



U. S. DEPARTMENT OF THE INTERIOR STEWART L. UDALL, SECRETARY

1961 Report on the U. S. Columbia River Power System

U. S. DEPARTMENT OF THE INTERIOR

BONNEVILLE POWER ADMINISTRATION





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*Grand Coulee generators
work both day and night
to create and move
electric energy
through BPA substations
and transmission lines,
bringing light and power
to the Pacific Northwest*



U. S. DEPARTMENT OF THE INTERIOR

Stewart L. Udall, Secretary



Report on the U. S. Columbia River Power System

BONNEVILLE POWER ADMINISTRATION

1961

The U. S. Columbia
River Power System
consists of
Bonneville Power Administration,
and the following projects:
Bonneville Dam,
Columbia Basin
(Grand Coulee Dam),
Hungry Horse, Albeni Falls,
Detroit - Big Cliff, McNary,
Lookout Point - Dexter,
Chief Joseph, Yakima
(Roza & Chandler),
The Dalles, Ice Harbor,
Hills Creek, Cougar,
Green Peter, Foster,
John Day
& Lower Monumental

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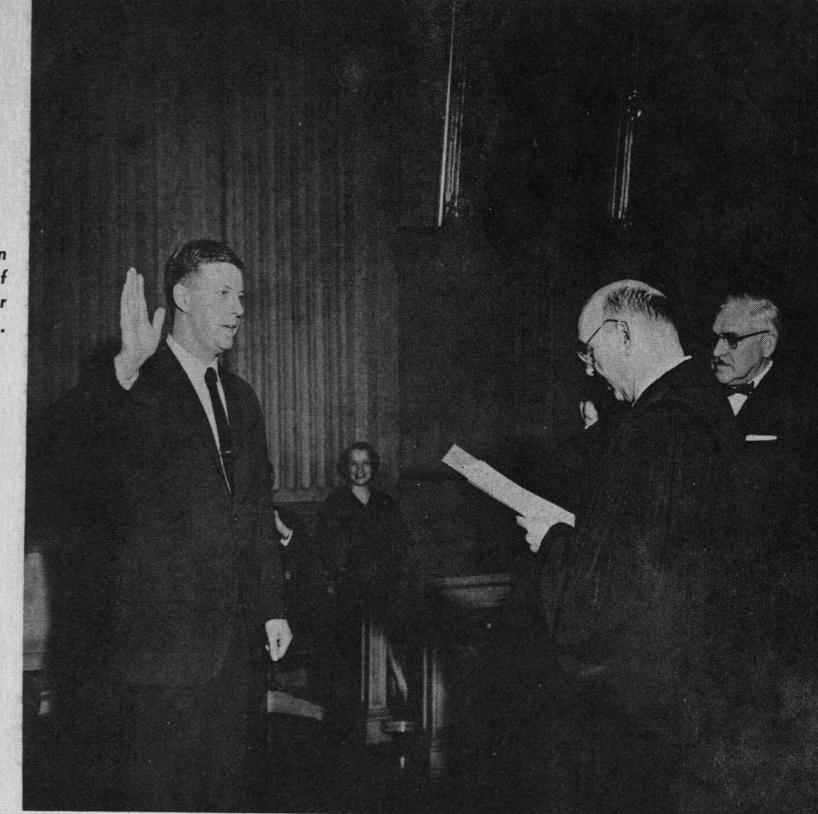
Letter of Transmittal

December 31, 1961

Hon. Stewart L. Udall
Secretary of the Interior
Washington, D. C.

Dear Mr. Secretary:

Herewith is the Twenty-fourth Annual Report of the Bonneville Power Administration, and my first since you appointed me Administrator February 15, 1961. It is submitted in accordance with subsection 9(c) of the Bonneville Project Act. The report contains operations and financial data on the marketing and transmission of electric energy generated by Federal multi-purpose dams in the Administration's marketing area for fiscal year 1961. This area includes Washington, Oregon, northern Idaho, Montana west of the Continental Divide, and a small portion of northwest Nevada.



Charles F. Luce, Walla Walla attorney, was officially sworn in as Bonneville Power Administrator in the chambers of Chief Judge Gus J. Solomon, U. S. District Court for Oregon, Portland, February 14, 1961.

In this letter of transmittal I shall describe in brief, narrative form the most significant developments in the Pacific Northwest power situation through the calendar year 1961.

The financial condition of the Bonneville Power Administration and the U. S. Columbia River power system is of particular importance, inasmuch as this relates directly to BPA's rate level. BPA, as marketing agent for Federal power in the Northwest, is charged with the responsibility for repaying the Treasury, with interest, for its transmission facilities, operations and maintenance, and for the power share of the Federal investment in the 20 dams which comprise the U. S. Columbia River power system. This investment totaled \$1,677,600,000 at the end of fiscal year 1961, exclusive of the investment in 7 dams still under construction. Of this amount, Bonneville Power Administration has repaid \$304,600,000, plus \$283,500,000 interest. Four years ago, BPA was \$78,800,000 ahead of schedule in repaying its obligations to the Treasury. However, 4 successive deficit

years--\$15,300,000 last year, alone--have reduced this surplus to \$37,800,000. Future deficits are predicted for the next 4 or 5 years which, although successively smaller each year, threaten to consume the balance of our surplus. If this trend is not reversed, it will be most difficult to avoid a rate increase. BPA's basic rate is \$17.50 per kilowatt year. It has not changed since it was established in 1939. BPA rates are reviewed each 5 years by the Federal Power Commission. The next review date is in 1964. A rate increase would seriously impair economic growth of the region, and must be avoided if at all possible.

During the past year, BPA has given careful study to the factors which have resulted in 4 consecutive years of deficit operation after 20 consecutive years of surplus operation. Five factors stand out: (1) Failure to construct new projects on a schedule that will permit orderly marketing of firm power. This has resulted in BPA having a temporary surplus of firm power which is being held for normal load growth and which cannot be sold on long-term contracts because additional generation is not scheduled to come on the line in time to meet load growth. (2) Inability to find markets in the Pacific Northwest for a large quantity of surplus secondary power, which is available under certain stream-flow conditions, and which cannot be guaranteed for delivery day in and day out, year in and year out. (3) Higher cost projects resulting somewhat from generally increased construction costs and, more importantly, from the fact the more economical sites already have been developed. (4) Construction, during an 8-year period of a "no new starts" policy, of large amounts of generation by public and private utilities which has reduced Bonneville's sales. (5) Economic conditions which have made it necessary for our industrial customers to curtail their power purchases from BPA. Had these industries been operating at full contract capacity, they would have purchased \$8,500,000 more power from

BPA during fiscal year 1961.

As a result of the foregoing circumstances, we have shaped our program to achieve two paramount purposes: to maintain our low rates, and to meet the load growth requirements of the region, including those for new industries, whose location in the region is dependent upon the availability of low-cost power.

- We have reorganized and given new emphasis to our power marketing division, in an effort to sell here in the region greater quantities of surplus power (temporary firm, interruptible secondary, and peaking capacity) now going to waste.

- We have re-established our planning section and assigned it the responsibility for clearly charting future power needs of the region so that new starts may be scheduled to bring new power on the line by the time it is needed.

- We have completed a 1-year coordination contract with a large group of non-Federal generating utilities designed to squeeze every kilowatt possible out of power plants on the U. S. Columbia River power system. This coordination agreement, subject to approval by the Federal Power Commission, is expected to lead to a long-term coordination agreement. The 1-year agreement will result in net payments to BPA of \$1,100,000 for downstream and coordination benefits from Federal storage.

- We have commenced studies of our accounting procedures and our payout schedules, to bring them more nearly into line with practices for other Federal agencies in the power field. We expect to make recommendations which, if adopted, will improve BPA's financial condition by up to \$9,000,000 per year.

- We have sought to achieve economies all along the line--in personnel, in operations and in maintenance--and to offset generally rising transmission costs by means of advances in technology.

There remain three major projects--"birds in the bush", so to speak--which are beyond the decision-making powers of Bonneville Power Administration, but which will have a profound effect on our future operations and financial condition. These are: (1) The treaty with Canada for joint development of the Columbia River, which has been signed by the chief executives of both countries and ratified by the United States, but which is awaiting ratification in Canada. (2) The proposed addition of electrical power generating facilities to the New Production Reactor at the Hanford Atomic Works in the state of Washington, which requires either Congressional authorization or financing by a non-Federal entity. (3) The proposed Pacific Northwest-Pacific Southwest intertie which requires, first, action by Congress on regional protective legislation to assure the consumers of each region first call on all Federal power generated on its streams and, second, a decision whether the lines will be constructed by the Federal Government, the public utilities, the private utilities, or a combination thereof.

The Canadian treaty provides for the construction of three large storage dams in Canada with resultant increased downstream generation of electricity at U. S. power plants to be shared equally between the two nations. It also permits the United States to construct Libby Dam in Montana, which would back water into Canada. These four projects would add about 2,000,000 kilowatts of firm power to BPA resources, which could be delivered to load centers at a cost of \$14.00 per kilowatt-year. This cost is substantially less than BPA's established basic wholesale rate of \$17.50 per year, and would go a long way toward protecting our rate structure as well as making a major contribution to our growing power needs.

The Hanford reactor project calls for utilizing otherwise waste steam to generate approximately 900,000 kilowatts of firm power. The reactor project would pay out in 35 years. BPA



Secretary of Interior Stewart L. Udall and Bonneville Power Administrator Charles F. Luce discuss generating possibilities at the Hanford Project with J. E. Travis, Project Manager

could market this power at its established \$17.50 per kilowatt-year price. As a Federal project, Hanford power would cost about \$13.00 per kilowatt-year delivered out on our transmission system during the initial dual purpose period of approximately 8 years. When the production of plutonium is terminated, the reactor could be operated for the single purpose of producing electricity at costs comparable to alternative steam generation. Had the reactor project been authorized this past year, it could have brought power on the line in time to meet the small but significant regional power shortage predicted for 1965-66. This also would have permitted BPA to offer for sale immediately up to 400,000 kilowatts of temporarily surplus firm power which we are holding for normal load growth by 1965. This would have produced additional revenues of up to \$7,000,000 per year. There is still time to get the reactor into production of electricity by January 1, 1966, which would enable us to avoid the predicted deficiency of energy in 1965-66, but which would not be soon enough to let us sell our temporary surplus of firm power. We will continue to support efforts to achieve power production at the NPR in order to make use of steam that will be produced at the reactor in any event. We believe that in the national interest it is ill-advised to fail to utilize this great resource, especially when the alternative is pure waste.

The proposed California intertie, depending upon how many parties desire to utilize the interconnection, would consist of one, two or three extra-high voltage transmission lines connecting the U. S. Columbia River power system with load centers and generating plants in California. It would pay its own way and produce benefits over a 50-year period ranging from two to three times its cost. It would serve four purposes to which monetary value has been assigned: sale of surplus secondary power from the Northwest to California utilities for steam displacement; sale of surplus Northwest peaking capacity in California; shipment of California offpeak steam energy north to "firm up" between 200,000 and 400,000 kilowatts of Northwest surplus secondary power for use in the Northwest; and exchanges of power to take advantage of diversity of peak loads between the two regions. California has a summer peak load and the Northwest has a winter peak. By moving power back and forth between the regions to help meet peak loads, savings in plant investment could be made which would be greater than the cost of the line or lines. The net profits to BPA, after paying its share of transmission costs, would range from about \$6,000,000 to \$15,000,000 per year. This alone would go a long way toward enabling BPA to maintain its low rates for many years in the future. Before any intertie, public or private, is built, however, BPA strongly urges that Congress be given the opportunity to enact regional protective legislation.

The Interior Department Task Force which studied and recommended the California intertie also strongly urged that it utilize direct current (d-c) transmission. We believe that d-c technology is sufficiently advanced to transmit large quantities of electrical energy over long distances at costs substantially less than those associated with alternating current (a-c). We believe that d-c transmission can be used not only for the proposed California intertie, but that it holds great promise for other regions of the

United States. Specifically, we believe it may make feasible the development of hydroelectric power at Rampart Dam and other Alaskan sites for transmission to distant load centers. We believe d-c transmission will make possible the development of lignite fields in North Dakota and Montana to produce mine-mouth steam energy for movement over d-c lines to load centers such as Chicago. We believe it also may make possible the revitalization of the depressed coal areas of Pennsylvania and West Virginia, with electric energy produced at mine-mouth steam plants moving by d-c lines to load centers such as New York and Boston.

Finally, a word is required about the power needs of the Pacific Northwest over the next several years. Normal load growth at present is 400,000 kilowatts of firm average energy per year, almost equal to the output of a Bonneville Dam. By 1975, normal load growth will be 600,000 kilowatts per year. Loads will double in the next 10 years, and double again in the following decade. To meet the region's load growth by 1975--even if the Canadian treaty, the Hanford reactor and the California intertie all are realized--new hydro projects will have to be authorized soon and constructed on an orderly schedule.

There are only three authorized Federal dams which are not under construction--Little Goose and Lower Granite, authorized in 1945, and Libby, authorized in 1950. Libby, of course, is dependent upon a treaty with Canada. Unless the Congress soon authorizes a number of new multipurpose hydroelectric projects in the Northwest and provides funds to construct them, the region is faced with a critical power shortage in the decade ahead. Additional hydro projects will, of course, be self-liquidating. The Federal Government will be repaid, with interest, by the electric consumers of the region. In addition, these projects will provide other conservation benefits--flood control, reclamation, navigation and recreation.

Without the Canadian treaty, the same hydro projects will have to be authorized as well as some projects that can be considered alternatives to the treaty, but the construction schedule of all projects will have to be speeded up considerably if the region's power needs are to be met through hydro development. BPA has recommended that studies be commenced at once to determine, both from engineering and economic points of view, how much these projects can be accelerated.

The preceding power outlook discussion assumes that non-Federal utilities will complete on schedule all licensed projects, plus those for which noncontested license applications are pending. It does not assume development of any non-Federal projects for which a license has not been requested, nor does it assume development of the projects for which there is competition for licensing on the Middle Snake.

With full and timely development of remaining feasible hydro projects, the Pacific Northwest will be getting into steam generation by the mid-1970's. Without the Canadian treaty the region would require more steam, and require it sooner by at least 2 years, than with the treaty.

It is clear that the power needs of the region over the next several years can be met only through the most intensive efforts of both the Federal and non-Federal public and private entities to which the people of the Pacific Northwest look for the low-cost power supply that will govern the region's future economic growth.

Sincerely yours,

Charles F. Luce

Charles F. Luce

Administrator

FEDERAL GENERATING PLANTS

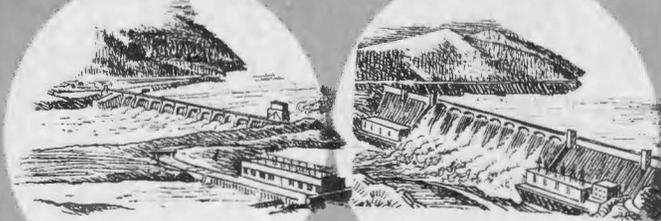
Built, Operated & Maintained by:

U. S. Army Corps of Engineers

Bureau of Reclamation

NONFEDERAL GENERATING PLANTS

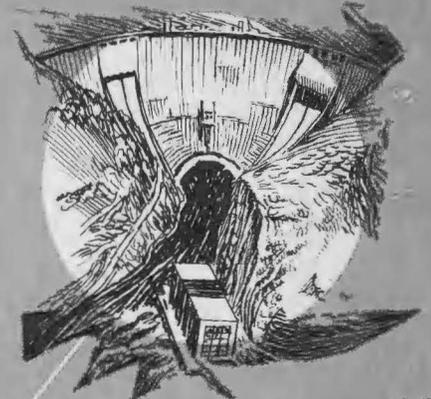
PRODUCERS



ALBENI FALLS
BIG CLIFF
BONNEVILLE
CHIEF JOSEPH
DETROIT

DEXTER
LOOKOUT POINT
MCNARY
THE DAELES

CHANDLER
GRAND COULEE
HUNGRY HORSE
ROZA



Built, Operated & Maintained by Other Utilities
Power transferred over BPA Grid:

BOX CANYON
CABINET GORGE
MERWIN
NOXON RAPIDS
PELTON

PRIEST RAPIDS
ROCK ISLAND
SWIFT
YALE
ROCKY REACH

WHOLESALE



BONNEVILLE POWER ADMINISTRATION

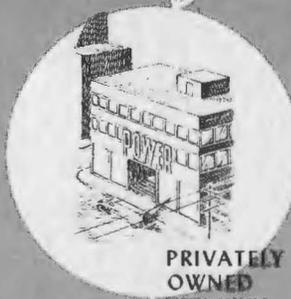
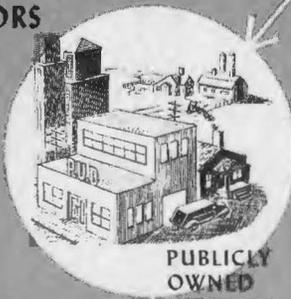
MARKETS POWER FROM FEDERAL DAMS,
TRANSFERS POWER FOR OTHER UTILITIES,
BUILDS, OPERATES & MAINTAINS
FEDERAL TRANSMISSION SYSTEM

POWER PROGRAM FUNCTIONS

1. JOINT ADVANCE PLANNING
 - (a) COORDINATION WITH GENERATING AGENCIES
 - (b) COLUMBIA BASIN INTERAGENCY COMMITTEE
2. POWER REQUIREMENTS FORECASTS
3. TRANSMISSION SYSTEM PLANNING
4. PAYOUT, COST ALLOCATIONS & RATES
5. ELECTRICAL & HYDRAULIC INTEGRATION
6. POOLED OPERATION

Functions of Bonneville Power Administration

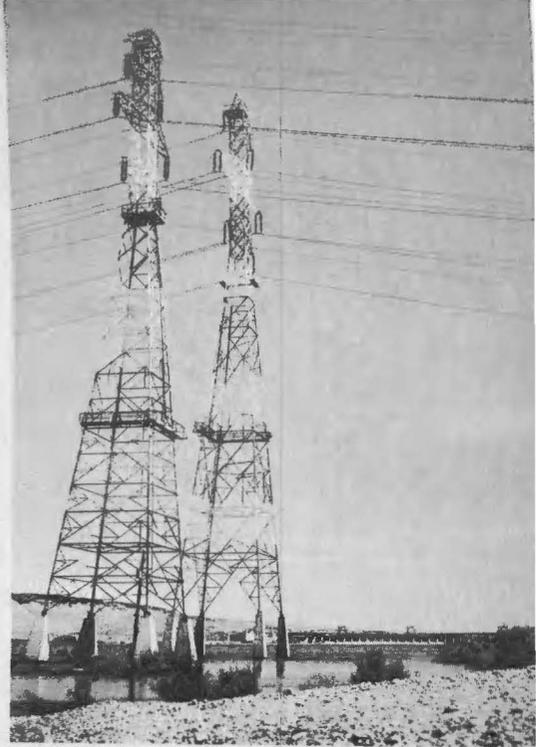
DISTRIBUTORS



CONSUMERS



Two giant river crossing steel towers carry Bonneville Power Administration power across the Columbia with McNary dam in the background.



Summary of Operations

Bonneville Power Administration, authorized by the Bonneville Project Act of 1937, is the designated marketing agency of the Department of the Interior for 20 hydroelectric generating plants of the United States Columbia River power system currently completed or under construction.

FEDERAL PROJECTS

Power was marketed during fiscal year 1961 from nine Corps of Engineers plants and four of the Department's Bureau of Reclamation plants with a total installed generating capacity of 6,189,250 kilowatts.

Completion of the projects under construction will bring the nameplate rating to 8,379,250 kilowatts, and completion of the authorized projects to 9,533,250 kilowatts. Projects existing, under construction, and authorized for construction, by the Corps of Engineers and Bureau of Reclamation, are shown in table 1.

GENERATION ADDED

U. S. Columbia River power system additions in fiscal year 1961 have a nameplate rating of 156,000 kilowatts. The last two units of 78,000

kilowatts each were added at the Corps of Engineers project, The Dalles.

Existing storage capacity usable for power in Federal reservoirs is 10,207,500 acre-feet. An additional 736,000 acre-feet will be provided by Cougar, Hills Creek and Green Peter on which construction is under way, and 5,010,000 acre-feet will be provided by Libby which is authorized for construction.

All generation and storage capacity under Federal construction will be in service by October 1968 under the present schedule. Service dates for the other authorized projects are not yet scheduled.

NON-FEDERAL PROJECTS

Addition of 605,500 kilowatts of nameplate rating by non-Federal utilities increased the generating capacity of non-Federal resources in the area served by the Bonneville Power Administration to a total of 5,089,000 kilowatts.

Future additions under construction or licensed for construction by non-Federal utilities would add 2,704,750 kilowatts to the area's resources.

TABLE 1
U. S. COLUMBIA RIVER POWER SYSTEM
 General specifications - projects existing, under construction and authorized
 June 30, 1961

Project	Operating agency 1/	Location	Stream	Plant installations		Date in service (initial unit)	Generation, fiscal year 1961 3/
				Number of units	Total capacity kilowatts 2/		
Existing:							
Bonneville	CE	Washington-Oregon	Columbia	10	518,400	June 1938	3,178 ^a
Grand Coulee	BR	Washington	Columbia	18	1,944,000	September 1941	11,855
Hungry Horse	BR	Montana	South Fork Flathead	4	285,000	October 1952	833
Detroit	CE	Oregon	North Santiam	2	100,000	July 1953	266
McNary	CE	Washington-Oregon	Columbia	14	980,000	November 1953	4,511
Big Cliff	CE	Oregon	North Santiam	1	18,000	June 1954	104
Lookout Point	CE	Oregon	Middle Fork Willamette	3	120,000	December 1954	208
Albeni Falls	CE	Idaho	Pend Oreille	3	42,600	March 1955	162
Dexter	CE	Oregon	Middle Fork Willamette	1	15,000	May 1955	73
Chief Joseph	CE	Washington	Columbia	16	1,024,000	August 1955	4,535
Chandler	BR	Washington	Yakima	2	12,000	February 1956	63
The Dalles	CE	Washington-Oregon	Columbia	16	1,119,000	May 1957	4,387
Roza	BR	Washington	Yakima	1	11,250	August 1958	55
Subtotal					6,189,250		30,230
Under construction:							
Ice Harbor	CE	Washington	Snake	3	270,000	December 1961	
Hills Creek	CE	Oregon	Middle Fork Willamette	2	30,000	February 1962	
Cougar	CE	Oregon	South Fork McKenzie	2	25,000	November 1963	
Green Peter	CE	Oregon	Middle Santiam	2	80,000	April 1966	
Foster	CE	Oregon	South Santiam	2	30,000	April 1967	
John Day	CE	Washington-Oregon	Columbia	10	1,350,000	June 1967	
Lower Monumental	CE	Washington	Snake		405,000	December 1967	
Subtotal					2,190,000		
Authorized:							
Libby	CE	Montana	Kootenai	4	344,000		
Little Goose	CE	Washington	Snake	3	405,000		
Lower Granite	CE	Washington	Snake	3	405,000		
Subtotal					1,154,000		
Total, 23 projects					9,533,250		

1/ CE - Corps of Engineers; BR - Bureau of Reclamation.
 2/ Nameplate rating.
 3/ Millions of kilowatt-hours.

NORTHWEST POWER POOL

Generation by the principal electric utility systems of the Pacific Northwest during the fiscal year 1961 is shown in the accompanying chart.

All utilities listed are members of the Northwest Power Pool with the exception of Pend Oreille County Public Utility District. This PUD is included because it provides a substantial part of its generation to the pool. The Utah Power and Light Company and the British Columbia Electric Company are members of the pool, but are not included as their major service areas are outside the region.

The U. S. Columbia River power system provid-

ed a total of 55.5 percent of the energy generated by the major utilities of the region. BPA provided 6.7 billion kilowatt-hours of energy to meet the net requirements of seven other pool utilities in addition to its other load.

ENERGY PRODUCTION

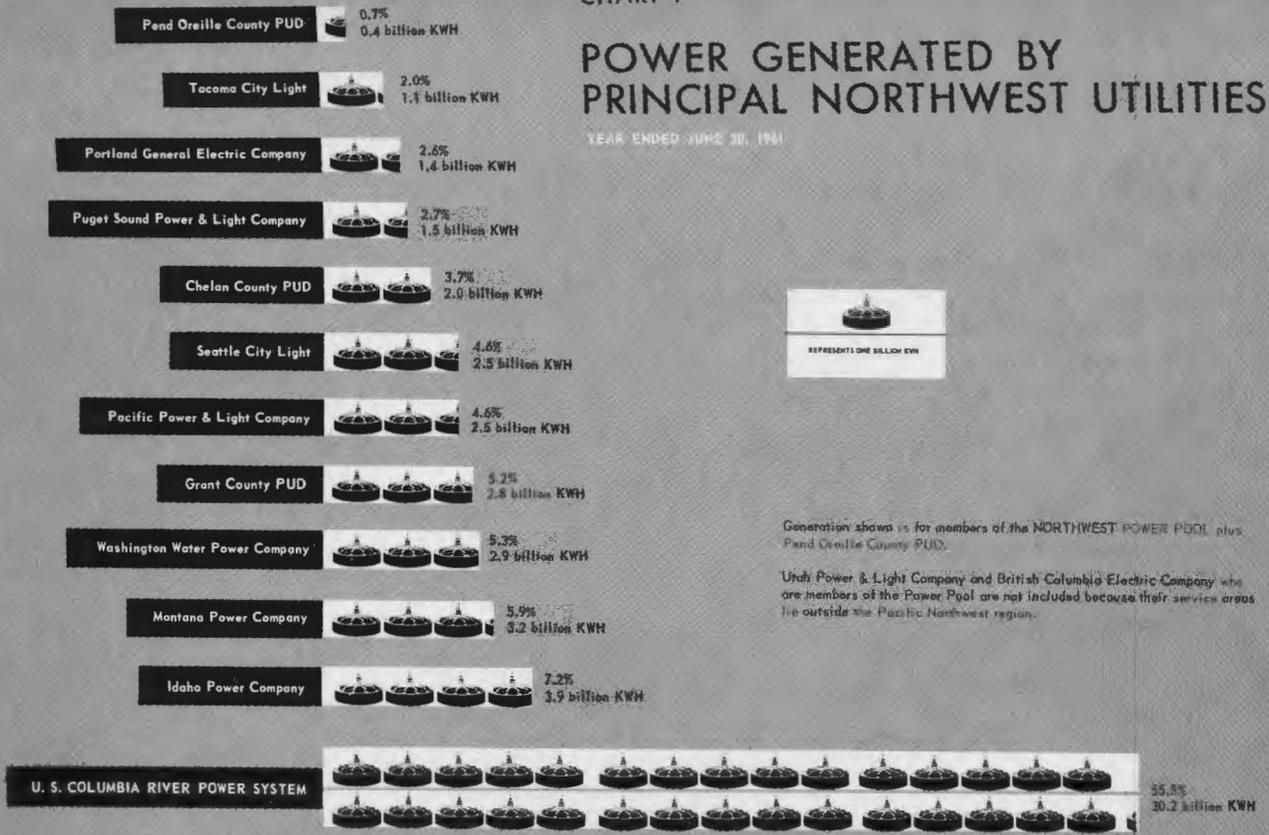
BPA's electric energy account for fiscal year 1961 is shown in table 2.

