Nos. 4 and 5 and also negligently participated in the financing, planning, construction, management, termination and decommissioning of these projects. Additionally, suits alleging that BPA negligently induced the claimants to participate in WNP Nos. 4 and 5 have been filed. Damages claimed under these suits, which have not been fully specified, exceed $2.4 billion.

3. Actions have been brought against the Supply System by bondholders and other creditors of WNP Nos. 4 and 5. Certain participants are attempting to recover funds advanced to the Supply System to pay the costs of ramping down construction of the projects and termination costs. Judgments have been entered in favor of the participants and a creditor who filed an action for alleged breach of contract because of failure by the Supply System to purchase uranium furnished by the contractor for projects Nos. 1, 4 and 5. The extent to which these claimants or future claimants may seek to recover the amounts of their judgments is of concern to BPA because of the possibility that the final judgments may be so worded as to be payable from any assets of the Supply System, including revenues derived from the net billed projects Nos. 1, 2 and 3.

The cases and legal issues involving the above matters have not been fully developed and involve legal questions for which there are no precedents. BPA and the U.S. Department of Justice intend to continue the vigorous defense of these cases; however, the ultimate effect on FCRPS, if any, cannot be determined at this time.

The investor-owned utilities that own a 30% share of WNP No. 3 have filed a motion for a preliminary injunction to compel BPA to proceed immediately with funding completion of that project. BPA's decision to suspend completion of WNP No. 3 was based on the impact which the funding of completion would have on BPA's rate structure during the project completion period. If the investor-owned utilities are successful in their motion, the necessary funds (estimated to be $1.4 billion) may be required to be raised through power revenues if the Supply System is unable to finance the completion through conventional financing. BPA General Counsel and management cannot, at this time, predict the outcome of this matter.

An action filed against the Supply System for damages resulting from an alleged breach of contract because of failure of the Supply System to purchase uranium furnished by the plaintiff for projects Nos. 1, 4 and 5 has resulted in a judgment against the Supply System in the amount of $53.6 million plus interest. The Supply System has appealed the judgment and, with the support of BPA, has entered into settlement negotiations. If a settlement is not effected and the judgment against the Supply System is sustained on appeal, 23% of the judgment would be allocated to WNP No. 1, a net billed project. Additional payments may be required by the net billed projects to satisfy the claimant's judgment because the judgment is so worded as to allow satisfaction of the judgment from any assets of the Supply System, including revenues derived from the net billed projects. BPA General Counsel and management cannot, at this time, predict the outcome of this matter.

Other Matters

Certain other claims, suits and complaints have been filed or are pending against entities of FCRPS. In the opinion of counsel and management, these actions are either without merit or involve amounts which are not material to these FCRPS financial statements.

Federal Columbia River Power System

Schedule A

Schedule of Amount and Allocation of Plant Investment

as of September 30, 1983 (Thousands of Dollars)

Project	Total	Commercial Power			Irrigation			Nonreimbursable					Percent of Total Returnable From Commercial Power Revenues
		Completed Plant	Construction Work in Progress	Total Commercial Power	Returnable From Commercial Power Revenues	Returnable From Other Sources	Total Irrigation	Navigation	Flood Control	Fish and Wildlife	Recreation	Other (c)	
Projects in Service:													
Transmission facilities (BPA)	$ 2,659,302	$2,318,310	$340,992	$2,659,302									100.0%
Bureau projects—													
Boise	77,277	5,687	3,579	9,266	$ 15,833	$ 35,408	$ 51,241		$ 16,770				32.5%
Columbia Basin	1,564,175	774,892	135,880	910,772	517,350	83,205	600,555	$ 1,000	48,032	$ 3,134	$ 155	$ 527	91.3%
Hungry Horse	101,656	76,971	31	77,002					24,654				75.7%
Minidoka-Palisades	200,885	14,068		14,068	10,270	109,759	120,029		60,793	409	5,586		12.1%
Yakima	84,779	4,651	16	4,667	10,605	67,275	77,880		842	1,152	238		18.0%
Total Bureau Projects	2,028,772	876,269	139,506	1,015,775	554,058	295,647	849,705	1,000	151,091	4,695	5,979	527	77.4%
Corps projects—													
Albeni Falls	33,868	32,227	9	32,236				135	174		1,323		95.2%
Bonneville	779,293	729,345	1,923	731,268				44,674			1,289	2,062	93.8%
Chief Joseph (a)	486,056	478,468	4	478,472	745		745				2,115	4,724	98.6%
Cougar	60,569	18,443	18	18,461		3,073	3,073	547	38,280			208	30.5%
Detroit-Big Cliff	67,175	40,670	72	40,742		5,109	5,109	222	21,102				60.7%
Dworshak	352,416	297,296	602	297,898				9,404	33,839		11,275		84.5%
Green Peter-Foster	90,608	50,027	21	50,048		5,842	5,842	367	30,434		1,856	2,061	55.2%
Hills Creek	49,066	17,474	63	17,537		4,321	4,321	627	26,309			272	35.7%
Ice Harbor	200,152	140,376	10,885	151,261				46,250			2,641		75.6%
John Day	538,902	392,927	4,057	396,984				84,516	19,521		11,472	26,409	73.7%
Libby (d)	593,604	421,311	48,093	469,404					87,097		5,594	31,509	79.1%
Little Goose (a)	257,729	188,874	11,098	199,972				51,102			4,051	2,604	77.6%
Lookout Point-Dexter	98,152	46,626	199	46,825		1,379	1,379	736	48,597		521	94	47.7%
Lost Creek (a)	149,345	26,714	22	26,736		1,998	1,998	2	53,113	24,378	29,288	13,830	17.9%
Lower Granite (a)	413,182	326,408	11,316	337,724				55,054			12,562	7,842	81.7%
Lower Monumental (a)	275,973	212,943	11,146	224,089				48,645			2,822	417	81.2%
McNary	349,015	273,143	5,235	278,378				67,845			2,792		79.8%
The Dalles	325,912	279,118	1,134	280,252				43,556			2,082	22	86.0%
Total Corps Projects	5,121,017	3,972,390	105,897	4,078,287	745	21,722	22,467	453,682	358,466	24,378	91,683	92,054	79.7%
Irrigation assistance at 12 projects having no power generation	150,871				103,358	47,513	150,871						68.5%
Total Plant Investment	9,959,962	7,166,969	586,395	7,753,364	658,161	364,882	1,023,043	454,682	509,557	29,073	97,662	92,581	84.5%
Repayment obligation retained by Columbia Basin Project	4,639	2,836 (b)		2,836	1,803		1,803						100.0%
Other repayment obligation	9,236				9,236		9,236						100.0%
Investment in Teton and Libby Projects (d)	97,834		32,453	32,453	47,120	3,675	50,795		12,264		2,322		81.3%
Total	$10,071,671	$7,169,805	$618,848	$7,788,653	$716,320	$368,557	$1,084,877	$454,682	$521,821	$29,073	$99,984	$92,581	84.4%