Electric energy totaling 30.3 billion kilowatt-hours was generated at the 13 Federal plants for the Administration during fiscal year 1961. Approximately this same level of generation has been maintained for the last 5 years.

CHART 1

POWER GENERATED BY PRINCIPAL NORTHWEST UTILITIES

YEAR ENDED JUNE 30, 1961



Generation shown is for members of the NORTHWEST POWER POOL, plus Pend Oreille County PUD.

Utah Power & Light Company and British Columbia Electric Company who are members of the Power Pool are not included because their service areas lie outside the Pacific Northwest region.

SOURCE: WEEKLY OPERATING RESULTS OF THE POWER POOL

The maximum coincidental demand during this fiscal year was 4,579,000 kilowatts.

TRANSMISSION NETWORK

Bonneville Power Administration, as part of its marketing function, is responsible for construction, operation, and maintenance of transmission facilities to transmit the power to the region's load centers. The Administration's transmission grid at the end of the fiscal year consisted of 8,244 circuit miles of high voltage transmission lines and 208 substations.

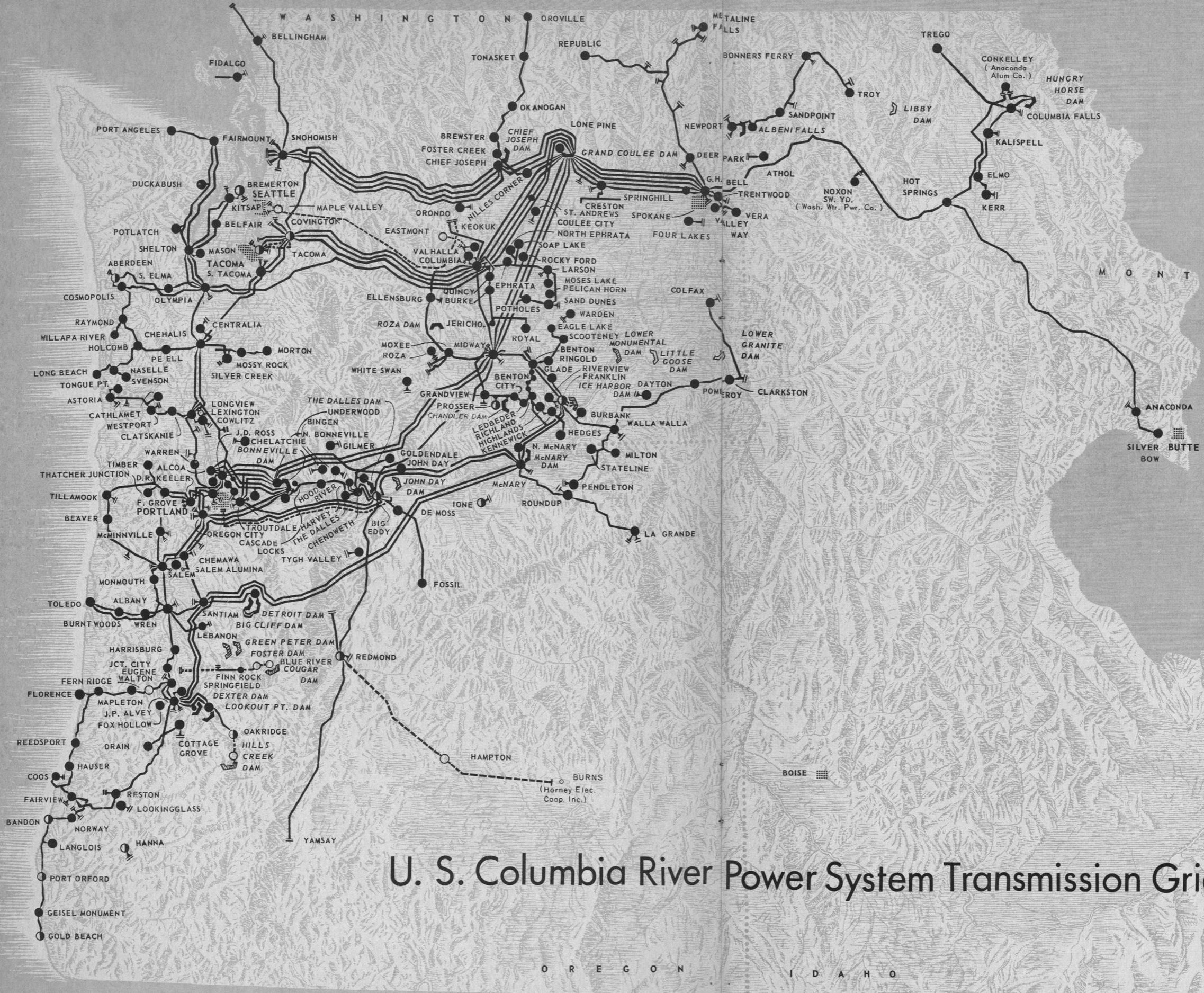
ELECTRICAL COORDINATION AND INTEGRATION

Bonneville Power Administration's high voltage transmission grid serves as the "backbone" for all interconnected utilities of the Pacific Northwest. The Administration's transmission sys-

tem had 436 points of connection as of June 30, 1961, almost double the 256 connections of 11 years ago. These include interconnections with all the principal utilities having generating facilities in the region.

TABLE 2
Electric energy account for fiscal year 1961

Energy received (millions of kilowatt-hours):	
Energy generated for BPA:	
Bureau of Reclamation	12,806
Corps of Engineers	17,425
Power interchanged in	8,666
Total received	38,897
Energy delivered (millions of kilowatt-hours):	
Sales	28,528
Power interchanged out	8,563
Used by Administration	34
Total delivered	37,125
Energy losses in transmission and transformation	1,772
Losses in percent of total received - percent	4.8
Maximum demand on Federal plants (kilowatts)	
Sept. 26, 1960, 6-7 p.m. PST	4,579,000
Load factor, total generated for BPA, percent	75.4



L E G E N D

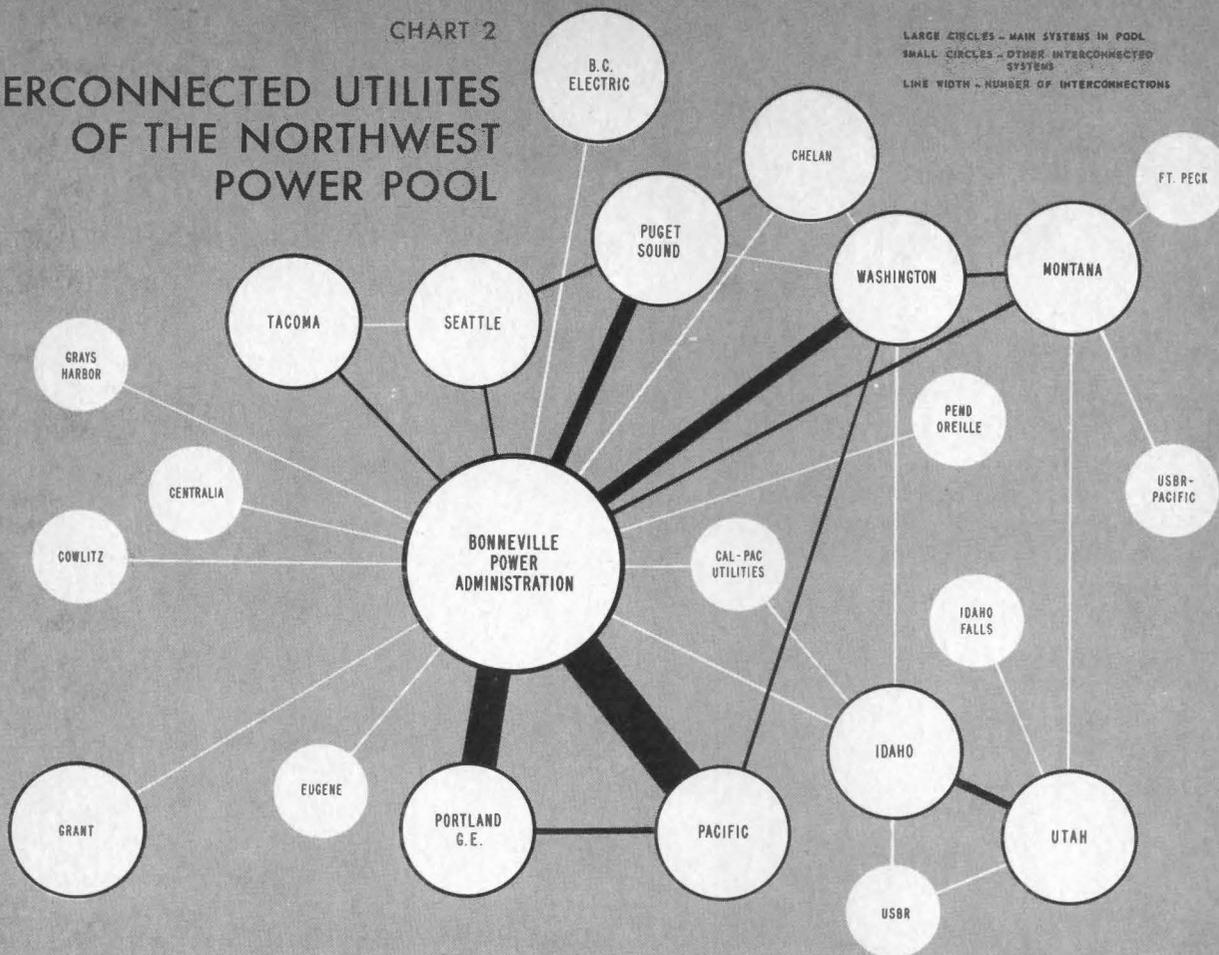
- Existing Transmission Line and Substation
- Approved or Under Construction
- ⊙ Additional Facilities Approved or Under Construction in Existing Substation
- ▬ Existing Dam and Hydro Development
- ▬ Dam and Hydro Development Under Construction
- ▬ Authorized Dam and Hydro Development
- ⊥ Interconnection
- Principal City

U. S. Columbia River Power System Transmission Grid

CHART 2

INTERCONNECTED UTILITIES OF THE NORTHWEST POWER POOL

LARGE CIRCLES - MAIN SYSTEMS IN POOL
 SMALL CIRCLES - OTHER INTERCONNECTED SYSTEMS
 LINE WIDTH - NUMBER OF INTERCONNECTIONS



GROWTH OF WHEELING PROGRAM

The wheeling program under which the Federal transmission grid is made available for transmission of non-Federal power generation to area load centers increased by 31.7 percent in fiscal year 1961 over the previous year.

BPA wheeled or transferred for other utilities 8.8 billion kilowatt-hours of energy as compared with 6.7 billion kilowatt-hours the previous year. During the same period other utilities wheeled or transferred 2.2 billion kilowatt-hours of energy for the Government.

Power is being delivered under long-term firm capacity contracts from the Pelton project of the Portland General Electric Company, the Box Canyon project of the Pend Oreille PUD, the Priest Rapids project of the Grant County Pub-

lic Utility District, and the Rocky Reach project of the Chelan County Public Utility District.

Excess capacity contracts cover power from the Swift project of the Pacific Power and Light Company, the Rock Island project of the Chelan County PUD, and into the region from the Idaho Power Company.

PUBLIC UTILITY SALES INCREASE

Sales to publicly owned utilities continued to increase at a higher rate than sales to other classes of customers. Over the last 10-year period, sales to publicly owned utilities increased 224 percent, while total sales increased 89 percent. During the same period, energy sales to the other classes of customers increased as follows: private utilities, 20 percent; aluminum companies, 31 percent; and Federal agencies and other customers, 198 percent.

TABLE 3
Sales of electric energy by classes of customers
Fiscal years 1961 and 1960

	Fiscal year 1961		Fiscal year 1960		Percent increase
	Millions of kilowatt-hours	Mills per kilowatt-hour	Millions of kilowatt-hours	Mills per kilowatt-hour	
Publicly owned utilities: 1/					
Firm	10,876	2.72	10,418	2.71	4.4
Nonfirm	198	2.51	135	2.52	45.7
Total	<u>11,074</u>	2.71	<u>10,553</u>	2.70	4.9
Privately owned utilities:					
Firm	3,587	2.23	4,599	2.16	- 22.0
Nonfirm	722	2.50	954	2.50	- 24.3
Total	<u>4,309</u>	2.28	<u>5,553</u>	2.21	- 22.4
Aluminum plants:					
Firm	7,431	2.01	7,761	1.98	- 4.2
Nonfirm	1,128	1.76	1,167	1.82	- 3.3
Total	<u>8,559</u>	1.98	<u>8,928</u>	1.96	- 4.1
Other industries: 2/					
Firm	4,193	2.24	4,098	2.26	2.3
Nonfirm	393	2.24	515	2.20	- 23.7
Total	<u>4,586</u>	2.24	<u>4,613</u>	2.25	- 0.6
Total energy:					
Firm	26,087	2.37	26,876	2.33	- 2.9
Nonfirm	2,441	2.11	2,771	2.16	- 11.9
Total	<u>28,528</u>	2.35	<u>29,647</u>	2.32	- 3.8

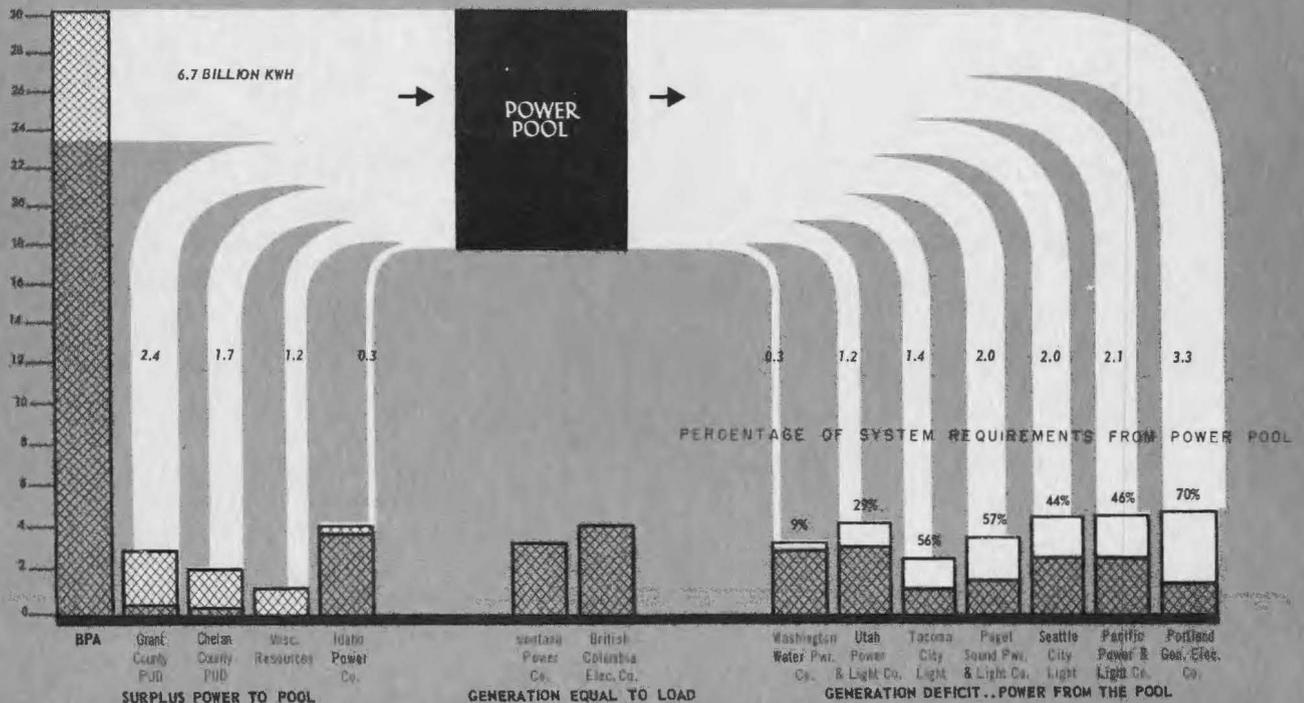
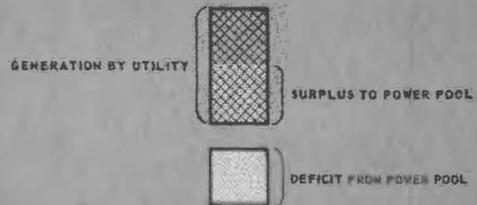
1/ City of Richland billed to Atomic Energy Commission July through October 1959. Data have been shifted from Federal agencies for comparative purposes.

2/ Includes Federal agencies.

CHART 3

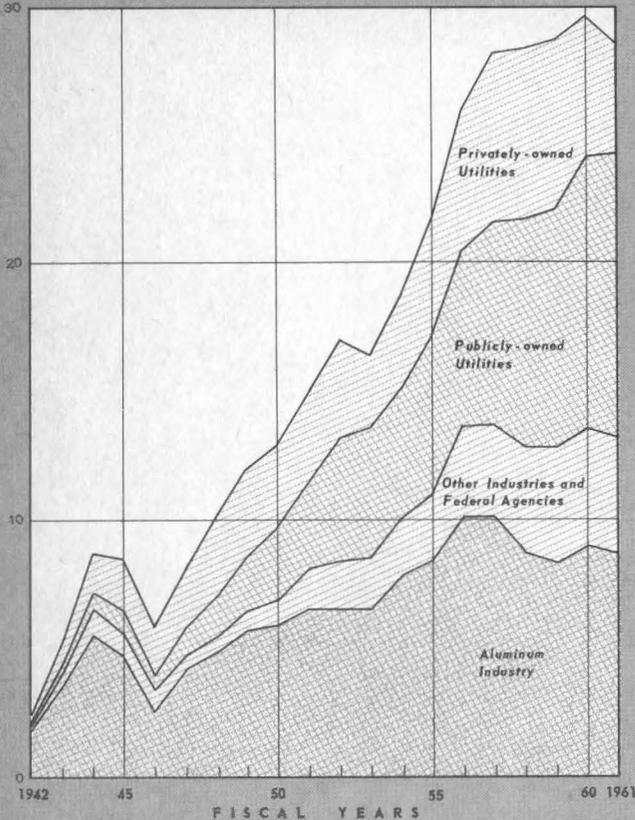
NORTHWEST POWER POOL

BPA SUPPLIED 54.5% OF NET ENERGY REQUIREMENTS
NET OPERATIONS ENDING JUNE 30, 1961



SALES OF ELECTRIC ENERGY BY CLASS OF CUSTOMER

BILLIONS OF KILOWATT HOURS



Detailed energy deliveries by classes of customers for 1961 compared with 1960 are shown in table 3.

UNUSED CAPACITY

BPA's industrial customers have, in the aggregate, an estimated capacity to use power at the rate of approximately 1,900,000 kilowatts. As of June 30, 1961, their power purchases from the Government and from other sources totaled 1,472,000 kilowatts, leaving idle plant capacity of about 425,000 kilowatts. Firm deliveries from

the Government were 1,089,000 kilowatts, interruptible deliveries were 246,000 kilowatts, and 137,000 kilowatts were purchased from non-Federal sources.

ENERGY SALES OF 28.5 BILLION KILOWATT-HOURS

During fiscal year 1961, Bonneville Power Administration sold 28.5 billion kilowatt-hours of electric energy for \$67,100,000, an average of 2.35 mills per kilowatt-hour. Energy sales were approximately 4 percent below the previous year.

The percentage distribution of energy sales by classes of customers for fiscal year 1961 follows:

	Number of customers June 1961	Energy sale by percent of total
Publicly owned utilities	81	38.8
Privately owned utilities	8	15.1
Aluminum industry	9	30.0
Other industries & Federal agencies	18	16.1
Total	116	100.0

POWER RATES

Bonneville Power Administration has maintained the same basic wholesale rate of \$17.50 a kilowatt-year since it was established in 1939. Pursuant to action taken during 1959, the existing rates will continue until December 20, 1964.

TABLE 4
Electric energy sales by rate schedules
Fiscal year 1961

Rate schedule	Millions of kilowatt-hours	Percent of total	Percent change from fiscal year 1960	Mills per kilowatt-hour
C-4 1/	19,105	67.0	-7.2	2.19
F-4	51	0.2	-8.9	4.63
A-4 1/	2,373	8.3	10.0	1.68
E-4	5,972	20.9	5.9	3.08
H-3	1,013	3.6	-14.3	2.50
Space heating	14	2/	3/	1.00
	<u>28,528</u>	<u>100.0</u>	<u>-3.8</u>	<u>2.35</u>

Major features of rate schedules
 C-4 Kilowatt-year for transmission system firm power.
 F-4 Demand-energy rate for firm power.
 A-4 Kilowatt-year rate for at-site firm power.
 E-4 Demand-energy rate for firm power for resale to ultimate consumers.
 H-3 Energy rate for dump, emergency, breakdown or experimental service.
 Space heating. Special space heating rate applicable in vicinity of Grand Coulee plant.

1/ Includes interruptible industrial sales.

2/ Less than 0.05%.

3/ Initial service under this rate September 1959.

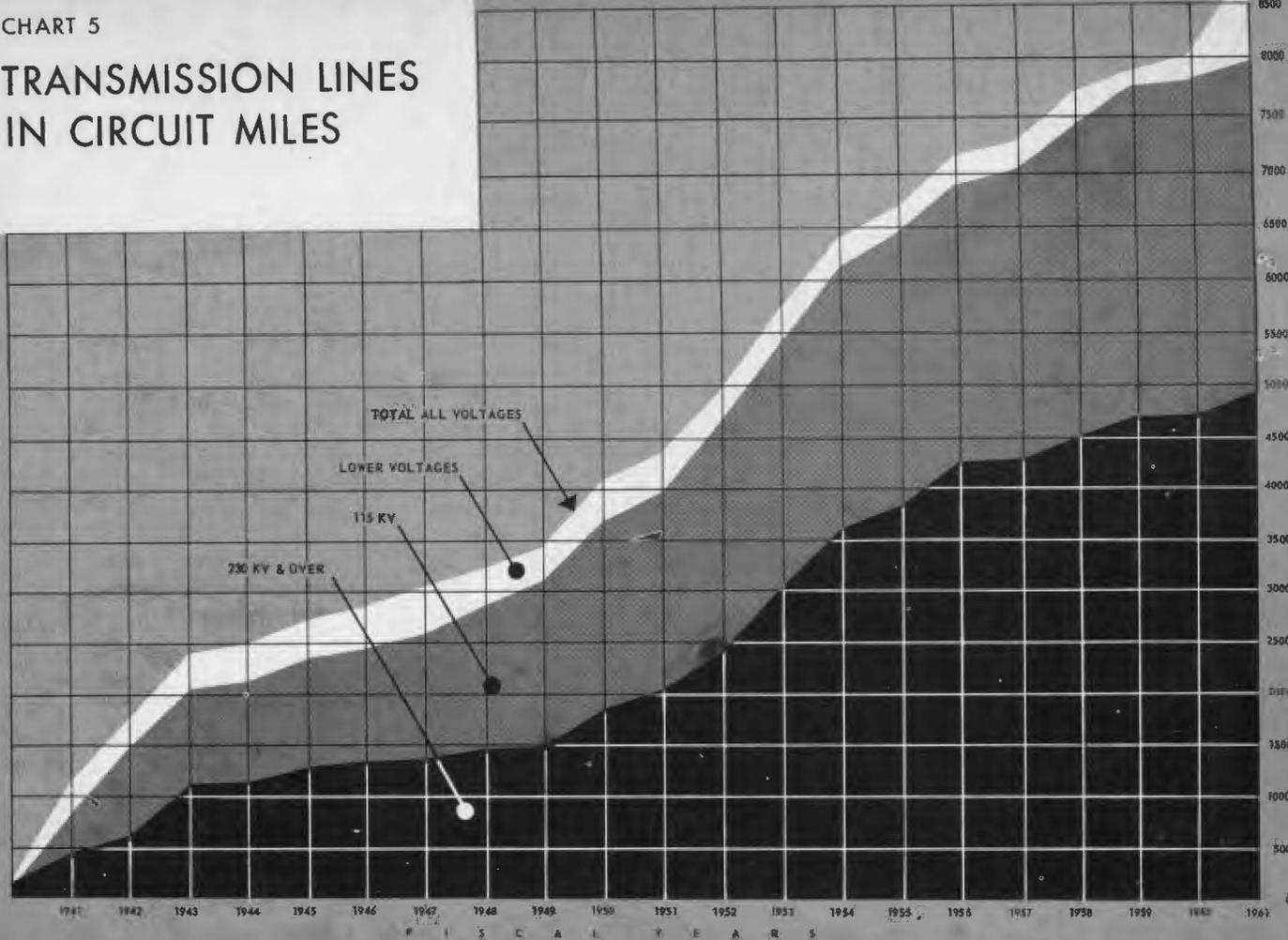
TABLE 5
Energy deliveries to customers of the Bonneville Power Administration
Fiscal year ended June 30, 1961

<u>Customers</u>	Energy deliveries for year 1/ thousands of kilowatt-hours	<u>Customers</u>	Energy deliveries for year 1/ thousands of kilowatt-hours
PUBLICLY OWNED UTILITIES			
MUNICIPALITIES			
Bandon, Oregon	23,195	Orcas Power & Light Co.	18,677
Bonners Ferry, Idaho	3,800	Quinalt Light Co.	2,676
Canby, Oregon	16,454	Ravalli Co. Elec. Coop.	13,455
Cascade Locks, Oregon	13,739	Salem Electric	65,443
Centralia, Washington	7,098	Surprise Valley Elec. Coop. 2/	4,560
Cheney, Washington	25,167	Tanner Electric	1,463
Coulee Dam, Washington	19,185	Umatilla Elec. Coop. Assn.	35,555
Drain, Oregon	17,311	Vera Irrigation Dist. #15	40,404
Ellensburg, Washington	59,673	Wasco Elec. Coop.	33,272
Eugene, Oregon	425,690	West Oregon Elec. Coop.	25,376
Forest Grove, Oregon	51,749		
Grand Coulee, Washington	18,049	Total cooperatives (35)	1,246,092
McMinnville, Oregon	71,657		
Milton-Freewater, Oregon	39,515	Total publicly owned utilities	11,073,964
Monmouth, Oregon	16,743		
Port Angeles, Washington	225,886	PRIVATELY OWNED UTILITIES	
Richland, Washington	148,932	British Columbia Elec. Co.	1,140
Seattle, Washington	1,561,153	California Oregon Power Co.	256,349
Springfield, Oregon	90,208	California-Pacific Utilities Co.	10,420
Tacoma, Washington	1,155,729	Idaho Power Co.	-
		Montana Power Co.	350,600
Total municipalities (20)	3,990,933	Pacific Power & Light Co.	844,963
		Portland General Elec. Co.	2,759,479
PUBLIC UTILITY DISTRICTS			
Benton Co. PUD #1	272,502	Puget Sound Power & Light Co.	64,087
Central Lincoln PUD	329,175	Washington Water Power Co.	22,339
Chelan Co. PUD #1	257,539		
Clallum Co. PUD #1	73,457	Total privately owned utilities (8) 3/	4,309,377
Clark Co. PUD #1	688,070		
Clatskanie PUD	25,948	FEDERAL AGENCIES (8) 3/ 4/	
Cowlitz Co. PUD #1	911,179		2,812,959
Douglas Co. PUD # 1	153,725	INDUSTRIES	
Ferry Co. PUD #1	19,371	ALUMINUM	
Franklin Co. PUD #1	130,562	Aluminum Co. of America:	
Grant Co. PUD #2	392,522	Vancouver Plant	
Grays Harbor Co. PUD #1	420,500	Wenatchee Plant	
Kittitas Co. PUD #1	11,274	Anaconda Aluminum Co.	
Klickitat Co. PUD #1	103,729	Harvey Aluminum Co.	
Lewis Co. PUD #1	165,621	Kaiser Alum. & Chem. Corp:	
Mason Co. PUD #1 2/.	7,928	Spokane Alum. Fab.	
Mason Co. PUD #3	92,683	Spokane Alum. Red.	
Northern Wasco Co. PUD	33,398	Tacoma Alum. Red.	
Okanogan Co. PUD #1	135,449	Reynolds Metals Co.:	
Pacific Co. PUD #2	92,609	Longview Plant	
Pend Oreille Co. PUD #1	28,065	Troutdale Plant	
Skamania Co. PUD #1	38,389		
Snohomish Co. PUD #1	1,277,040	OTHER	
Tillamook PUD	108,283	Carborundum Co.	
Wahkiakum Co. PUD #1	17,198	Crown Zellerbach Corp.	
Whatcom Co. PUD #1	50,723	Hanna Nickel Smelting Co.	
		Keokuk Electro-Metals Co.	
Total public utility districts (26)	5,836,939	Pacific Carbide and Alloys Co.	
		Pacific Northwest Alloys	
COOPERATIVES			
Benton Rural Elec. Assn.	58,166	Pennsalt Chemicals Corp.	
Big Bend Elec. Coop.	75,761	Rayonier Corp.	
Blachly-Lane Co. Coop. Elec. Assn.	29,902	Union Carbide Metals Co.	
Central Elec. Coop.	23,998	Victor Chemical Works	
Clearwater Power Co.	47,806		
Columbia Basin Elec. Coop.	14,415	Total industries (19)	
Columbia Power Coop. Assn.	17,489	10,332,081	
Columbia Rural Elec. Assn.	39,034	Total sales of electric energy (116) 3/	
Consumers Power	106,012	28,528,381	
Coos-Curry Elec. Coop.	122,887		
Douglas Elec. Coop.	43,164		
Eastern Oregon Elec. Coop. Assn.	5,869		
Flathead Elec. Coop.	27,633		
Hood River Elec. Coop.	24,946		
Idaho Co. L & P Assn.	18,585		
Inland Power & Light Co.	124,761		
Kootenai Rural Elec. Assn.	20,307		
Lane Co. Elec. Coop.	86,811		
Lincoln Elec. Coop. - Montana	12,461		
Lincoln Elec. Coop. - Washington	29,963		
Midstate Elec. Coop.	13,748		
Missoula Elec. Coop.	15,798		
Nespelem Valley Elec. Coop.	9,310		
Northern Lights	30,761		
Okanogan Co. Elec. Coop.	5,624		

1/ Includes energy deliveries carried on exchange accounts.
2/ New customer added during year.
3/ Number of customers as of June 30, 1961; California Oregon Power Co. merged with Pacific Power & Light Co. during year and one Federal agency discontinued during year.
4/ Federal Agencies: Atomic Energy Comm., Bureau of Mines, Bureau of Reclamation, Fairchild Air Base, Puget Sound Navy Yard, Tongue Pt. Naval Station, U.S. Indian Service, and U.S. Navy (Jim Creek).
5/ Service temporarily discontinued.

CHART 5

TRANSMISSION LINES IN CIRCUIT MILES



During fiscal year 1961, the Administration delivered about 67 percent of its energy sales at an average cost of 2.19 mills per kilowatt-hour to industries and to utilities having substantial generating facilities.

A summary of energy sales for fiscal year 1961, classified by rate schedules, is shown in table 4. Energy deliveries to customers for fiscal year ended June 30, 1961, appear in table 5.

CONSTRUCTION PROGRAM

Bonneville Power Administration's grid was expanded by the addition of 196 circuit miles of transmission lines, 363,625 kilovolt-amperes of substation transformer capacity, and 534,360 kilovolt-amperes of reactive. At the close of the year, the grid consisted of 8,224 miles of

transmission lines, 14,472,747 kilovolt-amperes of transformer capacity and 2,435,545 kilovolt-amperes of reactive. Eight new substations were added and one retired, making a total of 208 substations on the system.

Major facilities completed include the 113-mile, 287,000-volt line between Columbia, near Wenatchee, Washington, and Covington, near Seattle, Washington, to integrate into the system and to carry the output of Grant County PUD's Priest Rapids and Chelan County PUD's Rocky Reach hydroelectric projects into the Puget Sound area; a 23-mile, 230,000-volt line from Rocky Reach hydroelectric project to Columbia, near Wenatchee, to integrate the output into the BPA system; an additional 230,000-volt line from The Dalles hydroelectric project and the Big Eddy

substation, to carry added generation; and a 53-mile, 115,000-volt line between DeMoss and Fossil, Oregon, to improve service to the electric cooperatives in north-central Oregon. An additional 250,000-kilovolt-ampere transformer was installed at the Longview substation to serve the load growth in that area.

Construction was under way at the close of the fiscal year on a 128-mile, 345,000-volt line from Chelan County PUD's Rocky Reach hydroelectric project to Maple Valley, near Seattle, Washington, to bring the generation to western Washington; a 9-mile, double circuit 115,000-volt line to integrate the output of the Corps of Engineers' Ice Harbor hydroelectric project into the BPA system near Pasco, Washington; an 81-mile, 345,000-volt line, between The Dalles hydroelectric project and McLoughlin, near Oregon City,

Oregon, to interconnect with Portland General Electric Company; a 130-mile, 115,000-volt line between Redmond and Burns, Oregon; and a 5-mile, 115,000-volt line between the Corps of Engineers' Hills Creek hydroelectric plant and Oakridge, Oregon.

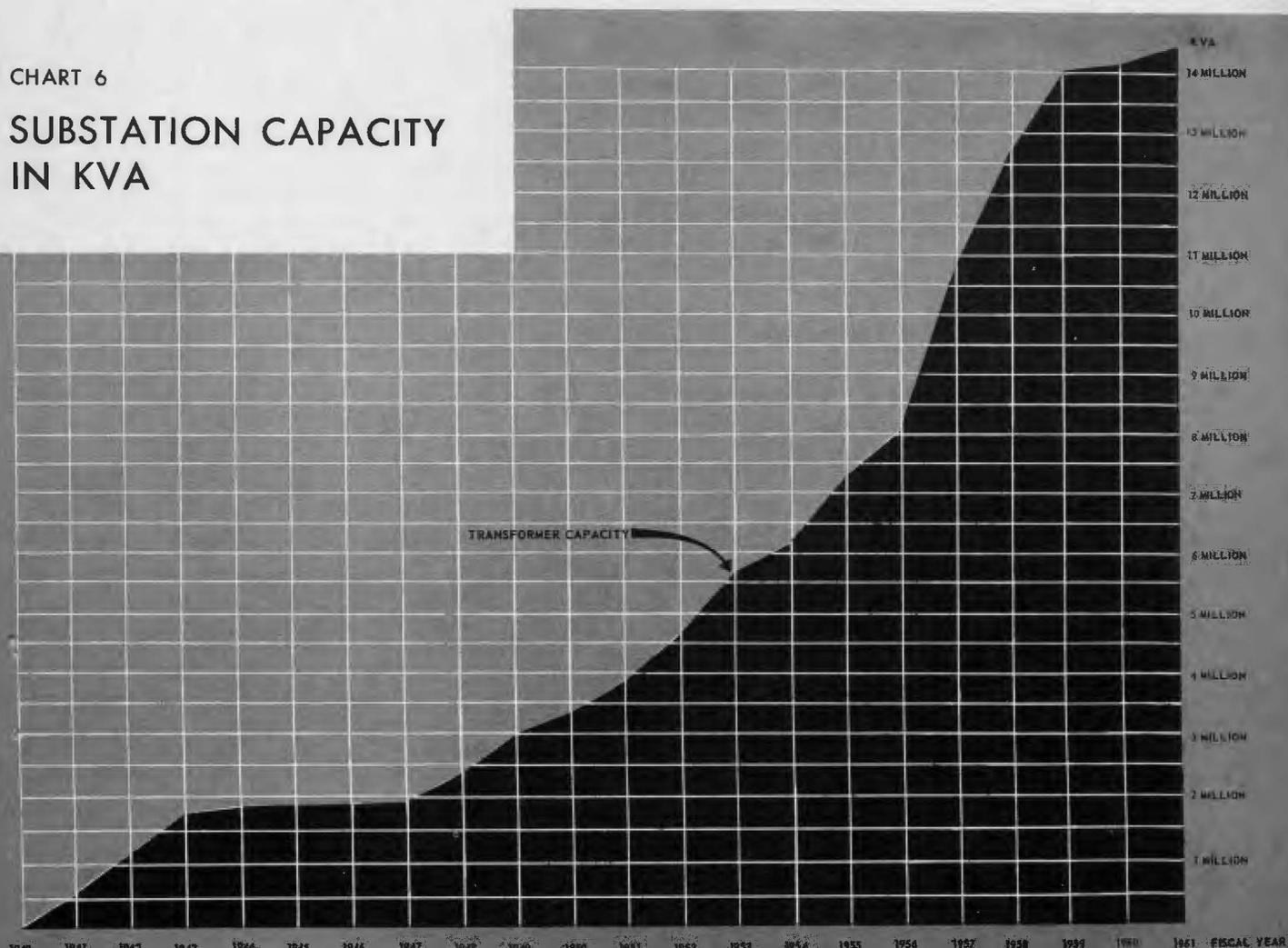
TRANSMISSION TECHNOLOGY

In the past fiscal year, Bonneville Power Administration, working in close cooperation with contractors and equipment suppliers, introduced several major improvements in transmission line construction.

The first experimental 460,000/500,000-volt aluminum conductors were installed in two 4,000-foot sections of the 80-mile Big Eddy-McLoughlin 345,000-volt line near Sandy, Oregon. Technological advances make the extra-high voltage

CHART 6

SUBSTATION CAPACITY IN KVA



feasible in moving large blocks of power from Federal and non-Federal plants in the middle and upper Columbia River to major load centers. The objectives of the installations are to provide field trials for these giant conductors and to determine the feasibility of the six different designs under normal operating conditions. In addition to the field installations, a laboratory testing program is scheduled on short lengths of each conductor to study its vibration, creep and radio noise, and corona characteristics.

As the demand for higher transmission voltages increases and larger and heavier conductors are used, the older stringing methods are no longer adequate. New machinery for stringing conductors was put into use on all high voltage lines during the year. Hydraulically controlled tension machines replaced the old ground stringing methods, with the stringing tractors giving way to large stationary 3-drum hoists. Radio communications help speed the work. With these advanced methods, some contractors can string 3 miles of line in a 5-day week.

Tower designs are being constantly improved. During the year new narrow-waisted towers, which require less steel than earlier designs, were used for the first time on 345,000-volt lines and improved steel towers were developed for use on 115,000-volt lines. Because of longer life, steel has economic advantages over wood pole designs, especially west of the Cascades.

OTHER IMPROVEMENTS

During the period of making additions and changes in substations, there is a serious problem of maintaining service. This is especially true of small substations that serve customers with no other source of energy. To solve this problem, a shu-fly has been devised, complete with 115,000-volt bus, circuit breaker and cables, that bypasses the station and provides service to the customer. This equipment can be installed or removed quickly.

Improved methods are constantly sought in the field of network analysis. Bonneville Power Administration pioneered the development and put into operation the most modern electronic alternating current network analyzer used in the electric utility industry. During the past year, the Administration added to the analyzer a device known as an automatic swing curve plotter. These curves are used to indicate whether or not the power system will continue to carry customer loads when it is subjected to a fault, such as lightning flashover or when a line is struck by a falling tree. If such faults cause load interruption, then studies are made to determine what must be done to carry the loads. A set of these curves as previously plotted took 6 hours of analyzer time--with the automatic plotter it takes about 2 minutes.

In the past, very high frequency coverage for communication with mobile units has been absent or substandard in some areas on the Bonneville system because it was not economically feasible to provide the conventional additional land stations. Development and design work has recently been completed on a low-cost low-powered very high frequency land station which should make it practical when used with the existing system to provide more extensive and effective communication in areas where this equipment can be utilized.

A steel "sock" similar in principle to the ancient Chinese finger grips is fastened to the end of the 500,000 volt experimental conductor.





A helicopter takes off with a lead line to span a precipitous canyon in the Cascade range with a high voltage BPA transmission line.

The engineering improvements accomplished during the past year are indicative of the Administration's constant search for economical and effective devices and techniques in the construction, operation and maintenance of its transmission system. Such engineering advances have made it possible to keep the cost of transmission at the lowest possible figure.

Additional equipment is on order and scheduled for operation by the spring of 1962 to provide centralized semiautomatic control of Federal generation. This equipment, which is a step in the direction of full computer control of scheduling and generation, will not only make it possible for other Northwest Power Pool members to assume their proper portion of power pool regulation but also will enable the Northwest

Power Pool to interconnect satisfactorily with other large power networks. Other by-product benefits include more efficient following of scheduled water use, more generators participating in the area regulation, and better control of power interchange with other utilities.

Bonneville Power Administration is well on its way toward a long-term program for remote or supervisory control of many major substations from strategically located supervisory centers. This will make possible more economical operation and better utilization of skilled manpower. The largest center will be at Portland from which the Troutdale, Ross, Oregon City, Keeler, Alcoa, St. Johns and Tillamook substations will be controlled. Operation of the center is scheduled to be started in the spring of 1962.



Typical of rugged terrain encountered in the Cascade range are these two steel transmission towers of the Rocky Reach-Maple Valley 345,000 volt transmission line completed during the fiscal year.

Financial Report

INTRODUCTION

The U. S. Columbia River power system consists of the Bonneville Power Administration, a power marketing and transmission agency, and the 20 hydroelectric generating plants, existing or under construction, of the Corps of Engineers and the Bureau of Reclamation for which the Administration is delegated the power sales responsibility. The accounts and records of this commercial power operation have been audited by the United States General Accounting Office, an arm of the Congress and thus a part of the legislative branch of the Government rather than the executive branch which conducts the power operation. The Auditors' Report for fiscal year 1961 is included in its entirety as a part of this report by the Bonneville Power Administration on the generation, transmission and sale of electric power and energy for the fiscal year.

As in prior years, the financial results of operations of the U. S. Columbia River power system are presented on both a cost accounting basis and a payout basis. Except for schedule 4, the

financial statements in the Auditors' Report are presented in terms of conventional accrual cost accounting in accordance with the uniform system of accounts for electric utilities prescribed by the Federal Power Commission. Schedule 4 of the Auditors' Report is a summary of financial results for fiscal year 1961 and in cumulative total through June 30, 1961, on a payout basis. The payout basis was developed from the cost accounting schedules in the report by substituting cash receipts for revenues and amortization requirements for depreciation expense and by making certain additional but minor adjustments.

In the conventional cost accounts the recovery of the fixed plant investment is accomplished through provisions for depreciation expense determined on the basis of the estimated service lives of the various units of property. These service lives range upward from a few years to as much as 100 to 150 years for some of the facilities such as the concrete dams, the reservoirs, and similar items that will never need

replacement. However, for the purposes of payout reporting, the recovery of the power investment is scheduled in a much shorter period than the estimated service lives used for depreciation accounting purposes. The payout schedules are based upon a 50-year period for the generating projects and a 35-year period for the transmission investment. Moreover, the payout schedule for the Columbia Basin project includes provision for the return from commercial power revenues of a substantial portion of the investment allocated to irrigation.

The payout accounts differ from the conventional accrual cost accounts in another important respect, namely, the use of cash receipts rather than accrued revenues. However, it is contemplated that this practice may be discontinued so that all reporting will be on the basis of accrued revenues. Moreover, since the cost accounts are based upon memorandum accounts rather than the official accounts in the case of the reclamation projects, consideration is being given to a single basis of reporting which would be taken from the official accounts and records of all projects and would be on the conventional accrual cost accounting basis except for the use of amortization in lieu of depreciation. The problems involved in reporting on (1) a cost accounting basis using memorandum accounts, (2) a payout basis derived primarily from such cost accounts, and (3) a payout basis using the official accounts for all projects, were discussed at length in a financial addendum to the Administration's Annual Report last year. An addendum to this year's report presents pro forma financial statements illustrating a revised basis of reporting.

Financial results of operations presented on a payout basis are more meaningful than those on a cost accounting basis because payout requirements govern the required wholesale power rate levels. The rates must be adequate to produce returns to the Government to cover the total payout requirements based upon the amortiza-

tion schedules, including the return of costs allocated to irrigation in excess of the repayment ability of the water users. These payout requirements exceed "costs" determined on a depreciation accounting basis for reasons set forth above. It therefore follows that for the purposes of power rate determination and for reporting financial results, payout requirements are "costs".

The following sections of this report present a brief summary of the power system's financial status on a payout basis and a summary of revenues and expenses on a cost accounting basis.

SUMMARY OF PAYOUT STATUS

Despite 4 successive deficit years, 1958 to 1961, inclusive, the Bonneville Power Administration is still \$26,400,000 ahead of schedule and the Columbia River power system is \$37,800,000 ahead of schedule in the repayment to the Treasury of the Federal investment in the power operations. These data are set forth in schedule 4 of the Auditors' Report.

Four years ago, prior to the first power system deficit incurred in fiscal year 1958, BPA was \$53,500,000 and the system was \$78,800,000 ahead of the payout schedules. These data were presented in schedule 3 of the Auditors' Report for fiscal year 1957 which formed a part of the Administration's Annual Report for that year.

As indicated in the summary which follows, the power system's financial status appears much better on the cost accounting system since the surplus on that basis, as of June 30, 1961, was \$70,300,000 as against the payout basis surplus of \$37,800,000. However, we do not consider results on a cost accounting basis to be realistic because such results do not adequately reflect our obligations to amortize the power investment in periods less than their depreciation service lives and to provide in addition for the return of a substantial portion of the construction costs allocated to the irrigation program.

Comparative net revenue data
as of June 30

	In millions of dollars			
	Payout basis		Cost accounting basis	
	1957	1961	1957	1961
BPA only	53.5	26.4	39.7	3.1
U.S. Columbia River power system	78.8	37.8	104.7	70.3

system on a cost accounting basis is presented in table 6. Actual data are given for fiscal years 1960 and 1961 and in total through fiscal year 1961, together with estimated data for fiscal years 1962 and 1963.

The gross operating revenues for 1961 were \$69,819,125, a decrease of \$1,381,438 from the all-time peak of \$71,200,563 established in 1960. This was also \$1,429,875 below the estimate made at the beginning of the year. The reasons

COST ACCOUNTING SUMMARY

A condensed statement of combined revenues and expenses of the U. S. Columbia River power

TABLE 6
U. S. COLUMBIA RIVER POWER SYSTEM
Summary of results of operations
Fiscal years 1960 and 1961
Estimates for fiscal years 1962 and 1963

Line No.	Item	Fiscal year		Cumulative total to June 30, 1961	Estimated	
		1960	1961		Fiscal year 1962	Fiscal year 1963
1	Sales of electric energy	\$68,944,051	\$66,994,544	\$785,237,081	\$68,100,000	\$76,100,000
2	Other electric revenue	2,256,512	2,824,581	20,353,867	5,300,000	6,300,000
3	Total operating revenue	71,200,563	69,819,125	805,590,948	73,400,000	82,400,000
4	Less:					
5	Expenses of operation, maintenance, administration, etc.	21,061,626	22,496,177	225,630,212	24,114,000	25,345,000
6	Interest expense, net of interest during construction	31,764,840	32,807,928	283,560,108	34,266,000	35,405,000
7	Subtotal	52,826,466	55,304,105	509,190,320	58,380,000	60,750,000
8	Remainder available for depreciation and amortization	18,374,097	14,515,020	296,400,628	15,020,000	21,650,000
9	Provisions for depreciation	26,860,113	28,685,761	226,115,764	29,971,000	31,459,000
10	Net revenues	\$(8,486,016)	\$(14,170,741)	\$70,284,864	\$(14,951,000)	\$(9,809,000)
11	Net revenues (line 10) as a percentage of total operating revenues (line 3)	(11.92)%	(20.30)%	8.72%	(20.37)%	(11.90)%
12	System maximum generation during the year (kilowatts)	4,928,000	4,579,000	5,024,000 ^{1/}	5,100,000	5,600,000
13	Total kilowatt-hours sold (thousands)	29,682,910	28,528,381	333,882,381	28,400,000	31,900,000
14	Total kilowatt-hours wheeled (thousands)	4,123,546	7,899,133	19,052,664	11,400,000	13,200,000
15	Revenue per KWH sold (line 1 divided by line 13) mills	2.32	2.35	2.35	2.40	2.39
16	Revenue per KWH wheeled (mills)	0.44	0.29	0.38	0.31	0.34
17	Power supply costs per kilowatt-hour sold (mills)	1.61	1.80	1.17	1.88	1.75
18	Power supply costs per KW of system maximum generation	\$9.70	\$11.20	-	\$10.46	\$9.94
19	Transmission costs per KWH sold (mills)	1.01	1.06	0.99	1.11	1.00
20	Transmission costs per KWH handled	0.94	0.90	0.96	0.88	0.81
21	Transmission costs per KW of system maximum generation	\$6.11	\$6.63	-	\$6.17	\$5.72

1/ All time high, fiscal year 1958.

COMMENTS:

Line 8. Power revenues continue to be adequate to cover out-of-pocket costs, i. e., expenses of operation, maintenance and interest, with a substantial remainder available for repayment of capital investment.

Line 10. Net revenues, \$70,284,864, through June 30, 1961, as well as provisions for depreciation, \$226,115,764, a total of \$296,400,628, are available for repayment (amortization) of the capital investment.

Line 14. The data shown for kilowatt-hours wheeled are limited to energy delivered by the Bonneville Power Administration (BPA) for the account of others from non-Federal sources. BPA also "wheels" a small amount of Federal power sold "at-site" over its own facilities to some of its customers located within 15 miles of a Federal dam purchasing power at BPA's at-site rate schedule. Such deliveries are included in energy sold (line 13) and not in energy wheeled.

Line 16. This ratio is restricted to the revenues received from wheeling energy shown in line 14. See comments above re line 14.