(a) Projects in service that have tentative cost allocations at September 30, 1983.

(b) Joint facilities transferred to Bureau of Sport Fisheries and Wildlife. This portion is included in other assets and deferred charges in the accompanying statement of assets and liabilities.

(c) Included in this amount are nonreimbursable road costs amounting to $77.1 million.

(d) The $13,838,023 commercial power portion of the Teton dam and the $18,614,521 portion of Libby related to the reregulating dam are included in other assets and deferred charges in the accompanying statement of assets and liabilities. Teton amounts exclude interest totaling approximately $2.2 million subsequent to June 1976 which has been charged to expense.

Federal Columbia River Power System

Schedule B

Reconciliation of Cost Accounting Financial Statements to the Revenue Requirement Study

for the year ended September 30, 1983 (Thousands of Dollars)

In Thousands	Cumulative Balance 9/30/82	Fiscal Year 83 Operations	Cumulative Balance 9/30/83	Cumulative Adj. To Repayment Basis	Cumulative Data Thru 9/30/83 On Revenue Requirement Study
Operating Revenues	$6,484,072	$1,845,382	$8,329,454	$(313,475)	$8,015,979
Expenses:					
Purchase and Exchange Power	1,734,106	1,255,810	2,989,916	189,738	3,179,654
Operation and Maintenance Expense	1,739,783	219,646	1,959,429	(6,582)	1,952,847
Interest Expense	2,173,017	292,031	2,465,048	(2,244)	2,462,804
Depreciation	789,874	63,857	853,731	(853,731)	-0-
Total Expenses	6,436,780	1,831,344	8,268,124	(672,819)	7,595,305
Net Revenues	$47,292	$14,038	$61,330	$359,354	420,674
Unpaid Annual Expense					217,635
Adjustment to Cash Amortization					95,840
Cumulative Revenues Available for Amortization					$734,149 (a)
Plant Investment:					
Completed Plant			$7,166,969		
Retirement Work-in-Progress			22,553		
Repayment Obligation Retained by Columbia Basin Project (Schedule A)			2,836		
Net Retirements			172,896		
Conservation Investment				$265,449	
Total			$7,365,254	$265,449	$7,630,703
Less Cumulative Amortization through September 30, 1983					(638,309) (b)
Unamortized Plant Investment					$6,992,394

(a) Changes in Cumulative Revenues Available for Amortization:

Cumulative Revenues Available for Amortization through September 30, 1982	$645,018
Fiscal Year 1983:	
Depreciation	63,857
Net Revenues	14,038
Purchase & Exchange Power Adjustment to Cash Basis	6,072
Amortization of Conservation Program Costs	5,164
Revenues Available for Amortization for the Year	89,131
Cumulative Revenues Available for Amortization through September 30, 1983	734,149
Less: Adjustment to Cash Amortization	(95,840)
(b) Cumulative Amortization through September 30, 1983	$638,309

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"BPA will provide leadership in the region, fulfilling our responsibilities with professional excellence."

BPA Mission Statement

February 1984
DOE/BP-205
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