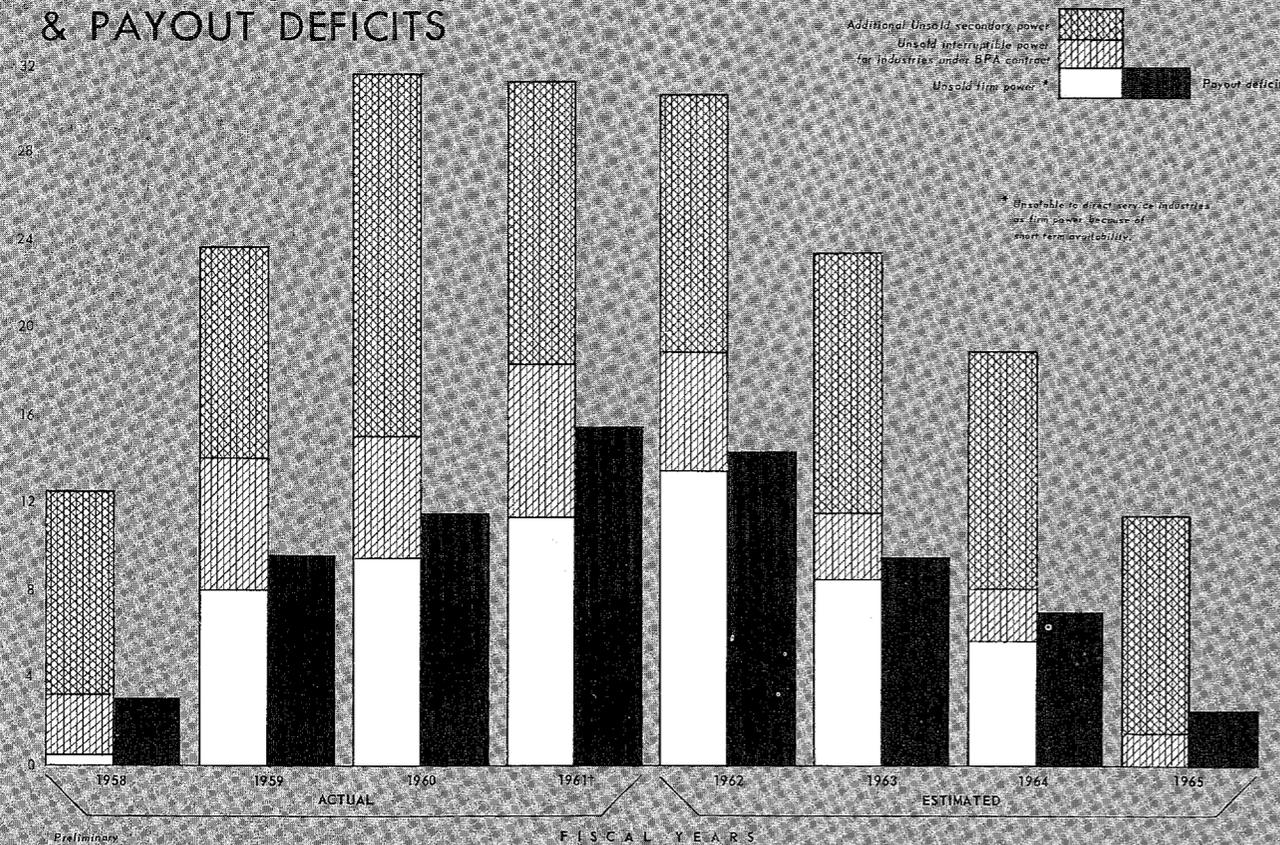
Line 17 and 18. Power supply costs include total operation, maintenance, interest and depreciation expenses at the Federal dams allocated to power plus the cost of power purchased by BPA.

Line 19 and 21. For the purpose of these ratios transmission costs consist of BPA's total expenses for operation, maintenance, interest and depreciation less the cost of power purchased and less the amount of revenues obtained by BPA from the wheeling of power from non-Federal sources (see comment re line 14 above). Inasmuch as a part of BPA's cost is assignable to wheeling operations and the wheeling charges are derived from an average transmission cost formula, the wheeling revenues are credited against BPA costs in order to obtain a remainder fairly applicable against the handling of Federal energy.

Line 20. This ratio consists of total BPA costs except purchased power divided by the total of energy sold (line 13) and energy wheeled (line 14).

COMPARISON OF UNSOLD POWER & PAYOUT DEFICITS

MILLIONS OF DOLLARS



that after providing for operation, maintenance, administration and interest, about \$15,020,000 in 1962 and \$21,650,000 in 1963 will be available for repayment of capital investment. These amounts fall short of covering depreciation in these years by \$14,951,000 and \$9,809,000, respectively, and will further reduce the cumulative surplus of \$70,285,000 shown as of June 30, 1961, to about \$45,500,000 at June 30, 1963.

AVERAGE REVENUE

Table 6 also contains comparative data on energy sold, energy transmitted for the account of others, and revenue and cost per kilowatt-hour. Average revenue per kilowatt-hour continues at approximately 2 1/3 mills. Revenue for energy wheeled for the account of others averaged 0.29 mill per kilowatt-hour for the year 1961. This is a decrease of 0.15 mill from fiscal year 1960. The decreases in revenue per kilowatt-hour wheeled in fiscal years 1961, 1962, and 1963 reflect the impact of wheeling large amounts of power from Priest Rapids and Rocky Reach Dams over the high voltage system.

TRANSMISSION COSTS

Rates for energy sold must consider cost of generation, transmission, and marketing. However, charges for wheeling service are not concerned with cost of production or marketing but are based on a pricing formula which is tied into the Administration's average annual transmission cost considering the types of facilities used in such wheeling services. The bulk of the wheeled power utilizes high voltage high capacity transmission facilities which have a much lower average annual cost per unit than does the BPA transmission system as a whole. Therefore, transmission cost for energy wheeled averaged considerably less than transmission cost for energy sold.

Average transmission cost per kilowatt-hour handled decreased slightly (0.04 mill) from the prior year, although such cost continued to approximate 1 mill per kilowatt-hour. On the other hand, transmission cost per kilowatt-hour sold increased slightly (0.05 mill) during the year. These changes result primarily because the

for the decrease in gross revenue are set forth in more detail in the review of revenues later in this report.

Net revenues available for repayment of capital investment through depreciation and amortization were \$14,515,020 after providing for all expenses of operation, maintenance, administration and interest. On a cumulative basis the amount available for return of capital investment exceeds \$296,000,000. However, the amount available for fiscal year 1961 was short of meeting provisions for depreciation expense by \$14,170,741; nonetheless, on a cumulative basis revenues have exceeded requirements for depreciation by more than \$70,000,000.

FORECASTS

Forecasts for the next 2 fiscal years indicate

Line No.	Item	Total for Columbia River Power System	Bonneville Power Administration
1	Sales of electric energy	\$66,994,544	\$66,994,544
2	Other electric revenue	2,707,321	2,707,321
3	Allocation of BPA revenue to projects . .	(48,578,000)	(48,578,000)
4	Total operating revenues by projects . .	69,819,125	21,123,865
5	Less:		
6	Expenses of operation, maintenance, administration, etc.	22,496,177	13,012,608
7	Interest expense, net interest during construction	32,807,928	8,703,931
8	Subtotal	55,304,105	21,716,539
9	Remainder available for depreciation and amortization	14,515,020	(592,674)
10	Provision for depreciation and amortization	28,685,761	11,670,101
11	Net revenues for the year	(14,170,741)	(12,262,775)
12	Accumulated net revenues 6-30-60	84,455,605	15,367,768
13	Accumulated net revenues 6-30-61	\$70,284,864	\$ 3,104,993

() Denotes red figures

TABLE 7
U. S. COLUMBIA RIVER POWER SYSTEM
Combining statement of revenues and expenses
Fiscal year 1961

Total generating projects	Albeni Falls	Bonneville Dam	Chief Joseph	Columbia Basin Project	Detroit-Big Cliff	Hungry Horse	Lookout Point-Dexter	McNary	The Dalles	Yakima-Kennewick & Roza
\$ 117,260	\$	\$ 10,793	\$	\$ 23,737	\$	\$ 7,226	\$	\$ 61,134	\$ 9,346	\$ 5,024
48,578,000	1,200,000	2,100,000	6,500,000	12,800,000	1,400,000	3,833,000	1,400,000	8,200,000	10,800,000	345,000
48,695,260	1,200,000	2,110,793	6,500,000	12,823,737	1,400,000	3,840,226	1,400,000	8,261,134	10,809,346	350,024
9,483,569	340,921	1,199,620	1,088,892	2,606,741	375,270	440,524	303,700	1,741,983	1,312,208	73,710
24,103,997	720,167	842,675	3,711,553	3,145,880	942,860	1,395,394	965,295	6,461,792	5,832,402	85,979
33,587,566	1,061,088	2,042,295	4,800,445	5,752,621	1,318,130	1,835,918	1,268,995	8,203,775	7,144,610	159,689
15,107,694	138,912	68,498	1,699,555	7,071,116	81,870	2,004,308	131,005	57,359	3,664,736	190,335
17,015,660	536,528	1,134,635	2,610,337	2,187,412	596,800	819,954	612,593	4,559,445	3,884,511	71,445
(1,907,966)	(397,616)	(1,066,137)	(910,782)	4,883,704	(516,930)	1,184,354	(481,588)	(4,502,086)	(219,775)	118,890
69,087,837	(299,591)	15,331,304	(1,870,210)	48,824,861	381,897	3,404,062	136,111	4,555,884	(1,755,404)	378,923
\$67,179,871	\$ (697,207)	\$14,265,167	\$ (2,780,992)	\$53,708,565	\$ (135,033)	\$4,588,416	\$ (345,477)	\$ 53,798	\$ (1,975,179)	\$497,813

number of kilowatt-hours wheeled was almost double that of the prior year.

GENERATION COSTS

The cost of the system power supply obtained primarily from generation at Federal hydroelectric plants shows a continuation of the upward trend of recent years. The increase for the year was 0.19 mill per kilowatt-hour to make the total power supply cost 1.80 mills per kilowatt-hour for the fiscal year 1961. The increase in generation costs per kilowatt-hour sold is the result of several factors. The costs of construction of hydroelectric plants in recent years have been much higher because of rising

wages and prices than the construction cost levels prevailing when the first projects, such as Bonneville and Grand Coulee Dams, were constructed. In addition, of course, the most favorable sites were developed first. Some of the newer projects have encountered substantial costs for relocation of railroads, highways, and other facilities. Finally, the unit costs have been influenced by the fact that the volume of sales has actually declined somewhat, while annual generation costs have increased.

Table 7 is a combining statement of revenues and expenses for fiscal year 1961. The schedule shows revenue and expenses for each gen-

TABLE 8
BONNEVILLE POWER ADMINISTRATION
Comparative summary of revenues 1/
Fiscal years 1960 and 1961 and
estimate for 1962

Class of customer and type of service	Fiscal year 1960	Fiscal year 1961			Increase or (decrease)		Estimate 1962
		Amount	Percent of total	Per KWH (mills)	Amount	Percent	
Aluminum industry:							
Firm power	\$15,293,231	\$14,978,449	21.49	2.01	\$(314,782)	(2.06)	\$14,300,000
Nonfirm	2,167,610	1,980,787	2.84	1.76	(186,823)	(8.62)	2,963,000
Total aluminum	<u>17,460,841</u>	<u>16,959,236</u>	<u>24.33</u>	<u>1.98</u>	<u>(501,605)</u>	<u>(2.87)</u>	<u>17,263,000</u>
Other industry:							
Firm power	3,163,441	3,204,802	4.60	2.15	41,361	1.37	3,159,000
Nonfirm	867,604	613,257	.88	2.19	(254,347)	(29.32)	1,091,000
Total other industry	<u>4,031,045</u>	<u>3,818,059</u>	<u>5.48</u>	<u>2.15</u>	<u>(212,986)</u>	<u>(5.28)</u>	<u>4,250,000</u>
Federal agencies:							
Firm power	5,985,636	6,193,983	8.89	2.30	208,347	3.48	6,155,000
Nonfirm	238,757	281,116	.40	2.36	42,359	17.74	245,000
Total Federal agencies	<u>6,224,393</u>	<u>6,475,099</u>	<u>9.29</u>	<u>2.30</u>	<u>250,706</u>	<u>4.03</u>	<u>6,400,000</u>
Privately owned utilities:							
Firm power	9,907,325	8,337,618	11.96	2.23	(1,569,707)	(15.84)	5,610,000
Nonfirm	2,659,262	1,301,054	1.87	2.50	(1,358,208)	(51.07)	1,630,000
Total private utilities	<u>12,566,587</u>	<u>9,638,672</u>	<u>13.83</u>	<u>2.28</u>	<u>(2,927,915)</u>	<u>(23.30)</u>	<u>7,240,000</u>
Publicly owned utilities:							
Firm power	28,304,569	29,519,803	42.35	2.71	1,215,234	4.29	32,369,000
Nonfirm	356,615	583,675	.84	2.51	227,060	63.67	578,000
Total public agencies	<u>28,661,184</u>	<u>30,103,478</u>	<u>43.19</u>	<u>2.71</u>	<u>1,442,294</u>	<u>5.03</u>	<u>32,947,000</u>
Total energy sales	68,944,050	66,994,544	96.12	2.34	(1,949,506)	(2.83)	68,100,000
Other electric revenues	2,054,169	2,707,321	3.88		653,152	31.80	5,300,000
Total operating revenues	<u>\$70,998,219</u>	<u>\$69,701,865</u>	<u>100.00</u>		<u>\$(1,296,354)</u>	<u>(1.83)</u>	<u>\$73,400,000</u>
Recapitulation of energy sales revenue:							
Firm power	62,654,202	62,234,655	89.29	2.37	(419,547)	(.67)	61,600,000
Nonfirm	6,289,848	4,759,889	6.83	1.99	(1,529,959)	(24.32)	6,500,000
Total	<u>\$68,944,050</u>	<u>\$66,994,544</u>	<u>96.12</u>	<u>2.34</u>	<u>\$(1,949,506)</u>	<u>(2.83)</u>	<u>\$68,100,000</u>

1/ These data are for the Bonneville Power Administration only and thus exclude a small amount (\$117,260) of other electric revenue accruing to the generating projects and included in the combined statements of the U.S. Columbia River power system. Therefore the percentage ratio for each item to the total shown in this schedule may differ slightly from the percentage ratio shown in schedules based upon the total power system.

erating project and for the Bonneville Power Administration and in total for the U. S. Columbia River power system on a condensed basis. The total system data are the same as those shown in the 1961 column of table 6.

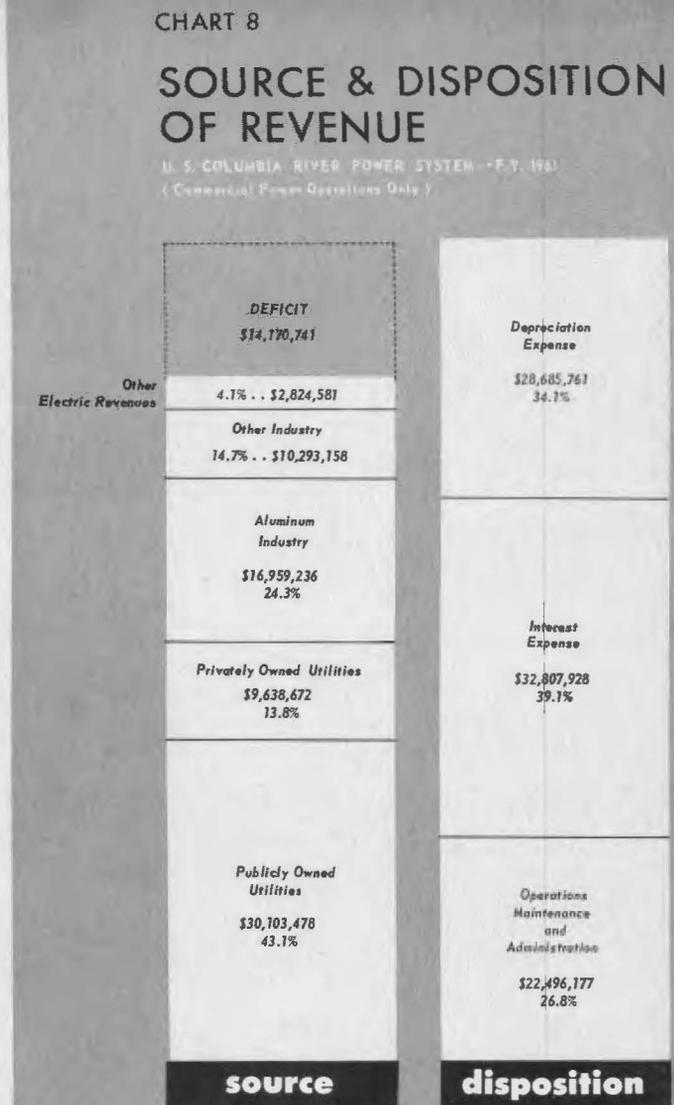
The revenues and expenses for the power system in fiscal year 1961 are depicted graphically in chart 8. Sales to publicly owned utilities accounted for 43.1 percent of the gross revenue. Sales to privately owned utilities accounted for 13.8 percent of gross revenue and sales to industry accounted for 39.0 percent of which 24.3 percent was accounted for by the aluminum industry and 14.7 percent by all other industries, including Federal agencies. Other electric revenues, consisting primarily of wheeling, accounted for the remaining 4.1 percent of the gross revenue of \$69,819,125.

Operation and maintenance expenses were 26.8 percent of the total expenses for the year. Interest expense accounted for 39.1 percent and depreciation accounted for 34.1 percent. The total expenses for the year exceeded revenues by \$14,170,741 or 20.3 percent.

REVENUE ANALYZED

Table 8 analyzes BPA revenues by class of customer and type of service, that is, firm and nonfirm sales. Actual data for 1961 are compared with the results for the prior year and with the estimate for the succeeding year. Firm power sales in general remained nearly constant except for the privately owned utilities where a substantial decrease occurred.

The aluminum industry firm power sales were down slightly due to curtailment of power requirements by Reynolds Metals Company and Harvey Aluminum Company, but other industries, Federal agencies, and publicly owned utilities were up slightly from the prior year. The decrease in firm power sales to privately owned utilities reflects the fact that these utilities have been developing other sources of supply. They have constructed additional gener-



ating facilities and have entered into contracts with public utility districts to purchase substantial shares of the output of large hydroelectric generating plants constructed or under construction by the districts on the main stem of the Columbia River.

Nonfirm power sales decreased in most categories except for an increase in sales of nonfirm to Federal agencies and publicly owned utilities which, although large percentage-wise based on prior sales, were actually nominal in terms of gross revenue dollars. The increase in other electric revenue resulted primarily



from the rise in the amount of non-Federal power wheeled for the private and public utilities.

In total, the forecast for 1962 is for an increase in gross revenue of approximately \$3,700,000 over the actual gross revenue for fiscal year 1961. Energy sales are expected to increase about \$1,100,000 and other electrical revenues are expected to increase by about \$2,600,000, principally from wheeling service and river regulation benefits. The estimate for 1962 shows most revenue categories remaining fairly constant.

Total revenues of approximately \$69,700,000 for 1961 were slightly below the estimate made in the 1960 Annual Report. This reduction is due to the fact that publicly owned utilities did not require as much firm power as anticipated because of the availability of new non-Federal sources of supply and because customer loads were down due to economic conditions in the area, particularly the depressed economic activity in the forest products industry.

INDUSTRIAL REVENUE

Electrometallurgical and electrochemical industrial plants requiring large blocks of low-cost power are an important source of revenues

to the U. S. Columbia River power system. A list of the industrial customers other than Federal agencies is given in table 9, together with data on the location, products and plant capacities in terms of electrical requirements. As of June 30, 1961, the Bonneville Power Administration had direct power sales contracts with the 19 industrial customers.

Although sales to these large power-consuming industries have constituted an important part of the Administration's total business, the proportion of total sales obtained from these customers has declined considerably in the last 16 years. For example, in 1945 sales to industries including Federal agencies were 69.8 percent of gross revenues compared with the 47.8 percent in 1951 and 39.1 percent in 1961. For the aluminum industry alone, the ratio has declined from 51.5 percent in 1945 to 37.4 percent in 1951 and to 24.3 percent in 1961. The actual dollar volume of sales to both the aluminum and other industries has increased during this period but not so rapidly as the Administration's total sales. ^{1/}

The dollar volume of firm power sales to the aluminum and other industries has increased every year for the last several years except 1961 when a decline of \$274,000 occurred. The volume of secondary power sales to the industries has dropped substantially in the last several years including a fall of approximately \$440,000 more in 1961. The aluminum companies decreased their firm power purchases \$315,000 in 1961 and in keeping with the trend over the past few years their nonfirm purchases decreased by \$187,000 in 1961.

LOAD DATA

Table 9 summarizes the load data for the industrial customers served by the Administration. The data are as of June 30, 1961. Changes

^{1/} The percentages cited in this paragraph may differ slightly from those in chart 9 for the reason given in the footnote on table 8.

in power purchases occur from day to day as the companies increase or decrease their operations, particularly by the use of secondary energy; therefore, these data would be somewhat different if presented for another date.

The Administration's industrial customers have, in the aggregate, an estimated capacity to use power at the rate of 1,896,300 kilowatts, as shown in table 9. As of June 30, 1961, their power purchases from the Government and other sources totaled 1,472,400 kilowatts. Hence, idle capacity was 423,900 kilowatts.

A total of 1,089,000 kilowatts was being purchased from the Government under firm con-

tracts and 246,000 kilowatts on an interruptible supply basis. ^{2/} The remaining 137,400 were being purchased from outside sources. A large portion of the 423,900 kilowatts of idle capacity has, in earlier years, been served by the Administration on an interruptible power supply basis in addition to the 246,000 kilowatts being so served as of June 30, 1961.

LOAD CURTAILMENT

As of June 30, 1961, there was only a small curtailment of firm power loads by the industrial

^{2/} Fifty megawatts of contract demand for the Tacoma aluminum reduction plant of the Kaiser Company have been shifted to the Spokane plant by agreement with BPA. The Tacoma plant is presently shutdown.

TABLE 9
Summary load data for industrial customers served directly by the Bonneville Power Administration as of June 30, 1961

Company	Location	Products	Number potlines or furnaces	Total plant capacity (MW)	BPA firm contract demand (MW)	Power purchases June 30, 1961			Total (MW)
						BPA firm (MW)	BPA interruptible (MW)	Outside sources (MW)	
Alcoa	Vancouver	Aluminum pig, rod, wire & extrusions	5	210.0	136.0	136.0	4.4	30.0 1/	170.4
Alcoa	Wenatchee	Aluminum pig	4	210.0	120.0	101.6	.0	10.0 2/	111.6
Anaconda	Columbia Falls	Aluminum pig	2	148.0	111.0	111.0	29.2	.0	140.2
Carborundum	Vancouver	Silicon carbide	6 sets	28.7	18.7	18.7	6.3	.0	25.0
Crown Zellerbach	Port Angeles	Pulp & paper		41.1	6.2	6.2	1.9	13.8 3/	21.9 4/
Hanna Nickel Smelting Co.	Riddle	Ferromickel	4 melting	71.0	67.1	67.1	1.1	3.0 5/	71.2
Harvey Aluminum	The Dalles	Aluminum pig	2	161.3	60.6	60.6	100.6	.0	161.2
Kaiser Aluminum Reduction	Spokane	Aluminum pig	8	370.0	204.0	252.0 6/	69.6	.0	321.6
Kaiser Aluminum Fabrication	Spokane	Aluminum sheet & fabricated products		45.0	35.8	37.8 6/	1.0	.0	38.8
Kaiser Aluminum Reduction	Tacoma	Aluminum pig	2	85.0	50.0	.0 6/	.0	.0	.0
Keokuk	Rock Island	Ferrosilicon	4	30.0	7.3	7.3	.6	14.6 7/	22.5
Pacific Northwest Alloys	Spokane	Ferrochrome	4 8/	37.2	13.0	13.0	.4	10.0 9/	23.4
Pacific Carbide & Alloys	Portland	Calcium carbide & vinyl acetate	1	6.5	5.0	5.0	1.5	.0	6.5
Pennsalt Co.	Portland	Chlorine, caustic, soda, ammonia, ammonium perchlorate	2 lines	30.0	19.6	19.6	10.3	.0	29.9
Rayonier	Port Angeles	Pulp		16.0	3.3	3.3	4.5	.0	7.8 4/
Reynolds	Longview	Aluminum pig	3	134.4	132.0	132.0	.0	.0	132.0
Reynolds	Troutdale	Aluminum pig	4	189.0	85.1	70.7	.0	56.0 10/	126.7
Union Carbide Metals Co.	Portland	Ferromanganese	4	30.1	9.0	9.0	13.7	.0	22.7
Victor Chemical	Silver Bow	Phosphorus	2	53.0	38.1	38.1	.9	.0	39.0
Total				1896.3	1121.8	1089.0	246.0	137.4	1472.4

1/ Purchased from City Light of Seattle under a firm contract. Seattle obtains the power from the Box Canyon plant of Pend Oreille PUD.

2/ Purchased from Chelan PUD.

3/ Purchased from City of Port Angeles.

4/ Also obtains power from its own generation.

5/ Purchases from PP&L Company (formerly COPCO) approximately 3 MW under separate contract for wheel turning and other low load factor usage.

6/ The 50 MW contract demand for the Tacoma plant (which is presently shut down) has been shifted by agreement with BPA to the Spokane plant.

7/ Purchased from Douglas County PUD.

8/ Also have vacuum furnaces.

9/ Purchased from Washington Water Power Co.

10/ Purchased from PP & L Company (formerly COPCO) under a firm contractual arrangement.

customers. One aluminum plant with a firm contract demand of 120,000 kilowatts was taking only 101,600 kilowatts of firm power, a curtailment of 18,400 kilowatts. Another aluminum plant with a firm contract demand of 85,100 kilowatts was taking 70,700 kilowatts, a curtailment of 14,400 kilowatts.

The total industrial firm power purchases were only 32,800 kilowatts below total industrial firm contract demands. However, since last June one aluminum company has temporarily curtailed its firm contract demand. This resulted because the company was obligated by contract to purchase power from Rocky Reach generation commencing August 1, 1961, a time when market conditions did not warrant full plant operation. Two other industrial customers reduced their loads temporarily for furnace relining so that the total firm industrial plant loads as of November 3, 1961, were reduced to 973,400 kilowatts, a total curtailment of 148,400 kilowatts as of that time.

BALANCE SHEET

A statement of combined assets and liabilities of the U. S. Columbia River power system and related activities as of June 30, 1961, is given in table 10. The statement shows data in total and separately for the amounts allocated to power. The related activities consist principally of irrigation, flood control, and navigation.

The total fixed plant investment was \$2.45 billion at June 30, 1961. Of this total, \$255,000,000 represented work in progress at projects under construction for which no allocation of costs has been made in the balance sheet. The fixed plant investment allocated to power is \$1.64 billion, to irrigation \$384,000,000, to flood control \$91,000,000, to navigation \$77,000,000, and to fish and wildlife activities \$1,000,000.

INVESTMENT REPAYMENT

The investment allocated to power is repayable with interest from power revenues. The invest-

TABLE 10
U. S. COLUMBIA RIVER POWER SYSTEM
AND RELATED ACTIVITIES
Statement of combined assets and liabilities
as of June 30, 1961

Assets	Total	Amount allocated to power
FIXED ASSETS (PLANT):		
Commercial power	\$1,644,940,848	\$1,644,940,848
Irrigation	383,736,571	
Flood control	91,249,515	
Navigation	77,177,458	
Fish and Wildlife and Recreation	1,377,571	
Multipurpose projects under construction 1/	254,896,325	
Total	2,453,378,288	\$1,644,940,848
Less accumulated depreciation:		
Commercial power	208,921,454	208,921,454
Irrigation	1,368,025	
Flood control	4,445,719	
Navigation	7,430,802	
Other	8,098	
Total	222,174,098	208,921,454
Original cost, net	2,231,204,190	1,436,019,394
CURRENT ASSETS:		
Unexpended funds	29,544,904	16,727,635
Special deposits	1,159,991	831,458
Accounts receivable		
Customers	9,579,440	9,579,440
Other	492,204	407,270
Materials and supplies	5,303,048	4,970,713
Total	46,079,587	32,516,516
OTHER ASSETS AND DEFERRED CHARGES	11,748,270	985,063
Total assets	\$2,289,032,047	\$1,469,520,973

1/ Consists of expenditures to June 30, 1961, for projects having no generators in service. These projects are John Day, Ice Harbor, Cougar, Hills Creek, Lower Monumental, and Green Peter-Foster. Ultimately the cost of these projects will be allocated among purposes.

ment allocated to irrigation is repayable without interest and will be returned in part by the water users but primarily by power revenues. The investment allocated to other activities, such as flood control and navigation, is non-revenue-producing and thus is nonreimbursable from project revenues in accordance with the provisions of the applicable statutes. These nonreimbursable activities provide benefits to the public that have traditionally been considered more than adequate to compensate for their costs.

Liabilities	Total	Amount allocated to power
INVESTMENT OF U.S. GOVERNMENT:		
Congressional appropriations	\$2,626,975,179	\$1,790,379,350
Cost of materials and services furnished by other Federal agencies, net	26,520,055	22,637,502
Interest on Federal investment:		
Charged to operations	317,716,484	283,560,108
Charged to construction	100,578,354	79,213,126
Revenues transferred to continuing fund	1,833,035	1,833,035
Total investment of U.S. Government	3,073,623,107	2,177,623,121
Less funds returned to U.S. Treasury:		
Repayment of Federal investment in the power program	787,941,456	787,932,392
Repayment of Federal investment in nonpower program	25,057,551	
Expense of flood control operations	17,407,375	
Expense of navigation operations	37,536,611	
Other nonreimbursable expenses	2,046,711	
Total	869,989,704	787,932,392
Net investment of U.S. Government	2,203,633,403	1,389,690,729
ACCUMULATED NET REVENUES:		
Net revenues from commercial power operations	70,284,864	70,284,864
Less net loss from irrigation operations	4,422,810	
Total	65,862,054	70,284,864
Total investment	2,269,495,457	1,459,975,593
CURRENT AND ACCRUED LIABILITIES:		
Accounts payable	13,984,891	6,455,243
Employees' accrued leave	2,471,786	2,471,786
Total	16,456,677	8,927,029
DEFERRED CREDITS	437,035	437,035
MATURED INSTALLMENTS OF FIXED OBLIGATIONS FOR USE OF IRRIGATION FACILITIES	2,107,044	
CONTRIBUTIONS IN AID OF CONSTRUCTION	535,834	181,316
Total liabilities	\$2,289,032,047	\$1,469,520,973

Plant investment by project and the amount allocated to power and nonpower purposes for each project are shown in table 11. A footnote shows the amount of the nonpower allocation detailed by activity for both specific facilities and the portion of joint facilities allocated to each nonpower purpose. The amount of joint facility cost allocated to nonpower purposes is shown as \$208,000,000 or less than 10 percent of the total plant investment for all purposes.

The fixed plant facility of the Bonneville Power

Administration has an estimated average service life of 35 years. 3/ Therefore, the Administration has adopted a policy of returning to the U. S. Treasury each year's additional investment in fixed plant facilities with interest over the ensuing 35 years. The hydroelectric generating plants, however, have a substantially longer estimated service life because of different physical characteristics of the bulk of such investment, i.e., concrete dams and power houses.

Payout schedules have been prepared independently for each of the generating projects on the basis of repayment in 50 years after the property is placed in service. This approach is more conservative than that followed by the Federal power systems in several other river basins where the repayment schedules are based on the total system with repayment of the total generation investment scheduled for a period of 50 years after the last generator is added to the system. In light of the practice in other areas and the provisions of applicable regulations, modified bases for the scheduling of the amortization of the power investment in the U. S. Columbia River power system are under consideration.

The water users on Federal reclamation projects are required by Federal reclamation law to make payments in accordance with their repayment ability as determined by the Secretary of the Interior. The annual payments made by the water users are applied to the annual costs of operation, maintenance and replacements of the irrigation works and the remainder is applied to the repayment of the construction costs. In the case of the Columbia Basin project, the water users are required to make these payments for a period of 40 years following a developmental period of not to exceed 10 years. The major portion of the irrigation costs of this project ex-

3/ Recent studies indicate that the average may be slightly more than 35 years but no change in the amortization plan has been adopted at the present time.

TABLE 11
U. S. COLUMBIA RIVER POWER SYSTEM
 Summary of amount and allocation of investment in fixed assets
 (Plant accounts)
 as of June 30, 1961

Operating projects only

Project	Total	Allocation 2/			
		Nonpower 1/		Power 3/	
		Amount	Percent	Amount	Percent
Bonneville Power Administration	\$504,684,851			\$504,684,851	100.0
Albeni Falls	31,876,352	\$ 299,437	0.9	31,576,915	99.1
Bonneville Dam	87,864,742	27,438,388	31.2	60,426,354	68.8
Chief Joseph	159,227,028	3,786,150	2.4	155,440,878	97.6
Columbia Basin (Grand Coulee)	541,810,192	341,032,268	62.9	200,777,924	37.1
Detroit-Big Cliff	66,019,124	24,243,640	36.7	41,775,484	63.3
Hungry Horse	106,059,566	24,486,028	23.1	81,573,538	76.9
Lookout Point-Dexter	94,093,779	52,194,697	55.5	41,899,082	44.5
McNary	306,253,413	25,975,530	8.5	280,277,883	91.5
The Dalles	264,083,216	21,856,751	8.3	242,226,465	91.7
Yakima (Chandler and Roza)	36,509,700	32,228,226	88.3	4,281,474	11.7
Total plant	<u>\$2,198,481,963</u>	<u>\$553,541,115</u>	25.2	<u>\$1,644,940,848</u>	74.8
Less combined reserve for depreciation				208,921,454	
Total less reserve				<u>\$1,436,019,394</u>	

1/ Segregation of nonpower by purpose:

	Specific facilities	Allocation of joint facilities	Total	Percent
Irrigation	\$300,885,321	\$ 82,851,250	\$383,736,571	69.3
Flood control	1,000,000	90,249,515	91,249,515	16.5
Navigation	42,902,862	34,274,596	77,177,458	14.0
Other	1,165,888	211,683	1,377,571	0.2
Total	<u>\$345,954,071</u>	<u>\$207,587,044</u>	<u>\$553,541,115</u>	<u>100.0</u>

2/ Allocations are tentative or interim except for Bonneville, Grand Coulee, Hungry Horse, Albeni Falls, and BPA.

3/ These are the percentages of total project costs, not just the joint costs.

ceeds the repayment ability of the water users and must be returned from other project revenues, in this case sale of commercial power.

Both the power investment and the irrigation costs assigned for repayment from power revenues must be repaid within the over-all payout period for the project. In order to obtain the lowest annual payout requirements, the interest-bearing power investment is to be repaid first and then the noninterest-bearing irrigation costs will be repaid. Completion of the power payout is thus scheduled for fiscal year 1976 or only about 24 years after the 18th and last generator unit was placed in service at

Grand Coulee Dam in September of 1951 (fiscal year 1952). The average period is approximately 27 years for the power investment, rather than the usual period of 50 years for each generating project.

The Department of the Interior has under consideration a revised method of reporting cost and payout which, if adopted, will result in the same figures being used for both purposes. A financial addendum immediately following this section of the report shows the proposed reporting on a pro forma basis and views the problems involved in reporting both costs and payout on separate bases as has been done in the past.

A BPA transmission line skirts picturesque Beacon Rock, one of the largest stone monoliths on the lower Columbia.



Financial Addendum

The 1960 Annual Report of the Bonneville Power Administration included an addendum which explained in considerable detail the accounting and reporting requirements of the Bonneville Power Administration and the power generating agencies, the Bureau of Reclamation and the Corps of Engineers. The present addendum illustrates by means of pro forma financial statements how reporting might be effected in accordance with the basic objectives summarized in last year's report.

We believe this approach not only simplifies financial reporting by eliminating all but one set of figures, but also most clearly reveals the basic financial obligations of the power system and the status of accomplishments in meeting those obligations. These pro forma financial statements are included in this addendum for illustrative purposes only. The problems of reporting are receiving further study which may lead to still different methods of presentation.

Table 12 is a pro forma statement of revenues, expenses and amortization for the Bonneville Power Administration. The amounts shown for sales of electric energy are on an accrual basis and correspond to the amounts shown as electric energy sales on schedule 1 of the Auditors' Report. The amounts of revenues allocated to the generating projects are shown as a deduction from the gross energy sales figure to derive the amount available to BPA. The details of these allocations are shown in table 13.

All of the expense items also are on an accrual basis and correspond (except depreciation) in detail with the expense figures for BPA shown on the combining expense statement (schedule 5) of the Auditors' Report. The difference between this presentation for BPA and the accrued cost accounting basis used for BPA in the Auditors' Report consists entirely of the substitution of amortization in this statement in place of the depreciation. The difference for fiscal year 1961

is \$1,331,101--amortization is that much less than straight line depreciation due to the effect of interest during the earlier years of the repayment period. Later in the repayment period amortization will be more than depreciation on a straight line basis.

This table shows an accumulative excess over scheduled amortization of \$38,900,000 which is some \$12,500,000 more than the \$26,400,000 reported under the payout basis shown in schedule 4 of the Auditors' Report. This change would increase the total system payout surplus from the \$37,800,000 shown in schedule 4 of the Auditors' Report to \$50,300,000. This difference results because the former basis included construction work in progress, property held for future use, and certain current assets, primarily materials and supplies inventories, in the amortization base. Construction work in progress and property held for future use are not properly subject to either depreciation or amortization until such time as placed in service and thereby become revenue producing.

Current assets should not be subject to amortization because as long as they remain liquid they are available for repayment and when they are charged to expense or construction they are repaid currently or become part of the construction capital investment for amortization. Thus the difference is largely a matter of timing and although the cumulative difference at the end of fiscal year 1961 is substantial, in the long run it necessarily will be minimized. The difference at the end of the repayment period would be only the amount of the current assets on hand at that time.

Table 13 shows the allocation of revenue to the generating projects for each of the past 10 fiscal years and the cumulative allocation to each generating project to June 30, 1961.

Proceeds from the sale of power are collected by the Bonneville Power Administration and turned in to the U. S. Treasury. As an interim

Line No.	Item	1952	1953
1	Operating revenues:		
2	Sales of electric energy	\$39,526,432	\$38,383,475
3	Less amount allocated to generating projects	14,912,430	14,600,000
4	Remainder available for BPA	24,614,002	23,783,475
5	Other electric revenues	653,715	565,973
6	Total operating revenues for BPA	25,267,717	24,349,448
7	Operating expenses:		
8	Purchased power	655,323	753,815
9	Operation	5,171,191	5,740,970
10	Maintenance	1,188,538	1,648,626
11	Net loss on sales or abandonment of property	90,784	(12,559)
12	Total operating expenses	7,105,836	8,130,852
13	Net operating revenues	18,161,881	16,218,596
14	Interest and other deductions:		
15	Interest on Federal investment	3,973,235	4,988,440
16	Less amount charged to construction	642,268	811,306
17	Net interest expense	3,330,967	4,177,134
18	Miscellaneous income deductions	63,288	79,292
19	Total interest and other deductions	3,394,255	4,256,426
20	Net revenues available for amortization	14,767,626	11,962,170
21	Less scheduled amortization requirements	3,418,000	4,049,000
22	Excess of net revenues over amortization requirements	11,349,626	7,913,170
23	Add excess net revenues over amortization requirements end of prior year	44,579,555	55,929,181
24	Cumulative excess of net revenues over amortization requirements	\$55,929,181	\$63,842,351

() Denotes red figures.

TABLE 12
BONNEVILLE POWER ADMINISTRATION
Pro forma statement of revenues and expenses (amortization basis)
Fiscal years 1952 to 1961, cumulative to June 30, 1961,
and estimates for fiscal years 1962 and 1963

	1954	1955	1956	1957	1958	1959	1960	1961	Cumulative to June 30, 1961	Estimates Fiscal years 1962	Estimates Fiscal years 1963
1 Operating revenues:											
2 Sales of electric energy	\$44,127,409	\$51,258,723	\$59,789,690	\$64,971,975	\$64,704,008	\$66,859,544	\$68,944,050	\$66,994,544	\$785,236,988	\$68,100,000	\$76,100,000
3 Less amount allocated to generating projects	27,577,210	31,744,000	36,517,000	38,778,000	45,475,000	44,742,000	47,078,000	48,578,000	451,783,320	53,478,000	57,378,000
4 Remainder available for BPA	16,550,199	19,514,723	23,272,690	26,193,975	19,229,008	22,117,544	21,866,050	18,416,544	333,453,668	14,622,000	18,722,000
5 Other electric revenues	1,089,244	719,332	1,044,307	1,298,731	1,871,126	1,614,548	2,054,169	2,707,321	19,014,972	5,300,000	6,300,000
6 Total operating revenues for BPA	17,639,443	20,234,055	24,316,997	27,492,706	21,100,134	23,732,092	23,920,219	21,123,865	352,468,640	19,922,000	25,022,000
7 Operating expenses:											
8 Purchased power	730,027	483,289	1,061,261	1,083,954	561,950	597,557	652,314	696,859	10,122,466	700,000	700,000
9 Operation	5,003,697	5,397,376	6,063,955	6,431,571	7,030,437	7,628,112	7,958,379	8,693,442	99,059,172	9,675,000	10,070,000
10 Maintenance	2,161,284	2,024,078	2,202,572	2,408,746	2,745,822	2,806,442	3,122,516	3,469,116	29,495,171	3,700,000	4,000,000
11 Net loss on sales or abandonment of property	1,379,976	601,385	180,354	429,052	(23,346)	162,850	412,473	129,284	4,798,062	100,000	100,000
12 Total operating expenses	9,274,984	8,506,128	9,508,142	10,353,323	10,314,863	11,194,961	12,145,682	12,988,701	143,474,871	14,175,000	14,870,000
13 Net operating revenues	8,364,459	11,727,927	14,808,855	17,139,383	10,785,271	12,537,131	11,774,537	8,135,164	208,993,769	5,747,000	10,152,000
14 Interest and other deductions:											
15 Interest on Federal investment	5,870,805	6,456,032	7,114,680	7,510,553	7,869,010	8,365,764	8,707,281	9,259,321	91,078,057	9,813,000	10,334,000
16 Less amount charged to construction	873,448	739,732	701,534	511,156	370,774	291,056	389,960	555,390	8,257,159	540,000	900,000
17 Net interest expense	4,997,357	5,716,300	6,413,146	6,999,397	7,498,236	8,074,708	8,317,321	8,703,931	82,820,898	9,273,000	9,434,000
18 Miscellaneous income deductions	(13,032)	(5,278)	(1,773)	(102,350)	(4,031)	(100,985)	9,423	23,907	1,489,070		
19 Total interest and other deductions	4,984,325	5,711,022	6,411,373	6,897,047	7,494,205	7,973,723	8,326,744	8,727,838	84,309,968	9,273,000	9,434,000
20 Net revenues available for amortization	3,380,134	6,016,905	8,397,482	10,242,336	3,291,066	4,563,408	3,447,793	(592,674)	124,683,801	(3,526,000)	718,000
21 Less scheduled amortization requirements	5,096,000	6,029,000	6,874,000	7,723,000	8,433,000	9,300,000	9,908,000	10,339,000	85,797,000	11,006,000	11,645,000
22 Excess of net revenues over amortization requirements	(1,715,866)	(12,095)	1,523,482	2,519,336	(5,141,934)	(4,736,592)	(6,460,207)	(10,931,674)	38,886,801	(14,532,000)	(10,927,000)
23 Add excess net revenues over amortization requirements end of prior year	63,842,351	62,126,485	62,114,390	63,637,872	66,157,208	61,015,274	56,278,682	49,818,475		38,886,801	24,354,801
24 Cumulative excess of net revenues over amortization requirements	\$62,126,485	\$62,114,390	\$63,637,872	\$66,157,208	\$61,015,274	\$56,278,682	\$49,818,475	\$38,886,801	\$ 38,886,801	\$24,354,801	\$31,427,801

TABLE 13
U. S. COLUMBIA RIVER POWER SYSTEM
Transfers of revenues to generating projects

Project	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	Cumulative total to June 30, 1961
To Bureau of Reclamation projects											
Columbia Basin project	\$11,100,000	\$11,100,000	\$12,535,000	\$12,535,000	\$12,535,000	\$12,535,000	\$12,800,000	\$12,800,000	\$12,800,000	\$12,800,000	\$187,158,680
Hungry Horse			5,067,210	3,609,000	3,610,000	3,553,000	3,752,000	3,816,000	3,833,000	3,833,000	31,073,210
Yakima-Kennecook					172,000	220,000	223,000	230,000	230,000	230,000	1,305,000
Yakima-Roza								96,000	115,000	115,000	326,000
Total to Bureau projects	11,100,000	11,100,000	17,602,210	16,144,000	16,317,000	16,308,000	16,775,000	16,942,000	16,978,000	16,978,000	219,862,890
To Corps of Engineers projects											
Albeni Falls			475,000	600,000	1,300,000	1,400,000	2,000,000	1,400,000	1,400,000	1,200,000	9,775,000
Bonneville Dam	3,812,430	3,500,000	3,350,000	3,400,000	3,400,000	3,000,000	2,800,000	2,300,000	2,100,000	2,100,000	67,925,430
Chief Joseph					1,700,000	3,350,000	5,900,000	6,700,000	6,500,000	6,500,000	30,650,000
Detroit-Big Cliff			1,590,000	1,800,000	1,900,000	1,950,000	2,000,000	1,700,000	1,700,000	1,400,000	14,240,000
Lookout Point-Dexter				800,000	1,900,000	1,900,000	1,900,000	1,800,000	1,700,000	1,400,000	11,400,000
McNary			4,560,000	9,000,000	10,000,000	10,750,000	11,600,000	9,000,000	9,000,000	8,200,000	72,110,000
The Dalles						120,000	2,500,000	4,700,000	7,700,000	10,800,000	25,820,000
Total to Corps projects	3,812,430	3,500,000	9,975,000	15,600,000	20,200,000	22,470,000	28,700,000	27,800,000	30,100,000	31,600,000	231,920,430
Total to generating projects	\$14,912,430	\$14,600,000	\$27,577,210	\$31,744,000	\$36,517,000	\$38,778,000	\$45,475,000	\$44,742,000	\$47,078,000	\$48,578,000	\$451,783,320

accounting procedure, the amounts are recorded in a special account on the books of the Treasury pending a determination of the respective shares of such proceeds properly allocable to each generating project and to BPA. Such determinations and allocations are made annually.

The Treasury's only interest is whether these proceeds are to be credited to the General Fund (Miscellaneous Receipts) or to the Reclamation Fund. The segregation of the total amount between these two funds depends, in turn, upon the amounts properly assignable to the Bureau of Reclamation generating projects on the one hand and the Corps of Engineers generating projects and BPA on the other hand.

While the detail of the allocation by project, rather than by fund, is of no interest to the Treasury Department, the allocation by project is required for accounting purposes at each individual project since each keeps its own accounts and records as an accounting entity. Each generating project and BPA thus includes in its accounts the amounts of revenues allocated to it (plus minor amounts of individual project revenues), but this is done on a purely constructive accounting basis because none of the projects actually receives any sums of money from the power sales operation that may be retained for its own expenditure purposes. 1/ On the contrary, each project operates with funds appropriated to it by the Congress, and all gross proceeds are returned to the Treasury.

The amounts allocated to certain of the Corps of Engineers projects--notably, Bonneville, McNary, Albeni Falls, Lookout Point-Dexter and Detroit-Big Cliff--have been reduced in the last several years because these projects were ahead of scheduled requirements for amortization and were thus able to share the reduction in BPA's gross sales revenues.

1/ The BPA continuing fund, established from power receipts, is a minor exception to this general statement.

Table 14 is a statement of assets, liabilities and amortization for the Bonneville Power Administration. Although this schedule is presented in balance sheet form, it differs from a conventional statement in several important respects. For example, since the total investment in electric plant must be amortized over the repayment period it is necessary to add back to current electric plant in service and leased plant that investment in plant facilities which has been retired from service in order to develop gross plant investment to be amortized.

The total amortization to date is then deducted from the gross plant investment base to show the net remaining unamortized plant investment. Under conventional cost accounting procedures retirements would be charged to the depreciation reserve which would then be shown at the net figure, i.e., total depreciation accruals less retirements. The net depreciation reserve amount would then be deducted from the total plant account to show the net depreciated plant value.

	System total	Bonneville Power Administration	Total generating projects
Operating revenues:			
Sales of electric energy	\$ 66,994,544	\$ 66,994,544	
Allocation of BPA revenues to projects		(48,578,000)	\$48,578,000
Other revenues	3,298,390	2,707,321	591,069
Total operating revenues	70,292,934	21,123,865	49,169,069
Operating expenses:			
Operation and maintenance	23,201,229	13,012,608	10,188,621
Provision for replacements	1,187,100		1,187,100
Nonutility operations	73,333		73,333
Total operating expenses	24,461,662	13,012,608	11,449,054
Interest expense	33,775,639	8,703,931	25,071,708
Total O & M and interest	58,237,301	21,716,539	36,520,762
Net revenues available for amortization	12,055,633	(592,674)	12,648,307
Less scheduled amortization requirements	28,850,372	10,339,000	18,511,372
Excess of net revenues over scheduled amortization	\$(16,794,739)	\$(10,931,674)	\$(5,863,065)

() Denotes red figures.

TABLE 14
BONNEVILLE POWER ADMINISTRATION
Statement of assets, liabilities and cumulative amortization
as of June 30, 1961 (amortization basis)

Assets and other debits	Liabilities and other credits
Plant in service \$471,363,377	Investment of U.S. Government \$416,109,141 2/
Leased plant 445,307	Current liabilities 7,798,842
Add net retirements 14,895,709 1/	Other liabilities 437,035
Total plant investment to be amortized, 486,704,393	
Less amortization to June 30, 1961:	
Scheduled 85,797,000	
Excess over schedule 38,886,801	
Total amortization 124,683,801	
Unamortized plant investment 362,020,592	
Construction work in progress 31,997,206	
Property held for future use 878,961	
Total 32,876,167	
Cash (unexpended appropriations) 13,652,091	
Other current assets 14,459,280	
Total current assets 28,111,371	
Special funds 738,437	
Deferred charges 598,451	
Total assets and other debits \$424,345,018	Total liabilities and other credits \$424,345,018

1/ Represents the cost of plant retired plus the cost of retiring the plant less the salvage realized. Hence, net retirements are a part of the gross capital (plant) investment to be repaid (amortized) to the U.S. Treasury.

2/ Consists of:
Congressional appropriations \$636,234,469
Transfers - net - from other Federal agencies 19,096,834
Interest on Federal investment:
Charged to operations 82,820,898
Charged to construction 8,257,159
Revenues appropriated to continuing fund 1,833,035
Gross investment 748,242,395
Less receipt funds returned to U. S. Treasury 332,133,254
Net investment \$416,109,141

TABLE 15
U. S. COLUMBIA RIVER POWER SYSTEM
Pro forma statement of revenues and expenses (amortization basis)
Fiscal year 1961

	Albeni Falls	Bonneville Dam	Chief Joseph	Columbia Basin Project	Detroit-Big Cliff	Hungry Horse	Lookout Point-Dexter	McNary	The Dalles	Yakima-Kennewick & Roza
Operating revenues:										
Sales of electric energy	\$1,200,000	\$ 2,100,000	\$6,500,000	\$12,800,000	\$1,400,000	\$3,833,000	\$1,400,000	\$ 8,200,000	\$10,800,000	\$345,000
Allocation of BPA revenues to projects		10,793		417,136		7,940		61,134	9,346	84,720
Other revenues										
Total operating revenues	1,200,000	2,110,793	6,500,000	13,217,136	1,400,000	3,840,940	1,400,000	8,261,134	10,809,346	429,720
Operating expenses:										
Operation and maintenance	340,921	1,199,620	1,088,892	3,216,130	375,270	448,599	303,700	1,741,983	1,312,208	161,298
Provision for replacements				931,000		209,500				46,600
Nonutility operations				73,333						
Total operating expenses	340,921	1,199,620	1,088,892	4,220,463	375,270	658,099	303,700	1,741,983	1,312,208	207,898
Interest expense	720,167	842,675	3,711,553	3,358,431	942,860	2,133,471	965,295	6,461,792	5,832,402	103,062
Total O & M and interest	1,061,088	2,042,295	4,800,445	7,578,894	1,318,130	2,791,570	1,268,995	8,203,775	7,144,610	310,960
Net revenues available for amortization	138,912	68,498	1,699,555	5,638,242	81,870	1,049,370	131,005	57,359	3,664,736	118,760
Less scheduled amortization requirements	445,000	1,148,000	2,114,000	5,638,242	588,000	1,049,370	569,000	3,808,000	3,033,000	118,760
Excess of net revenues over scheduled amortization	\$(306,088)	\$(1,079,502)	\$(414,445)	\$ 0	\$(506,130)	\$ 0	\$(437,995)	\$(3,750,641)	\$ 331,736	\$ 0

BPA's J.D. Ross - McNary 345,000 volt transmission line with Mt. Hood in the background brings power from McNary dam to coastal load centers.

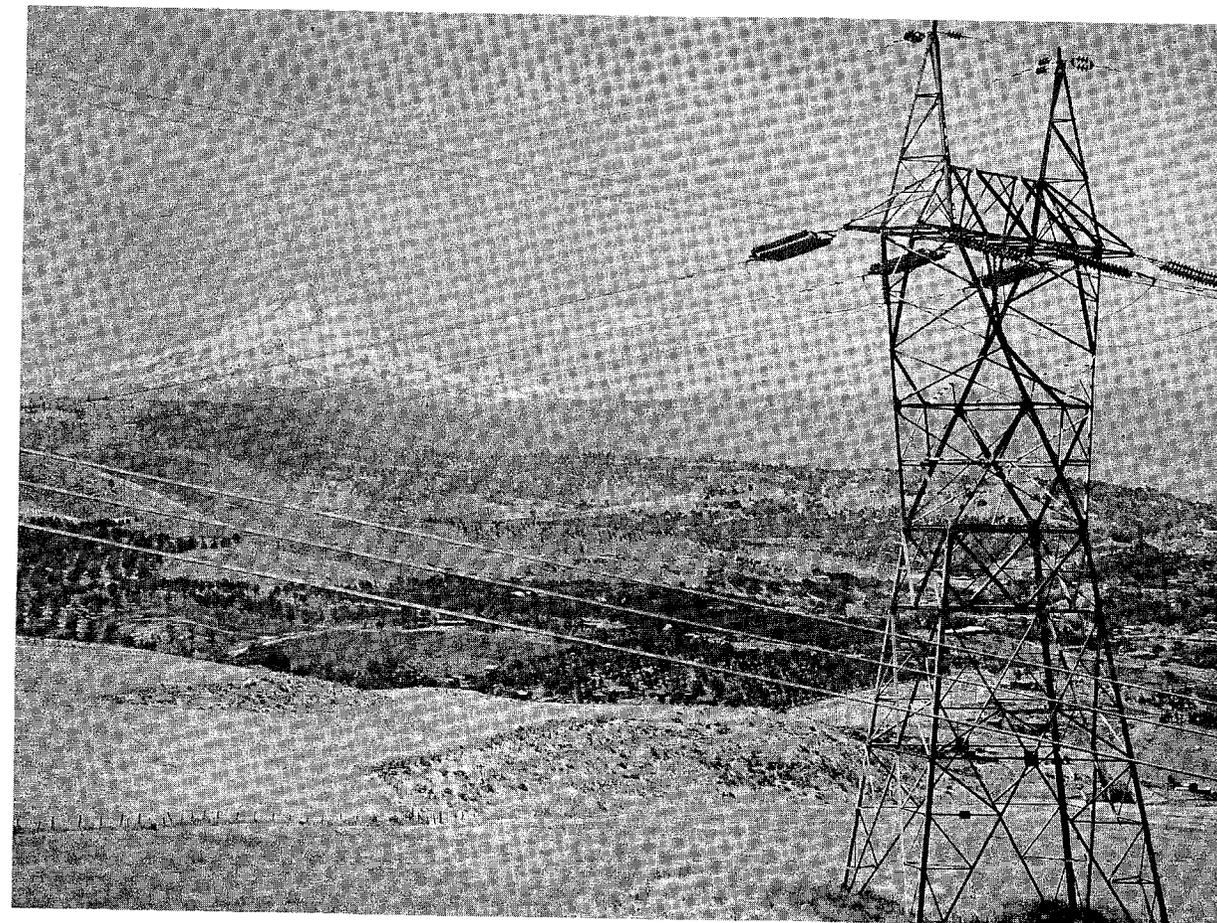


Table 15 is a condensed statement of revenues, expenses and amortization for the U. S. Columbia River power system for the fiscal year 1961. Each generating project revenue allocation and its official operation, maintenance, interest and amortization requirements are shown and combined to develop an income statement on an amortization basis for the U. S. Columbia River power system. The data in this schedule for BPA reflect the correction of the computation of scheduled amortization requirements discussed heretofore in this addendum.

Payout schedules for the Corps of Engineers projects and BPA provide for the payment of actual expenses for operation, maintenance, interest, etc., plus scheduled amounts of the capital investment in electric plant adequate to recover the total capital investment over the payout period. While the schedules for the Reclamation projects also contemplate complete recovery of the capital investment over the payout period, the annual amounts are not considered to be a set schedule. Each year for Reclamation projects the excess of revenues over expenses is applied to amortization and each year's revision of the payout schedule forecasts recovery of the actual unpaid capital balance over the remaining years. Hence, this table shows no repayment ahead of schedule for Reclamation projects as they are considered to be just "on schedule". A revised policy to establish definite capital repayment schedules for the Reclamation projects in the power system is under consideration by the Department of the Interior and the Bureau of Reclamation.

The total revenues shown in table 15 exceed the amount shown in schedule 1 of the Auditors' Report. The "other revenues" shown in table 15 for the Bureau projects are taken from the Bureau's repayment studies and include such non-operating revenues as fees from guide service and sales of water to the town of Coulee Dam. In the Auditors' Report some of these revenues and applicable expenses are included in the statements as a net amount.

The caption entitled "Provision for Replacements" is unique to the reclamation projects. It is an estimated amount accrued annually on a sinking fund basis to cover the cost of replacements at these projects when they occur. This procedure has been used by the Bureau of Reclamation for many years in determining the payout requirements of reclamation projects and has been the basis of reporting payout status of reclamation projects to the Department and the Congress.

The caption entitled "Nonutility Operations" consists of the net expense of operations such as expenses of the guide service, municipal water and other municipal operations at the Columbia Basin project.

Interest expense shown for the Reclamation projects is based on 3 percent of the unamortized plant investment except for the Kennewick division of the Yakima project for which a 2 1/2 percent rate is established pursuant to the enabling legislation.

Table 16 is identical in format to table 15. The data shown in table 16, however, are cumulative

	System total	Bonneville Power Administration	Total generating projects
Operating revenues:			
Sales of electric energy	\$785,236,988	\$785,236,988	
Allocation of BPA revenues to projects		(451,783,320)	\$451,783,320
Other revenues	24,843,335	19,014,972	5,828,363
Total operating revenues	810,080,323	352,468,640	457,611,683
Operating expenses:			
Operation and maintenance	228,114,152	144,963,941	83,150,211
Provision for replacements	16,149,198		16,149,198
Nonutility operations	2,191,863		2,191,863
Total operating expenses	246,455,213	144,963,941	101,491,272
Interest expense	269,470,806	82,820,898	186,649,908
Total O & M and interest	515,926,019	227,784,839	288,141,180
Net revenues available for amortization	294,154,304	124,683,801	169,470,503
Less scheduled amortization requirements	244,398,212	85,797,000	158,601,212
Excess of net revenues over scheduled amortization . . .	\$ 49,756,092	\$38,886,801	\$10,869,291

() Denotes red figures.

TABLE 16
U. S. COLUMBIA RIVER POWER SYSTEM
Pro forma statement of revenues and expenses (amortization basis)
cumulative to June 30, 1961

Albeni Falls	Bonneville Dam	Chief Joseph	Columbia Basin Project	Detroit - Big Cliff	Hungry Horse	Lookout Point - Dexter	McNary	The Dalles	Yakima - Kennewick & Roza
\$9,775,000	\$67,925,430	\$30,650,000	\$187,158,680	\$14,240,000	\$31,073,210	\$11,400,000	\$72,110,000	\$25,820,000	\$1,631,000
26,500	60,780	12	4,825,282	0	160,578	410	445,521	43,982	265,298
9,801,500	67,986,210	30,650,012	191,983,962	14,240,000	31,233,788	11,400,410	72,555,521	25,863,982	1,896,298
1,688,625	16,305,763	5,032,650	38,001,522	2,343,423	3,149,910	1,694,370	10,073,069	4,288,841	572,038
			14,251,020		1,712,067				186,111
1,688,625	16,305,763	5,032,650	2,151,657	2,343,423	40,206	1,694,370	10,073,069	4,288,841	758,149
			54,404,199		4,902,183				
5,115,280	24,226,092	16,690,669	54,208,970	7,476,490	18,054,669	6,208,615	40,057,625	14,144,832	466,666
6,803,905	40,531,855	21,723,319	108,613,169	9,819,913	22,956,852	7,902,985	50,130,694	18,433,673	1,224,815
2,997,595	27,454,355	8,926,693	83,370,793	4,420,087	8,276,936	3,497,425	22,424,827	7,430,309	671,483
2,745,000	18,175,000	8,766,000	83,370,793	4,163,000	8,276,936	3,359,000	21,905,000	7,169,000	671,483
\$ 252,595	\$ 9,279,355	\$ 160,693	\$ 0	\$ 257,087	\$ 0	\$ 138,425	\$ 519,827	\$ 261,309	\$ 0

from the commencement of operations for each project.

The following reconciliation is intended to provide a better understanding of the differences between the proposed amortization method of reporting and the cost accounting statements. Each major item of difference is explained in some detail. The beginning figures are identical to the net revenue items shown in the Auditors' Report, schedule 1, and the final totals are the excess of net revenues over scheduled amortization shown on tables 15 and 16.

	Fiscal year 1961	Cumulative
Net return from commercial power operations, per schedule I, GAO Auditors' Report.	\$(14,170,741)	\$ 70,284,864
Add: Other revenues not included in power cost accounts, consisting primarily of irrigation pumping power revenues at reclamation projects.	473,809	4,489,377
Add: Depreciation in excess of amortization requirements for Corps of Engineers projects and Bonneville Power Administration.		

is due to amortization payments being smaller during the early years of the amortization period when interest payments are high. The amount by which depreciation exceeds amortization will become less from year to year until in the later years of the repayment period when interest payments are low amortization will exceed depreciation.	3,562,950	38,265,023
Deduct: Excess of amortization over depreciation at reclamation projects. Accelerated amortization of power investment is required to permit subsequent repayment of capital investment in irrigation facilities in excess of water users repayment abilities scheduled for return from power revenues.	(3,727,561)	(56,548,472)
Deduct: Operation and maintenance expenses not included in power cost accounts, related primarily to irrigation pumping power and joint facilities. Although not allocated to commercial power costs, these items are repayable from commercial power revenue	(705,052)	(2,483,940)
Deduct: Provision for replacements at reclamation projects (amortization basis).	(1,187,100)	(16,149,198)
Deduct: Nonutility operating expenses (amortization basis). Primarily expenses of guide service, municipal water and other municipal operations at reclamation projects.	(73,333)	(2,191,853)
Deduct: Excess of interest expense in payout accounts over interest expense in cost accounts, consisting principally of the difference between the 3 percent interest rate applied in reclamation payout schedules and the 2½ percent rate used for cost accounting purposes.	(967,711)	14,089,301 2/
Excess of net revenue over scheduled amortization (tables 15 and 16).	\$16,794,739	\$49,756,092

Table 17 shows the current gross repayment responsibility assigned to power revenue. At present the system has only 13 generating projects and the BPA transmission system in operation. Included, also, are estimates of additional power investment to complete in accordance with presently authorized plans these 13 generating projects and the estimated amount of irrigation assistance authorized to June 30, 1961. The accumulated amortization to June 30, 1961, is deducted from the total electric plant investment now in service in order to show the unamortized electric plant investment as of that date. Electric transmission plant construction

work in progress, transmission plant held for future use, estimated electric generating plant additions and currently authorized estimated total irrigation assistance are added to total electric plant investment to develop the estimated gross power repayment responsibility at June 30, 1961, which must be recovered from power operations.

Transmission plant under ideal conditions is normally planned and built so that completion coincides with generation coming on the system. However, in many cases the lines are constructed at higher voltages and initially operated at lower voltage until additional capacity is required to take care of future load growth or additional generating capacity at existing plants. Therefore the present transmission system is not necessarily that which would have been built

2/ The lesser interest expense requirement on a cumulative basis results primarily because the Bureau excluded the investment allocated to future downstream generating projects from the interest base for repayment purposes until such time as the downstream plants came into service.

TABLE 17
U. S. COLUMBIA RIVER POWER SYSTEM
Gross power repayment responsibility (amortization basis)
includes generating plants now in service, estimated costs to complete, transmission plant adequate for this generation and estimated irrigation assistance currently authorized
as of June 30, 1961

Line No.	System total	Bonneville Administration	Total generating projects	Albeni Falls	Bonneville Dam	Chief Joseph	Columbia Basin Project	Detroit Big Cliff	Lookout Point-Dexter	Hungry Horse	McNary	The Dalles	Yakima-Kennewick & Roza	
1	Fixed plant account (amounts allocated to power)	\$1,597,804,742	\$471,808,684	\$1,125,996,058	\$31,576,915	\$60,426,354	\$155,440,878	\$191,090,528	\$41,775,484	\$41,899,082	\$77,163,217	\$280,277,883	\$242,226,465	\$4,119,252
2	Add net retirements	17,194,310	14,895,709	2,298,601	218	477,600	6,734	1,306,498	6,629	142,991	124,983	40,973	323	
3	Total electric plant investment to be amortized	1,614,999,052	486,704,393	1,128,294,659	31,577,133	60,903,954	155,447,612	192,397,026	41,905,711	77,306,208	280,402,866	242,267,438	4,119,575	
	Less amortization to June 30, 1961													
4	Scheduled	244,398,212	85,797,000	158,601,212	2,745,000	18,175,000	8,766,000	83,370,793	4,163,000	3,359,000	8,276,936	21,905,000	7,169,000	671,483
5	Excess over scheduled	49,756,092	38,886,801	10,869,291	252,595	9,279,355	160,693	0	257,087	138,425	0	519,827	261,309	0
6	Total amortization	294,154,304	124,683,801	169,470,503	2,997,595	27,454,355	8,926,693	83,370,793	4,420,087	3,497,425	8,276,936	22,424,827	7,430,309	671,483
7	Unamortized electric plant investment	1,320,844,748	362,020,592	958,824,156	28,579,538	33,449,599	146,520,919	109,026,233	37,547,049	33,408,286	69,029,272	257,978,039	234,837,129	3,448,092
8	Estimated additional power investment to complete	49,142,370	32,876,167 1/	16,266,203	260,867		3,244,388	225,578		1,875,471	9,062,134	1,276,562	321,203	
	Estimated irrigation assistance currently authorized													
9	Columbia Basin project	588,931,000		588,931,000			588,931,000							
10	Yakima project												1,138,000	
11	Roza division	1,138,000		1,138,000									5,065,000	
12	Kennewick division	5,065,000		5,065,000										
13	Chief Joseph						1,617,000							
14	Foster Creek division	1,617,000		1,617,000			3,985,000							
15	Greater Wenatchee division	3,985,000		3,985,000										
16	The Dalles											2,843,000		
17	Crooked River	2,843,000		2,843,000										
18	BPA system													
19	Dalton Gardens, Hayden Lake, Avondale	1,326,000	1,326,000											
20	The Dalles, western division	3,354,000	3,354,000											
21	Total irrigation assistance	608,259,000	4,680,000	603,579,000			5,602,000	588,931,000				2,843,000	6,203,000	
22	Gross power repayment responsibility (3+8+17)	\$2,272,400,422	\$524,260,560	\$1,748,139,862	\$31,838,000	\$60,903,954	\$164,294,000	\$781,553,604	\$41,967,136	\$41,905,711	\$79,181,679	\$289,465,000	\$246,387,000	\$10,643,778

1/ Consists of construction work in progress and plant held for future use.

Auditors' Report

had these 13 generating projects comprised the ultimate Federal generation in the area. However, the dollar amount of transmission investment shown is deemed to be adequate to have built an ideal system for this generation. Hence, no additions to the transmission plant are estimated.

Final allocations of plant costs at McNary and The Dalles are expected to reduce the amount of power repayment responsibility by approximately \$43,000,000.

The power repayment responsibility as shown by table 17, although it shows the current magnitude of future amortization requirements with respect to this system, cannot be used of itself in rate determinations because the system is continually growing and new requirements are being added. At each rate adjustment period it is necessary to look forward at least for 5 years and to take into consideration what the system

will be during that period. Only in this way can the adequacy of the rate structure be evaluated.

Present rate planning is based on a 20-dam system with appropriate transmission to carry the power from these plants to the load centers plus wheeling of power for non-Federal power developments in the area. The seven additional dams under construction and additional transmission facilities are estimated to require plant investment amounting to \$1.19 billion. Of this amount \$905,000,000 is estimated to be repayable from commercial power revenues, thus bringing the total commercial power repayment responsibility in electric plant investment (generation and transmission) and irrigation assistance for the 20-project development to \$3.18 billion. This gross repayment responsibility is about 81 percent of the aggregate Federal investment in all plant facilities for the 20-project development estimated at \$3.94 billion.



The spillway of The Dalles dam with fish ladders in the foreground and substation in the upper left is shown from the Washington shore of the Columbia.



COMPTROLLER GENERAL OF THE UNITED STATES

WASHINGTON 25

B-114858

November 15, 1961

Dear Mr. Secretary:

The General Accounting Office has made audits of the activities of the Bonneville Power Administration and the Bureau of Reclamation, Department of the Interior, and the Corps of Engineers (Civil Functions), Department of the Army, pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67). In connection with these audits, we examined the accounts and records pertaining to the Columbia River Power System and Related Activities for fiscal year 1961. Insofar as the accompanying financial statements are concerned, our examination was made in accordance with generally accepted auditing standards and included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The Columbia River Power System consists of the Bonneville Power Administration and the generating facilities for commercial power of the multiple-purpose projects built and operated (or under construction) by the Bureau of Reclamation and the Corps of Engineers in the Pacific Northwest, for which the Administration acts as the transmitting and marketing agency. The transmission system of Bonneville Power Administration and the hydroelectric plants of these multiple-purpose projects are operated as an integrated power system. In addition to the generation of electric energy, activities of these projects include the operation of irrigation, flood control, navigation, fish and wildlife, and recreation facilities.

The accompanying financial statements present the combined assets and liabilities at June 30, 1961, of the Bonneville Power Administration and the multiple-purpose projects (including those under construction) for which it acts as the power-marketing agent, and the combined financial results of commercial power operations for the year then ended. These financial statements are based on the official accounting records of these activities as maintained by the Bonneville Power Administration and the Corps of Engineers and, in part, on the official accounting records of the Bureau of Reclamation. However, in some important respects the financial data relating to the Bureau of Reclamation is based on memorandum accounting records maintained by that agency solely for the purposes of these financial statements, and these records are not a part of the official accounting system. The information

**REPORT ON AUDIT
OF
FINANCIAL STATEMENTS
OF
COLUMBIA RIVER POWER SYSTEM
AND RELATED ACTIVITIES
FISCAL YEAR 1961**



**BY
THE COMPTROLLER GENERAL OF THE UNITED STATES
NOVEMBER 1961**

The financial statements of the Columbia River Power System and Related Activities were prepared for the fiscal year 1961, as in past years, by the General Accounting Office. The continued preparation of these financial statements is desirable in order to disclose fully on an integrated system basis, for the information of the President, the Congress, and the public, the financial position and the results of operations of the various activities that make up the Columbia River Power System. However, in our opinion and that of the Director of the Bureau of the Budget, the preparation of such financial statements is more properly a function of the executive branch of the Federal Government. We therefore recommend that the Bonneville Power Administration be assigned the responsibility of preparing in future years the combined financial statements on the Columbia River Power System and Related Activities.

Firm allocations of the construction costs of 5 of the 10 projects in operation at June 30, 1961, had not been made as between power and nonpower purposes. These projects were the Yakima Project of the Bureau of Reclamation and the Detroit-Big Cliff, McNary, Lookout Point-Dexter, and The Dalles Projects of the Corps of Engineers. The cost of joint-use facilities of these projects amounted to \$374.2 million at June 30, 1961, of which \$277.6 million was tentatively allocated to commercial power. As explained in note 3 of schedule 7, tentative allocations of project construction costs have been used in preparing the accompanying financial statements. When firm allocations of cost are made, the accounts and financial statements relating to these projects may require adjustment.

Some of the practices followed by the agencies concerned in maintaining the accounting records on which the accompanying financial statements are based are not consistent. The more important of these inconsistencies relate to depreciation on plant in service, interest on the Federal investment, and costs incurred by other agencies and are described in note 2 of schedule 7.

The effect of the foregoing matters on the fairness of the accompanying financial statements is not possible or practicable to determine. However, we do not believe that the effect is so material as to preclude us from stating that, in our opinion, except for the effect of such matters, the accompanying financial statements present fairly the assets and liabilities of the Columbia River Power System and

obtained from the memorandum records consists of (1) depreciation of fixed assets applicable to the generation of electric power, which is not recorded in the official accounts of the Bureau of Reclamation, and (2) interest on the Federal investment in power facilities, which is not recorded in the Bureau's official accounts on the same basis as it is recorded in the accounts of the Bonneville Power Administration and the Corps of Engineers.

The practice of the Bureau of Reclamation in not accounting for depreciation of its fixed assets devoted to commercial power production is contrary to the principles and standards of accounting prescribed for executive agencies by the Comptroller General pursuant to law. The Budget and Accounting Procedures Act of 1950 fixes responsibility on the head of each executive agency to establish and maintain systems of accounting which shall conform to the principles, standards, and related requirements prescribed by the Comptroller General. These principles and standards, insofar as they pertain to accounting for depreciation of Federal water resource projects having electric power operations, were clarified by Accounting Principles Memorandum No. 5 (issued December 16, 1960, 2 GAO 1286), which states:

"The production and sale of electric power from many Federal water resource projects are revenue-producing operations which are substantial in size. Because of the nature, size, importance, and public interest in such operations, financial reports on them should disclose fully the financial results in terms of revenues earned and all costs incurred. Since depreciation of fixed assets applicable to power operations is so substantial in amount and in relation to total operating costs, it must be accounted for and included in financial reports on electric power operations to make them fully informative to all users including management officials, officials of other Government agencies, the Congress, and the public."

In view of this clear requirement, the need to produce financial reports which will clearly and fully disclose all significant financial aspects of these water resource operations, and the related responsibilities of the Secretary of the Interior under the law, we strongly recommend that the Commissioner of Reclamation be instructed to revise the official accounting system of the Bureau of Reclamation to incorporate appropriate accounting for depreciation of fixed assets applicable to commercial power operations.

UNITED STATES OF AMERICA
COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES
FINANCIAL STATEMENTS

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B-114858

Related Activities at June 30, 1961, and the financial results of power operations for the year then ended in conformity with principles, standards, and related requirements for accounting prescribed for executive agencies of the Federal Government.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Roger Campbell".

Comptroller General
of the United States

The Honorable
The Secretary of the Interior

Enclosures

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT OF COMMERCIAL POWER OPERATIONS
FOR THE FISCAL YEARS ENDED JUNE 30, 1961 AND 1960

	<u>1961</u>	<u>1960</u>
OPERATING REVENUES:		
Sales of electric energy by Bonneville Power Administration:		
Publicly owned utilities	\$30,103,478	\$28,537,730
Privately owned utilities	9,638,672	12,566,587
Federal agencies	6,475,099	6,347,848
Aluminum industry	16,959,236	17,460,841
Other industry	<u>3,818,059</u>	<u>4,031,045</u>
Sales, at wholesale	<u>66,994,544</u>	<u>68,944,051</u>
Other operating revenues:		
Payments for downstream river regulation	1,748	20,414
Projects energy--use at site	106,876	175,003
Rental of electric property (note 6)	<u>2,715,957</u>	<u>2,061,095</u>
	<u>2,824,581</u>	<u>2,256,512</u>
Total operating revenues	<u>69,819,125</u>	<u>71,200,563</u>
OPERATING EXPENSES (notes 2 and 3):		
Purchased power	696,859	652,314
Operation:		
Specific power facilities	12,225,237	11,530,799
Joint facilities	1,496,827	1,279,368
Maintenance:		
Specific power facilities	6,441,853	5,724,119
Joint facilities	1,524,328	1,293,229
Depreciation:		
Specific power facilities	23,843,837	22,038,915
Joint facilities	4,841,924	4,821,198
Net loss on sales and abandonment of property	<u>95,711</u>	<u>550,799</u>
Total operating expenses	<u>51,166,596</u>	<u>47,890,741</u>
Net operating revenues	<u>18,652,529</u>	<u>23,309,822</u>
INTEREST AND OTHER DEDUCTIONS (note 2):		
Interest on Federal investment	33,475,455	33,563,197
Interest charged to construction	667,527*	1,798,357*
Miscellaneous income deductions (net)	<u>15,342</u>	<u>30,998</u>
Net interest and other deductions	<u>32,823,270</u>	<u>31,795,838</u>
Net loss from commercial power operations before special item and adjustment	14,170,741	8,486,016
SPECIAL ITEM AND ADJUSTMENT:		
Write-off of unrecovered cost of property (note 7)	-	3,075,423
Decrease in accumulated expenses arising from change in allocation percentages (note 3)	<u>-</u>	<u>865,026*</u>
Net loss from commercial power operations	14,170,741	10,696,413
ACCUMULATED NET REVENUES FROM COMMERCIAL POWER OPERATIONS:		
Beginning of fiscal year	<u>84,455,605</u>	<u>95,152,018</u>
End of fiscal year	<u>\$70,284,864</u>	<u>\$84,455,605</u>

*Deduction

The accompanying notes (schedule 7) are an integral part of this statement.

The opinion of the General Accounting Office on the financial statements appears in the covering letter of transmittal to the Secretary of the Interior.

UNITED STATES OF AMERICA
COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT OF COMBINED ASSETS AND LIABILITIES

JUNE 30, 1961 AND 1960

A S S E T S	<u>1961</u>	<u>1960</u>	L I A B I L I T I E S	<u>1961</u>	<u>1960</u>
FIXED ASSETS, at original cost, including interest during construction (notes 2 and 3):			INVESTMENT OF U.S. GOVERNMENT AND ACCUMULATED NET REVENUES:		
Commercial power	\$1,644,940,848	\$1,618,184,972	Total investment of U.S. Government (note 5)	\$3,073,623,107	\$2,892,222,737
Irrigation	383,736,571	375,972,361	Less:		
Flood control	91,249,515	89,305,725	Funds returned to U.S. Treasury:		
Navigation	77,177,458	77,576,458	Repayment of Federal investment in the power program	787,941,456	717,150,287
Fish and wildlife	1,165,888	1,165,888	Repayment of Federal investment in the nonpower programs	25,057,551	19,612,530
Recreation	211,683	-	Total expense of flood control operations	17,407,375	14,918,829
Multiple-purpose projects under construction	254,896,325	167,942,327	Total expense of navigation operations	37,536,611	34,010,982
Total	<u>2,453,378,288</u>	<u>2,330,147,731</u>	Other nonreimbursable expenses	2,046,711	1,807,965
Less accumulated depreciation:			869,939,704	<u>787,500,593</u>	<u>787,500,593</u>
Commercial power	208,921,454	181,921,438	Net investment of U.S. Government	2,203,633,403	2,104,722,144
Irrigation	1,358,025	1,096,139	Accumulated net revenues:		
Flood control	4,445,719	3,788,584	Net revenues from commercial power operations (schedule 1)	70,284,864	84,455,605
Navigation	7,430,802	6,425,985	Less net loss from irrigation operations since inception	4,422,810	3,881,182
Recreation	8,098	-	65,862,054	<u>80,574,423</u>	<u>80,574,423</u>
Total	<u>222,174,098</u>	<u>193,232,146</u>	Total	<u>2,269,495,457</u>	<u>2,185,296,557</u>
Original cost, net	<u>2,231,204,190</u>	<u>2,136,915,585</u>	CURRENT AND ACCRUED LIABILITIES:		
CURRENT ASSETS:			Accounts payable	12,651,275	13,156,952
Unexpended funds in U.S. Treasury appropriated by the Congress for construction and for operation and maintenance	29,544,904	34,458,500	Employees' accrued leave	2,471,786	2,261,177
Special deposits	1,159,991	1,138,240	Total	<u>15,123,061</u>	<u>15,418,129</u>
Accounts receivable:			DEFERRED CREDITS	437,035	469,587
Customers	9,580,320	10,390,953	MATURED INSTALLMENTS OF FIXED OBLIGATIONS FOR USE OF IRRIGATION FACILITIES	2,107,044	1,888,644
Other	491,324	1,074,432	CONTRIBUTIONS IN AID OF CONSTRUCTION	1,869,450	686,737
Materials and supplies	5,303,048	6,295,725	\$2,289,032,047	<u>\$2,203,759,664</u>	<u>\$2,203,759,664</u>
Total	<u>46,079,587</u>	<u>53,357,850</u>			
OTHER ASSETS AND DEFERRED CHARGES	11,748,270	13,486,229			
	<u>\$2,289,032,047</u>	<u>\$2,203,759,664</u>			

The accompanying notes (schedule 7) are an integral part of this statement.

The opinion of the General Accounting Office on the financial statements appears in the covering letter of transmittal to the Secretary of the Interior.

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT OF INVESTMENT IN COMMERCIAL POWER PROGRAM
FROM INCEPTION TO JUNE 30, 1961

	Total	Bonneville Power Administration	Bonneville Project	Columbia Basin Project	Hungry Horse Project	Albeni Falls Project	McNary Project	Detroit-Big Cliff Project	Lookout Point-Dexter Project	Chief Joseph Project	Yakima Project, Roza and Kennewick Divisions	The Dalles Project	Ice Harbor Project	Cougar Project	Hills Creek Project	John Day Project	Lower Monumental Project	Green Peter-Poster Project
NET INVESTMENT IN COMMERCIAL POWER:																		
Investment allocated to commercial power:																		
Total investment of U.S. Government, principally, congressional appropriations for construction of fixed assets and operation and maintenance activities (schedule 6)	\$3,073,623,107	\$748,242,395	\$150,816,040	\$686,027,457	\$125,511,601	\$38,780,755	\$352,397,916	\$82,089,464	\$111,129,349	\$182,374,744	\$37,573,336	\$286,239,595	\$120,062,102	\$31,035,157	\$46,429,493	\$57,692,240	\$3,490,052	\$2,731,411
Less amounts allocated to nonpower purposes or unallocated:																		
Irrigation	420,418,888	-	-	373,655,010	-	-	-	4,687,887	5,962,849	4,781,530	31,331,612	-	-	-	-	-	-	-
Flood control	104,645,653	-	-	-	25,153,827	208,258	-	24,972,434	54,311,134	-	-	-	-	-	-	-	-	-
Navigation	107,673,705	-	49,060,818	1,070,462	-	161,404	31,553,777	160,684	1,000,408	-	-	24,666,152	-	-	-	-	-	-
Other purposes	1,821,285	-	-	-	-	-	232,780	417,416	20,042	-	1,151,047	-	-	-	-	-	-	-
Construction in progress and other unallocated assets	261,440,455	-	-	-	-	-	-	-	-	-	-	-	120,062,102	31,035,157	46,429,493	57,692,240	3,490,052	2,731,411
	895,999,986	-	49,060,818	374,725,472	25,153,827	369,662	31,786,557	30,238,421	61,204,433	4,781,530	32,482,659	24,666,152	120,062,102	31,035,157	46,429,493	57,692,240	3,490,052	2,731,411
Total investment in commercial power	2,177,623,121	748,242,395	101,755,222	311,301,985	101,357,774	38,411,093	330,611,359	51,851,043	49,834,916	177,593,214	5,090,677	261,573,443	-	-	-	-	-	-
Less funds from commercial power operations returned to U.S. Treasury:																		
Through June 30, 1960	716,882,974	309,865,071	65,878,359	176,721,208	27,937,915	8,602,240	64,314,338	12,856,643	10,009,498	24,366,206	1,295,092	15,033,887	346	-	-	2,171	-	-
During the year ended June 30, 1961:																		
By Bonneville Power Administration	70,846,183	22,268,183	2,100,000	12,800,000	3,833,000	1,200,000	8,200,000	1,400,000	1,400,000	6,500,000	345,000	10,800,000	-	-	-	-	-	-
By generating projects	212,299	-	10,384	35,490	2,467	279	7,671	-	-	144,179	4,502	780	7	-	-	6,540	-	-
Accumulated funds returned	787,941,456	332,133,254	67,988,743	189,556,698	31,773,382	9,802,519	72,522,009	14,256,643	11,409,498	31,020,385	1,644,594	25,834,667	353	-	-	8,711	-	-
Net investment in commercial power	\$1,389,681,665	\$416,109,141	\$33,766,479	\$121,745,287	\$69,584,392	\$28,608,574	\$258,089,350	\$37,594,400	\$38,425,418	\$146,582,829	\$3,446,083	\$235,738,776	\$353	\$-	\$-	\$8,711	\$-	\$-

*Deduction

The opinion of the General Accounting Office on the financial statements appears in the covering letter of transmittal to the Secretary of the Interior. The accompanying notes (schedule 7) are an integral part of this statement.

Secretary of the Interior.

STATEMENT OF REPAYMENT OF INVESTMENT IN COMMERCIAL POWER PROGRAM (note 4)
FOR THE FISCAL YEAR ENDED JUNE 30, 1961
AND FROM INCEPTION TO JUNE 30, 1961

	Total	Bonneville Power Administration	Bonneville Project	Columbia Basin Project	Hungry Horse Project	Albeni Falls Project	McNary Project	Detroit-Big Cliff Project	Lookout Point-Dexter Project	Chief Joseph Project	Yakima Project, Roza and Kennewick Divisions	The Dalles Project	Ice Harbor Project	John Day Project
COMPARISON OF REPAYMENT AND SCHEDULED REPAYMENT OF COMMERCIAL POWER INVESTMENT FOR THE FISCAL YEAR ENDED JUNE 30, 1961														
REPAYMENT OF CAPITAL INVESTMENT IN COMMERCIAL POWER:														
Funds returned to U.S. Treasury (schedule 3)	\$ 71,058,482	\$ 22,268,183	\$ 2,110,384	\$ 12,835,490	\$ 3,835,467	\$ 1,200,279	\$ 8,207,671	\$ 1,400,000	\$ 1,400,000	\$ 6,644,179	\$ 349,502	\$ 10,500,780	\$ 7	\$ 6,540
Less amounts equivalent to:														
Operation and maintenance expense	21,088,610	11,571,439	1,199,380	2,606,741	440,524	340,921	1,741,953	375,270	303,700	1,122,635	73,710	1,312,207	-	-
Interest charged to operations	32,307,928	8,703,931	842,675	3,145,530	1,395,394	720,167	6,461,792	942,560	955,295	3,711,553	89,979	5,832,402	-	-
	53,896,538	20,275,420	2,042,055	5,752,621	1,835,918	1,061,088	8,203,775	1,318,130	1,263,995	4,834,238	159,639	7,144,609	-	-
Remainder applied to amortization of capital investment	17,161,944	1,992,763	68,329	7,082,869	1,999,549	133,191	3,996	81,870	131,005	1,809,941	189,813	3,656,171	7	6,540
SCHEDULED REPAYMENT OF CAPITAL INVESTMENT FOR FISCAL YEAR 1961, ESTABLISHED BY LAW OR ADMINISTRATIVE POLICY PURSUANT TO LAW														
	32,427,231	11,450,000	1,148,000	7,082,869	1,999,549	445,000	3,838,000	585,000	569,000	2,114,000	189,813	3,033,000	-	-
Excess of funds returned over scheduled repayment (-deficiency)	\$ -15,265,287	\$ -9,457,237	\$ -1,079,671	\$ -	\$ -	\$ -305,309	\$ -3,004,104	\$ -506,130	\$ -437,995	\$ -304,052	\$ -	\$ 623,171	\$ 7	\$ 6,540
COMPARISON OF REPAYMENT AND SCHEDULED REPAYMENT OF COMMERCIAL POWER INVESTMENT FROM INCEPTION TO JUNE 30, 1961														
REPAYMENT OF CAPITAL INVESTMENT IN COMMERCIAL POWER:														
Accumulated funds returned to U.S. Treasury (schedule 3)	\$ 787,941,456	\$ 332,133,254	\$ 67,988,743	\$ 189,556,698	\$ 31,773,332	\$ 9,302,519	\$ 72,522,009	\$ 14,256,643	\$ 11,409,498	\$ 31,010,355	\$ 1,644,594	\$ 25,834,667	\$ 353	\$ 8,711
Less amounts equivalent to:														
Operation and maintenance expense	199,732,629	122,397,668	16,305,240	32,644,731	3,100,751	1,688,470	9,944,636	2,340,157	1,673,636	4,988,831	354,669	4,238,340	-	-
Interest charged to operations	283,560,103	82,820,398	24,226,093	70,556,665	15,810,132	2,115,280	40,057,624	7,479,490	6,208,616	16,890,669	452,309	14,144,332	-	-
	483,292,737	205,218,066	40,531,333	103,201,396	18,910,883	6,803,750	50,002,260	9,816,647	7,887,252	21,879,500	807,478	18,433,572	-	-
Remainder applied to amortization of capital investment	304,648,719	126,914,688	27,457,410	86,355,302	12,862,499	2,993,769	22,519,749	4,439,996	3,522,246	9,330,885	837,116	7,400,995	353	8,711
SCHEDULED REPAYMENT OF CAPITAL INVESTMENT AT JUNE 30, 1961, ESTABLISHED BY LAW OR ADMINISTRATIVE POLICY PURSUANT TO LAW														
	266,854,917	100,518,000	13,175,000	86,355,302	12,862,499	2,745,000	21,905,000	4,163,000	3,359,000	3,766,000	837,116	7,169,000	-	-
Excess of funds returned over scheduled repayment	\$ 37,793,802	\$ 26,396,688	\$ 9,282,410	\$ -	\$ -	\$ 253,769	\$ 614,749	\$ 276,996	\$ 163,246	\$ 564,885	\$ -	\$ 231,995	\$ 353	\$ 8,711

The opinion of the General Accounting Office on the financial statements appears in the covering letter of transmittal to the Secretary of the Interior.
The accompanying notes (schedule 7) are an integral part of this statement.

UNITED STATES OF AMERICA
COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT COMBINING EXPENSES OF COMMERCIAL POWER OPERATIONS
FOR THE FISCAL YEAR ENDED JUNE 30, 1961

	Combined to schedule 1	Bonneville Power Adminis- tration	Bonneville Project	Columbia Basin Project	Hungry Horse Project	Albeni Falls Project	McNary Project	Detroit- Big Cliff Project	Lookout Point- Dexter Project	Chief Joseph Project	Yakima Project, Roza and Kennewick Divisions	The Dalles Project
OPERATING EXPENSES (notes 2 and 3):												
Purchased power	\$ 696,859	\$ 696,859	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operation:												
Specific power facilities	12,225,237	8,693,442	414,976	1,157,064	205,660	126,961	476,512	131,640	128,128	418,825	45,087	426,942
Joint facilities	1,496,827	-	152,427	269,115	31,245	19,216	549,820	101,867	62,915	-	3,172	307,050
Maintenance:												
Specific power facilities	6,441,853	3,469,116	414,357	811,731	137,580	140,870	480,170	103,725	89,339	416,419	9,874	368,672
Joint facilities	1,524,328	-	219,737	374,097	66,753	54,166	235,637	38,038	23,318	287,448	15,577	209,557
Depreciation:												
Specific power facilities	23,843,837	11,670,101	853,187	1,745,634	490,514	384,372	3,016,915	406,089	430,259	2,088,318	50,097	2,708,351
Joint facilities	4,841,924	-	281,448	441,778	329,440	152,156	1,542,530	192,711	182,334	522,019	21,348	1,176,160
Net loss on sales and abandonment of property	95,731	129,284	240	-	-	-	-	-	-	33,793*	-	-
Total operating expenses	51,166,596	24,658,802	2,336,372	4,799,419	1,261,192	877,741	6,301,584	974,070	916,293	3,699,236	145,155	5,196,732
INTEREST AND OTHER DEDUCTIONS (note 2):												
Interest on Federal investment	33,475,455	9,259,321	846,881	3,145,880	1,395,394	720,167	6,461,920	943,882	965,343	3,711,553	85,979	5,939,135
Interest charged to construction	667,527*	555,390*	4,206*	-	-	-	128*	1,022*	48*	-	-	106,735*
Miscellaneous income deductions (net)	15,342	23,907	2,117*	5,266*	714*	292*	156*	-	-	7*	-	13*
Net interest and other deductions	32,823,270	8,727,838	840,558	3,140,614	1,394,680	719,875	6,461,636	942,860	965,295	3,711,546	85,979	5,832,389
Total expenses and deductions	\$83,989,866	\$33,386,640	\$3,176,930	\$7,940,033	\$2,655,872	\$1,597,616	\$12,763,220	\$1,916,930	\$1,881,588	\$7,410,782	\$231,134	\$11,029,121

*Deduction

The accompanying notes (schedule 7) are an integral part of this statement.

The opinion of the General Accounting Office on the financial statements appears in the covering letter of transmittal to the Secretary of the Interior.

STATEMENT COMBINING ASSETS AND LIABILITIES

JUNE 30, 1961

ASSETS	Combined to schedule 2	Bonneville Power Administration	Bonneville Project	Columbia Basin Project	Hungry Horse Project	Albion Falls Project	McNary Project	Detroit-Big Cliff Project	Lookout Point-Dexter Project	Chief Joseph Project	Yakima Project, Roza and Kennewick Divisions	The Dalles Project	Ice Harbor Project	Cougar Project	Hills Creek Project	John Day Project	Lower Monumental Project	Green Peter-Poster Project
FIXED ASSETS, at original cost, including interest during construction (notes 2 and 3):																		
Commercial power:																		
Specific facilities (powerhouses, generating equipment, and transmission plant)	\$1,143,602,902	\$504,684,851	\$39,401,618	\$111,311,820	\$23,372,768	\$20,475,918	\$143,454,218	\$22,517,148	\$23,619,169	\$116,475,033	\$ 2,410,496	\$140,879,863	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Joint facilities (dams, reservoirs, etc.) allocated to power	496,337,946	-	21,024,736	89,466,104	58,200,770	11,100,997	136,823,665	19,258,326	18,279,213	38,965,845	1,870,978	101,346,602	-	-	-	-	-	-
	1,644,940,848	504,684,851	60,426,354	200,777,924	81,573,538	31,576,915	280,277,883	41,775,484	41,899,032	155,440,878	4,281,474	242,226,465	-	-	-	-	-	-
Irrigation:																		
Specific facilities	300,885,321	-	-	274,827,211	-	-	-	3,789,021	5,066,794	3,786,150	22,271,960	-	-	-	-	-	-	-
Joint facilities	82,851,250	-	-	65,205,957	-	-	-	-	-	-	8,790,378	-	-	-	-	-	-	-
	383,736,571	-	-	340,032,268	-	-	-	3,789,021	5,066,794	3,786,150	31,062,338	-	-	-	-	-	-	-
Flood control:																		
Specific facilities	1,000,000	-	-	-	1,000,000	-	-	20,324,115	46,270,589	-	-	-	-	-	-	-	-	-
Joint facilities	90,249,515	-	-	-	23,436,028	168,783	-	-	-	-	-	-	-	-	-	-	-	-
	91,249,515	-	-	-	24,436,028	168,783	-	20,324,115	46,270,589	-	-	-	-	-	-	-	-	-
Navigation:																		
Specific facilities	42,902,862	-	6,413,652	-	-	-	22,260,175	-	-	-	-	14,229,035	-	-	-	-	-	-
Joint facilities	33,274,596	-	21,024,736	1,000,000	-	130,654	3,503,299	130,504	352,667	-	-	7,627,716	-	-	-	-	-	-
	77,177,458	-	27,438,388	1,000,000	-	130,654	25,763,474	130,504	352,667	-	-	21,856,751	-	-	-	-	-	-
Fish and wildlife:																		
Specific facilities	1,165,388	-	-	-	-	-	-	-	-	-	1,165,888	-	-	-	-	-	-	-
Recreation:																		
Specific facilities	211,683	-	-	-	-	-	207,056	-	4,627	-	-	-	-	-	-	-	-	-
	1,377,571	-	-	-	-	-	207,056	-	4,627	-	1,165,888	-	-	-	-	-	-	-
Multiple-purpose projects under construction	254,896,325	-	-	-	-	-	-	-	-	-	-	-	119,416,358	29,430,989	44,649,562	55,289,433	3,445,183	2,664,750
Total	2,453,373,283	504,684,851	87,864,742	541,810,192	106,059,566	31,376,352	306,253,413	66,019,124	94,093,779	159,227,023	36,509,700	264,063,216	119,416,358	29,430,989	44,649,562	55,289,433	3,445,183	2,664,750
Less accumulated depreciation:																		
Specific facilities:																		
Commercial power	176,628,738	106,683,099	10,275,726	19,696,194	4,038,014	2,327,376	11,712,372	3,043,997	2,683,513	9,344,164	243,431	6,575,852	-	-	-	-	-	-
Irrigation (pumping power facilities)	773,452	-	-	513,928	-	-	-	-	-	-	159,534	-	-	-	-	-	-	-
Navigation	4,252,334	-	611,507	-	-	-	2,575,685	-	-	-	-	865,142	-	-	-	-	-	-
Recreation	8,058	-	-	-	-	-	3,098	-	-	-	-	-	-	-	-	-	-	-
Joint facilities:																		
Commercial power	32,292,715	-	2,435,862	6,732,059	3,512,134	1,367,209	10,533,674	1,314,471	1,152,760	2,356,788	99,096	2,788,663	-	-	-	-	-	-
Irrigation	594,563	-	-	-	-	-	-	266,635	327,923	-	-	-	-	-	-	-	-	-
Flood control	4,445,719	-	-	-	-	20,337	-	1,430,206	2,994,876	-	-	-	-	-	-	-	-	-
Navigation	3,178,468	-	2,435,862	-	-	15,879	270,094	9,183	55,164	-	-	392,466	-	-	-	-	-	-
Total	222,174,093	106,683,099	15,952,957	27,042,181	7,550,148	3,731,101	25,092,923	6,069,492	7,214,061	11,700,952	502,061	10,622,123	-	-	-	-	-	-
Original cost, net	2,231,204,190	398,001,752	71,905,785	514,768,011	98,509,418	28,145,251	281,153,490	59,949,632	86,879,718	147,526,076	36,007,639	253,461,093	119,416,358	29,430,989	44,649,562	55,289,433	3,445,183	2,664,750
CURRENT ASSETS:																		
Unexpended funds in U.S. Treasury appropriated by the Congress for construction and for operation and maintenance	29,544,904	13,552,091	541,413	2,330,099	168,541	75,494	371,763	131,782	97,848	1,346,125	162,350	1,215,024	1,453,902	1,793,032	2,243,101	3,168,563	85,697	708,079
Special deposits	1,139,991	736,437	-	378,676	745	-	-	-	-	13,430	23,653	-	-	-	-	-	-	-
Accounts receivable:																		
Customers	9,530,320	9,579,440	-	-	-	-	-	-	-	-	880	-	-	-	-	-	-	-
Other	491,324	355,060	757	115,275	1,181	384	3,704	-	6,781	3,009	-	707	1,054	1	89	-	-	
Materials and supplies	5,303,043	4,523,230	20,974	693,092	36,933	-	13,381	-	-	-	-	3,618	-	593	227	-	-	2,522
Total	46,079,587	28,249,808	563,144	3,517,142	207,450	75,878	393,346	131,782	104,629	1,367,614	186,083	1,224,549	1,454,956	1,793,626	2,243,328	3,169,652	85,697	710,601
OTHER ASSETS AND DEFERRED CHARGES	11,748,270	598,451	1,441	10,827,739	66,401	-	2,560	-	-	61,461	125,742	3,979	-	-	46	450	-	-
	\$2,289,032,047	\$427,850,011	\$72,470,370	\$527,178,392	\$98,783,269	\$28,221,129	\$281,549,898	\$60,081,414	\$86,984,347	\$148,955,151	\$36,320,264	\$254,689,621	\$120,671,314	\$31,224,615	\$46,892,836	\$58,458,585	\$3,530,880	\$3,375,351

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT COMBINING ASSETS AND LIABILITIES (continued)

JUNE 30, 1961

LIABILITIES	Combined to schedule 2	Bonneville Power Administration	Bonneville Project	Columbia Basin Project	Hungry Horse Project	Albeni Falls Project	McNary Project	Detroit-Big Cliff Project	Lookout Point-Dexter Project	Chief Joseph Project	Yakima Project, Reza and Kennewick Divisions	The Dalles Project	Ice Harbor Project	Cougar Project	Hills Creek Project	John Day Project	Lower Monumental Project	Green Peter-Poster Project
INVESTMENT OF U.S. GOVERNMENT AND ACCUMULATED NET REVENUES:																		
Congressional appropriations	\$2,626,975,179	\$636,234,469	\$108,498,634	\$599,850,171	\$105,850,190	\$32,518,495	\$297,075,416	\$65,877,776	\$90,462,152	\$154,055,797	\$36,148,620	\$251,429,515	\$113,637,173	\$29,586,000	\$43,999,500	\$56,080,000	\$3,210,000	\$2,461,271
Cost of materials and services furnished by other Federal agencies, net	26,520,055	19,096,834	127,804	5,933,225	440,958	54,147	772,445	2,880	9,399	408,946	809,685	97,331	3,412	120,738	17,807	6,877	75,052	113,027
Interest on Federal investment:																		
Charged to operations	317,716,484	82,820,898	38,565,910	70,556,665	15,810,132	5,174,535	44,785,336	12,154,742	14,299,792	16,690,669	452,809	16,404,996						
Charged to construction	100,578,354	8,257,159	3,623,692	9,687,396	4,410,321	1,033,578	21,309,609	4,054,066	6,376,804	11,219,332	162,222	18,307,753	6,428,341	1,328,419	2,412,186	1,605,363	205,000	157,113
Revenues transferred to continuing fund	1,833,035	1,833,035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total investment of U.S. Government (note 5)	3,073,623,107	748,242,395	150,816,040	686,027,457	126,511,601	38,780,755	362,397,916	82,089,464	111,129,349	182,374,744	37,573,336	286,239,595	120,062,102	31,035,157	46,429,493	57,692,240	3,490,052	2,731,411
Less:																		
Funds returned to U.S. Treasury:																		
Repayment of Federal investment in the power program (including amounts for operating expense and interest)	787,941,456	332,133,254	67,988,743	189,556,698	31,773,382	9,802,519	72,522,009	14,256,643	11,409,498	31,010,385	1,644,594	25,834,667	353	-	-	8,711	-	-
Repayment of Federal investment in non-power programs	25,057,551	-	17,282	21,774,050	267,313	22	8,824	21,570	20,859	-	2,943,268	917	97	266	-	3,083	-	-
Total expense of flood control operations	17,407,375	-	-	-	329,493	59,854	-	6,025,421	10,992,607	-	-	-	-	-	-	-	-	-
Total expense of navigation operations	37,536,611	-	24,721,453	70,463	-	46,121	8,444,745	39,021	202,124	-	-	4,012,684	-	-	-	-	-	-
Other nonreimbursable expenses	2,046,711	-	-	139,353	-	-	22,643	1,083,266	801,290	-	159	-	-	-	-	-	-	-
	869,989,704	332,133,254	92,727,478	211,540,564	32,370,188	9,908,516	80,998,221	21,425,921	23,426,378	31,010,385	4,588,021	29,843,268	450	266	-	11,794	-	-
Net investment of U.S. Government	2,203,633,403	416,109,141	58,088,562	474,486,893	94,141,413	28,872,239	281,399,695	60,663,543	87,702,971	151,364,359	32,985,315	256,391,327	120,061,652	31,034,891	46,429,493	57,680,446	3,490,052	2,731,411
Accumulated net revenues:																		
Net revenues from commercial power operations (schedule 1)	70,284,864	3,104,993	14,265,167	53,708,565	4,588,417	697,207	53,798	135,033	345,477	2,780,993	497,813	1,975,179	-	-	-	-	-	-
Less net loss from irrigation operations since inception	4,422,810	-	-	3,874,301	-	-	-	489,006	418,020	-	358,517	-	-	-	-	-	-	-
	65,862,054	3,104,993	14,265,167	49,834,264	4,588,417	697,207	53,798	624,039	763,497	2,780,993	856,330	1,975,179	-	-	-	-	-	-
Total	2,269,495,457	419,214,134	72,353,729	524,321,157	98,729,830	28,175,032	281,453,493	60,039,504	86,939,474	148,583,366	33,841,645	254,416,148	120,061,652	31,034,891	46,429,493	57,680,446	3,490,052	2,731,411
CURRENT AND ACCRUED LIABILITIES:																		
Accounts payable	12,651,275	5,327,056	116,441	3,196,770	53,439	46,097	96,405	41,910	43,374	371,653	245,871	269,023	727,162	189,724	463,443	773,139	40,828	643,940
Employees' accrued leave	2,371,786	2,471,786	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	15,123,061	7,798,842	116,441	3,196,770	53,439	46,097	96,405	41,910	43,374	371,653	245,871	269,023	727,162	189,724	463,443	773,139	40,828	643,940
DEFERRED CREDITS	437,035	437,035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MATURED INSTALLMENTS OF FILLED OBLIGATIONS FOR USE OF IRRIGATION FACILITIES	2,107,044	-	-	97,121	-	-	-	-	-	-	2,009,923	-	-	-	-	-	-	-
CONTRIBUTIONS IN AID OF CONSTRUCTION	1,369,450	-	200	1,557,844	-	-	-	-	1,499	132	222,825	4,450	82,500	-	-	-	-	-
	\$2,289,032,047	\$427,450,011	\$72,470,370	\$529,172,892	\$98,783,269	\$28,221,129	\$281,549,898	\$60,081,414	\$86,984,347	\$148,955,151	\$36,320,264	\$254,689,621	\$120,871,114	\$31,224,615	\$46,892,936	\$58,453,585	\$3,530,880	\$3,375,351

*Deduction

The accompanying notes (schedule 7) are an integral part of this statement.

The opinion of the General Accounting Office on the financial statements appears in the covering letter of transmittal to the Secretary of the Interior.

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

NOTES TO THE FINANCIAL STATEMENTS

SCHEDULES 1 TO 6, INCLUSIVE

Note 1. Composition of the Columbia River Power System and Related Activities

The Columbia River Power System and Related Activities consist of the Bonneville Power Administration and multiple-purpose projects of the Corps of Engineers and the Bureau of Reclamation for which the Bonneville Power Administration is the power-marketing agent. The transmission system and the hydroelectric plants of these multiple-purpose projects are operated as an integrated power system.

The following multiple-purpose projects, together with the transmission system of the Administration, constitute the Columbia River Power System and Related Activities:

<u>Agency and project</u>	<u>Operation of first unit (fiscal year)</u>	<u>Kilowatts</u>	
		<u>Installed capacity, June 30, 1961</u>	<u>Ultimate installed capacity presently scheduled</u>
Corps of Engineers:			
Bonneville	1938	518,400	518,400
McNary	1954	980,000	980,000
Detroit-Big Cliff	1954	118,000	118,000
Albeni Falls	1955	42,600	42,600
Lookout Point-Dexter	1955	135,000	135,000
Chief Joseph	1956	1,024,000	1,024,000
The Dalles	1957	1,119,000	1,119,000
Ice Harbor	-	-	270,000
Cougar	-	-	25,000
Hills Creek	-	-	30,000
John Day	-	-	1,350,000
Lower Monumental	-	-	405,000
Green Peter-Foster	-	-	110,000
Total, Corps of Engineers		<u>3,937,000</u>	<u>6,127,000</u>
Bureau of Reclamation:			
Columbia Basin	1942	1,944,000	1,944,000
Hungry Horse	1953	285,000	285,000
Yakima (Kennewick Division)	1956	12,000	12,000
Yakima (Roza Division)	1959	11,250	11,250
Total, Bureau of Reclamation		<u>2,252,250</u>	<u>2,252,250</u>
Total		<u>6,189,250</u>	<u>8,379,250</u>

Note 1 (continued)

Ice Harbor, Cougar, Hills Creek, John Day, Lower Monumental, and Green Peter-Foster Projects of the Corps of Engineers are under construction. In addition, certain specific irrigation facilities at the Chief Joseph Project, which are included in the project's statement of assets and liabilities, were constructed by the Bureau of Reclamation.

The Yakima Project has been included in these statements only to the extent of the Kennewick and Roza Divisions; the assets and liabilities of four other divisions have been omitted. Certain costs of the Storage Division, one of those omitted, are allocable directly to the irrigation operations of the Kennewick and Roza Divisions by tentative Bureau of Reclamation determination.

Note 2. Accounting policies

Accounting policies for the Bonneville Power Administration and the individual projects constituting the System are not wholly consistent with regard to depreciation, the recording of interest as a charge to expense and to construction work in progress, the inclusion of costs incurred by other Federal agencies, and the capitalization of investigations costs.

Depreciation. In fiscal year 1961, the straight-line method was used to compute depreciation for property of the Bonneville Power Administration, and for all individual projects in the System except the Columbia Basin Project. The compound-interest method, employing an interest factor of 2.5 percent, was used in computing depreciation on most of the plant investment allocated to power at the Columbia Basin Project of the Bureau of

Note 2 (continued)

Reclamation. Prior to fiscal year 1961, the compound-interest method was used on most of the property of the Bonneville Project. In fiscal year 1961 this method of computing depreciation was changed and the straight-line method of depreciation was applied to the remaining estimated service lives of the property at the beginning of the fiscal year. Recorded depreciation expense for fiscal year 1961 was about \$313,000 more than it would have been under the compound-interest method. The total accumulated depreciation under the compound-interest method was computed by the Corps of Engineers to be about \$10 million less than the amount of depreciation that would have been accumulated by using the straight-line method.

At the McNary Project the estimated service lives of power facilities were reduced in fiscal year 1961 on the basis of engineering studies. As a result depreciation expense for this project was increased about \$1,000,000 for fiscal year 1961.

All property of the Bonneville Power Administration is allocated to power and is depreciated where appropriate. Depreciation is recorded on depreciable property allocated to commercial power and to all other purposes at projects of the Corps of Engineers. Depreciation is recorded in special memorandum accounts on property allocated to commercial power for projects of the Bureau of Reclamation and on specific power facilities allocated to irrigation pumping at the Columbia Basin Project; no depreciation is recorded on most of the other property allocated to irrigation or to other purposes.

Note 2 (continued)

Estimated service lives of the various classes of property have been determined by engineering studies. No item of property has been assigned a service life in excess of 100 years, except for certain property at the Hungry Horse Project which has been assigned a maximum of 150 years. Costs of land and land rights for the Bonneville Power Administration have been included in the base for computing depreciation except for amounts paid to former owners for fee title. All costs of acquiring fee title to lands of the Corps projects are excluded from the base for computing depreciation, although any costs of acquiring intangible rights in land are depreciated. All costs associated with the acquisition of land and land rights at the Columbia Basin Project are depreciated; no costs associated with the acquisition of land and land rights at other Bureau projects are depreciated.

Interest. The Administration and the Corps of Engineers have recorded interest in their accounts at the rate of 2.5 percent on the net Federal investment allocated to commercial power and all other purposes.

For the Bureau of Reclamation projects included in these financial statements, interest has been included at the rate of 2.5 percent on only the net Federal investment allocated to commercial power.

Interest on the net Federal investment, in nonpower purposes, recorded by Corps of Engineers cumulatively through June 30, 1961, on projects in service amounted to \$43.4 million on a nonpower investment of \$145.7 million. The Bureau of Reclamation's nonpower investment on which no interest was recorded amounted to \$406.8 million.

Note 2 (continued)

Interest on the Federal investment recorded prior to operations has been charged to property costs (interest during construction).

Costs incurred by other agencies. Bonneville Power Administration has recorded in its accounts a total of \$19,096,834 of actual or estimated costs for rentals, property, materials, and services furnished without charge by the General Services Administration and other Federal agencies, and death disability claims on account of the Administration employees paid by the Bureau of Employees' Compensation, Department of Labor. For the fiscal year 1961, the Administration recorded in its accounts \$1,001,303 of costs for rentals, property, materials, and services furnished without charge; of this amount, \$456,503 was included in operating expenses and \$544,800 was included in construction costs. It is not the practice of the Corps of Engineers or the Bureau of Reclamation to include in its accounts amounts incurred by other Federal agencies and not assignable to the projects pursuant to law or administrative policy.

Investigations costs. Expenditures for preliminary surveys and investigations have been included as a part of construction costs, where appropriate, by the Administration and the Bureau of Reclamation. Expenditures for preliminary surveys and investigations are included as a part of project costs by the Corps of Engineers for projects or project modifications requiring construction funds after fiscal year 1959.

Note 3. Allocation of joint costs and expenses

Bonneville Power Administration. All of the property costs and expenses of the Bonneville Power Administration are considered as specific commercial power costs.

Bonneville Project. The costs of property, plant, and equipment determined to be jointly useful for power generation and for navigation, consisting principally of the dam, reservoir, and fishways, have been allocated 50 percent to power and 50 percent to navigation by the Federal Power Commission under the provisions of the Bonneville Project Act (16 U.S.C. 832f). Operation and maintenance expenses applicable to joint facilities have been allocated to power and to navigation in the same proportion as the related property costs.

Columbia Basin Project. The costs of property, plant, and equipment determined to be jointly useful for power generation and for other purposes, consisting principally of the dam, reservoir, and general service facilities, have been allocated 56 percent to commercial power (including downstream river regulation) and 44 percent to irrigation after assigning \$1,000,000 to navigation. Costs of specific power facilities (principally powerhouses and generating equipment) have been allocated to commercial power and to irrigation pumping power in proportion to the relative value of power delivered for each purpose except that the cost of the last 3 of the 18 main generating units and related electrical facilities has been assigned to commercial power. These allocations have been made by the Secretary of the Interior under the

Note 3 (continued)

provisions of the Reclamation Project Act of 1939 (43 U.S.C. 485h). The expenses of operating and maintaining the joint facilities have been allocated in the same proportions as the related property costs for purposes of presenting financial statements on the commercial power operation.

Hungry Horse Project. The costs of property, plant, and equipment determined to be jointly useful for power generation and flood control purposes, consisting principally of the dam and reservoir, have been allocated 70 percent to commercial power and 30 percent to flood control. These allocations were approved by the Commissioner of Reclamation on June 24, 1960, and were ratified by the Assistant Secretary for Water and Power Development, Department of the Interior, on September 30, 1960. Operation and maintenance expenses applicable to joint facilities have been allocated to commercial power and flood control in the same proportions as the related property costs.

During fiscal year 1960, the Hungry Horse Project accounts were initially adjusted to give effect to the firm cost allocation percentages. This adjustment resulted in a decrease of \$865,026 in interest, depreciation, and operation and maintenance expenses charged to commercial power operations from inception through June 30, 1959.

During fiscal year 1961, the Hungry Horse Project accounts were further adjusted to give effect to reclassification of certain project features as to purpose in order to conform with the purposes that were specifically stated in the final cost

Note 3 (continued)

allocation report. An outlet gate having a cost of \$1,000,000 was reclassified from a joint facility to a specific flood control facility. Penstocks having a cost of \$3,693,616 were reclassified from specific power to joint facilities. As a result of the reclassifications, cumulative adjustments were recorded which decreased fiscal year 1961 power expenses by \$484,023, consisting of \$378,220 interest expense on the Federal investment and \$105,803 depreciation expense on power facilities.

Albeni Falls Project. Firm allocations of the costs of plant, property, and equipment determined to be jointly useful for power generation and for other purposes and of operation and maintenance expenses applicable to joint facilities have been approved by the Corps of Engineers. Approved firm cost allocation percentages for the Albeni Falls Project are as follows:

	<u>Percent</u>	
	<u>Construc- tion costs</u>	<u>Operation and maintenance costs</u>
Power	97.5	98.0
Flood control	1.5	1.0
Navigation	<u>1.0</u>	<u>1.0</u>
Total	<u>100.0</u>	<u>100.0</u>

McNary Project. The River and Harbor Act of 1945 (59 Stat. 22) authorized this project and provided that the Department of the Interior would market the electric energy in accordance with the terms of the Bonneville Project Act. Under the provisions of the Bonneville Project Act, the Federal Power Commission is authorized to allocate the construction costs of joint facilities to power

Note 3 (continued)

and nonpower purposes. In an interim report the Commission allocated 97.5 percent of the construction costs of joint facilities to commercial power and 2.5 percent to navigation. For the purposes of this report, the costs of joint facilities have been allocated in accordance with these percentages. Operation and maintenance expenses applicable to joint facilities have been allocated to commercial power and to navigation operations on the same basis.

Detroit-Big Cliff, Lookout Point-Dexter, The Dalles, and Chief Joseph Projects. Under the provisions of section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), the Secretary of the Interior became the marketing agent for energy generated by projects constructed and operated by the Corps of Engineers that is excess to project needs. The Bonneville Power Administration has been designated the marketing agent for these projects in the Columbia River Basin. The act, however, does not specify who shall make an allocation of the construction costs. Tentative allocations of the construction costs of the joint facilities have been made by the Corps of Engineers, as follows:

	<u>Percent</u>		
	<u>Detroit- Big Cliff</u>	<u>Lookout Point- Dexter</u>	<u>The Dalles</u>
Commercial power	44.27	25.94	92.72
Flood control	46.72	65.66	-
Navigation	.30	1.21	7.28
Irrigation	7.77	7.19	-
Municipal water supply	<u>.94</u>	<u>-</u>	<u>-</u>
Total	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>

For purposes of this report, the joint construction costs have been allocated in accordance with the foregoing percentages.

Note 3 (continued)

The entire construction costs of the joint facilities at the Chief Joseph Project have been allocated by the Corps of Engineers to commercial power. Because of related irrigation development by the Bureau of Reclamation at the Chief Joseph Project, this allocation may be changed at a later date to assign some comparatively minor amounts to irrigation.

The expenses of operating and maintaining facilities serving more than one purpose have also been allocated on the basis of tentative allocation percentages arrived at by the Corps of Engineers. The percentages are as follows:

	<u>Percent</u>		
	<u>Detroit- Big Cliff</u>	<u>Lookout Point- Dexter</u>	<u>The Dalles</u>
Commercial power	56.91	38.25	95.00
Flood control	35.10	54.89	-
Navigation	.25	.98	5.00
Irrigation	6.89	5.88	-
Municipal water supply	<u>.85</u>	<u>-</u>	<u>-</u>
Total	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>

As in the case of joint construction costs, the entire operation and maintenance expense of joint facilities at the Chief Joseph Project is considered applicable to commercial power.

Yakima Project (Kennewick and Roza Divisions). A firm allocation of the costs of the Yakima Project has not been made by the Secretary of the Interior.

A tentative allocation of the total costs to date of the Kennewick Division has been made by the Bureau of Reclamation. The

Note 3 (continued)

costs of property, plant, and equipment determined to be jointly useful for power generation and for irrigation have been allocated between these purposes in accordance with the following percentages:

	<u>Percent</u>		<u>Total</u>
	<u>Power</u>	<u>Irrigation</u>	
Prosser diversion dam:			
Original	-	100.0	100.0
Additions	100.0	-	100.0
Headworks and common facilities	14.6	85.4	100.0
Chandler Canal--1st section:			
Original	-	100.0	100.0
Additions	100.0	-	100.0
Chandler Canal--2d section:			
Original	-	100.0	100.0
Additions	22.5	77.5	100.0
General plant	71.2	28.8	100.0

The expenses of operating and maintaining facilities serving more than one purpose were allocated 64.4 percent to power and 35.6 percent to irrigation during fiscal year 1961.

A tentative allocation of the total costs to date of the Roza Division has been made by the Bureau of Reclamation on the basis of the use of facilities. The costs of property, plant, and equipment have been allocated between power and irrigation in accordance with the following percentages:

	<u>Percent</u>		<u>Total</u>
	<u>Power</u>	<u>Irrigation</u>	
Roza diversion dam and headworks:			
Original	-	100.0	100.0
Modification	100.0	-	100.0
Main canal:			
Original, except \$1,000,000 of canal costs	-	100.0	100.0
Canal costs of \$1,000,000	20.0	80.0	100.0
Modification	100.0	-	100.0
Roza power plant, switchyard, and operator's dwelling	20.0	80.0	100.0
34.5 kv transmission line	7.0	93.0	100.0
East Selah and pumping plant substations and balance of transmission lines	-	100.0	100.0

Note 3 (continued)

The operation and maintenance expenses of joint facilities were allocated 13.2 percent to commercial power and 86.8 percent to irrigation during fiscal year 1961.

Note 4. Actual repayment and scheduled repayment of commercial power investment

The Bonneville Power Administration has the responsibility of fixing commercial power rates at a level which, over periods established by or pursuant to law, will assure repayment of the investment in commercial power and the investment in related irrigation activities assigned for repayment from commercial power revenues. Repayment requirements for the Columbia River Power System are found in the Flood Control Act of 1944, the Reclamation Project Act of 1939, the several acts authorizing construction, and in the administrative interpretations thereof. Accordingly, System power rates reflect a composite of the requirements of these acts applied to the individual projects and the Administration.

An allocation of System power receipts among the generating projects and the Administration, designed to satisfy their respective requirements, is made annually pursuant to agreements reached by the Administration with the Corps of Engineers and the Bureau of Reclamation. Funds received from commercial power operations for repayment of the Federal investment in Bonneville Power Administration and Corps of Engineers projects are deposited into the Treasury as miscellaneous receipts. Funds received for repayment of Bureau of Reclamation projects are deposited into the Treasury to the reclamation fund.

Note 4 (continued)

The statement of repayment of investment in commercial power program (schedule 4) compares, for fiscal year 1961 and from inception to June 30, 1961, the actual repayment of Federal investment in commercial power with the scheduled repayment established by law or administrative policy pursuant to law. Power receipts returned to the Treasury have been applied first to the repayment of operation and maintenance and interest expenses, with the remainder being applied to repayment of the capital investment in commercial power. On projects in which part of the irrigation investment is assigned for repayment from commercial power revenues, the assistance is assumed to begin after repayment of the commercial power investment. Commercial power rate and repayment requirements are affected by irrigation assistance to the extent that the assistance makes necessary the recovery of commercial power investment in a shorter period of years. The annual deposits by Bonneville Power Administration into the Treasury to the reclamation fund on behalf of reclamation projects are based on repayment requirements set forth in rate and repayment studies made annually by the Bureau of Reclamation. These studies prepared by the Bureau of Reclamation show requirements for future years after giving effect to actual repayment to date rather than fixed annual repayment obligations. Consequently, repayment for each Bureau project is considered to be just on schedule.

The rate and repayment requirements established by law or administrative policy pursuant to law for the individual projects and the Administration are as follows:

Note 4 (continued)

Bonneville Project, Bonneville Power Administration, and McNary Project. The Bonneville Project Act (16 U.S.C. 832f) provides that rate schedules shall be drawn having regard to the recovery of the cost of producing and transmitting electric energy excess to project needs, including the repayment of the capital investment over a reasonable period of years. This provision of the Bonneville Project Act was also applied to McNary Project by the authorizing legislation.

In determining the rate and repayment requirements for the Bonneville Project, the Bonneville Power Administration, and the McNary Project, the "cost of producing and transmitting electric energy" is substantially the same cost, exclusive of depreciation, as that used in preparing these financial statements, except that for purposes of schedule 4 the noncash power exchange transactions have been excluded for Bonneville Power Administration. The repayment of the capital investment over a reasonable number of years has been administratively determined to be the recovery, during the periods of their respective service lives, of the cost of the power facilities having lives of less than 50 years and the repayment of the remainder of the capital investment in power facilities over a period of 50 years subsequent to the "in service" date of such facilities.

Albeni Falls, Detroit-Big Cliff, Lookout Point-Dexter, Chief Joseph, and The Dalles Projects. Rate and repayment requirements for these projects are governed by section 5 of the Flood Control Act of 1944. The provisions of this section are similar to the

Note 4 (continued)

corresponding provisions of the Bonneville Project Act and state that rate schedules shall be drawn having regard to the recovery of the cost of producing and transmitting electric energy excess to project needs, including the repayment of the capital investment over a reasonable period of years. Rate and repayment requirements for these projects have been determined by Bonneville Power Administration in cooperation with the Corps of Engineers in the same manner as those for the Bonneville Project, the Administration, and the McNary Project.

The acts of July 27, 1954 (68 Stat. 568), and May 5, 1958 (72 Stat. 104), authorized the Secretary of the Interior to construct irrigation facilities constituting the Foster Creek and Greater Wenatchee Divisions of the Chief Joseph Project. The acts provide for the use of surplus power revenues to assist in repayment of the irrigation investment. In accordance with the opinion dated August 28, 1959, of the Portland Regional Solicitor, Department of the Interior, the use of power revenues for repayment of the irrigation investment in the Foster Creek and Greater Wenatchee Divisions of the Chief Joseph Project will not be required until after repayment of the project commercial power investment.

Hungry Horse Project. Construction of Hungry Horse Dam and Reservoir was authorized by the act of June 5, 1944 (43 U.S.C. 593a). By the act of May 29, 1958 (72 Stat. 147), the Hungry Horse Project was made subject to the provisions of Federal reclamation law. On the basis of rate and repayment studies by the

Note 4 (continued)

Bureau of Reclamation, the Administration allocates power receipts annually to the Hungry Horse Project in an amount sufficient to repay, over a period of 50 years, costs of operation and maintenance, replacement of facilities, and investment in commercial facilities allocated to commercial power with interest at 3 percent.

The investment in commercial power to be repaid that was used by the Bureau of Reclamation in setting Hungry Horse Project rate and repayment requirements differs in two important respects from the investment as presented by the Bureau of Reclamation for use in the financial statements of the Columbia River Power System and Related Activities. For determining rate and repayment requirements, interest has not been capitalized during construction and interest during operations has been computed at a rate of 3 percent on the unrepaid investment. Because of these interest differences, the net investment of U.S. Government as shown in the financial statements at June 30, 1961, amounting to \$94,141,413, was about \$2,350,000 greater than the net investment shown by the Bureau of Reclamation.

As of June 30, 1961, funds returned to the U.S. Treasury in prior years, amounting to \$267,313, were reclassified as applying to a nonpower program instead of the power program. These funds consisted principally of miscellaneous receipts and were reclassified in accordance with the percentages used in allocating construction costs of joint facilities to purposes.

Columbia Basin Project. Reclamation law, as supplemented, and Executive Order 8526 require that payments be made into the

Note 4 (continued)

reclamation fund of the United States Treasury, for the account of Columbia Basin Project, of such revenues received by Bonneville Power Administration from the sale of electric energy as may be properly allocable to the project. On the basis of official cost allocations and annual payments (estimated at \$12,800,000 through fiscal year 1964 and at \$13,145,000 thereafter) from power receipts by the Administration to the Columbia Basin Project, the fiscal year 1960 rate and repayment study by the Bureau of Reclamation shows that a period of 96 years will be required to cover:

1. Operation, maintenance, and replacement of facilities allocated to commercial power.
2. Interest at 3 percent on unrepaid investment in facilities allocated to commercial power.
3. Investment in commercial power facilities.
4. Assistance to irrigators in repaying the investment in irrigation, estimated to require about \$589,000,000 of the total assistance shown as \$629,000,000; the balance will be repaid from other project revenues, principally those from irrigation pumping.

The rate and repayment study shows also that commercial power investment will be repaid in the 34th year (1976) after the first unit was placed in service and that net power revenues after that date will render the assistance necessary to repay the irrigation investment over the remaining 62 years of the project repayment period. The irrigation assistance will be repaid within 50 years after the last block of land is scheduled to receive water, currently estimated to be in 1988.

The investment in commercial power to be repaid as defined by the Bureau of Reclamation in setting Columbia Basin Project rate

Note 4 (continued)

and repayment requirements differs in several important respects from the investment as presented by the Bureau of Reclamation for use in the financial statements of the Columbia River Power System and Related Activities. For determining rate and repayment requirements, interest has not been capitalized during construction, interest has not been computed on investment in facilities held for future downstream river regulation through fiscal year 1961, and interest during operations has been computed at a rate of 3 percent on the unrepaid capital investment. Because of these interest differences, the net investment of U.S. Government as shown in the financial statements at June 30, 1961, amounting to \$474,486,893, was about \$29,000,000 greater than the net investment shown by the Bureau of Reclamation.

Yakima Project (Kennewick and Roza Divisions). Rate and repayment requirements for the Kennewick Division of the Yakima Project are governed by the Reclamation Project Act of 1939 and the authorizing act of June 12, 1948 (62 Stat. 382). The latter act provides an over-all repayment period of 66 years for the reimbursable investment in power and irrigation, with power revenue assistance to irrigators in repayment of the irrigation investment. It provides also for not less than 2.5 percent interest on the investment in commercial power and authorizes the use of one fifth of such interest to assist in repayment of the irrigation investment.

Repayment of investment in commercial power for the Kennewick Division is expected to require 35 years (1991), and net revenues after that date are to render the assistance necessary (about

Note 4 (continued)

\$4,690,000) to repay the irrigation investment over the remaining 31 years of the project repayment period.

Rate and repayment requirements for the Roza Division are governed by the Reclamation Project Act of 1939. The rate and repayment study by the Bureau of Reclamation shows that repayment of investment in commercial power for the Roza Division is expected to require 13 years (1972), and net revenues (including irrigation pumping power revenue) after that date are to render the assistance necessary (about \$4,517,000) to repay the irrigation investment over the remaining 49 years of the project repayment period.

Excess of scheduled repayment over amounts returned to the Treasury. During fiscal year 1961, funds returned to the United States Treasury were insufficient to cover the fiscal year scheduled repayment of capital investment established by law or administrative policy. The deficiency in fiscal year 1961 revenues was largely absorbed by the Bonneville Power Administration and the Bonneville and McNary Projects of the Corps. However, schedule 4 shows that funds returned to the Treasury on behalf of the Corps projects and the Bonneville Power Administration were substantially in excess of the cumulative scheduled repayment at June 30, 1961.

The scheduled repayment of capital investment for the McNary Project was based on the tentative cost allocations included in the project records as shown in schedule 3. The amount of funds returned to the United States Treasury by Bonneville Power Administration on behalf of this project for fiscal years 1960 and 1961

Note 4 (continued)

was based on a new cost allocation study made by the Corps of Engineers and used by Bonneville Power Administration for rate study purposes and consideration of existing excess of funds returned over repayment requirements. This cost allocation study resulted in cost allocations which assigned less costs to power purposes than were assigned under the tentative cost allocations included in the project records as shown in schedule 3. Accordingly, for fiscal year 1961 the scheduled repayment of capital investment for the McNary Project was substantially in excess of the proceeds available for repayment after paying operation, maintenance, and interest expenses.

Note 5. Investment of the United States Government

All funds expended on behalf of the Columbia River Power System and Related Activities for the acquisition of commercial power facilities, and for the operation and maintenance of such facilities, are obtained through congressional appropriation, except that Bonneville Power Administration may use a continuing fund to defray emergency expenses and to assure continuous operation. The continuing fund was authorized by the Bonneville Project Act, as amended (16 U.S.C. 832j), to be derived from receipts from sale of electric energy. To June 30, 1961, receipts transferred to the continuing fund totaled \$1,833,035, of which \$1,333,035 had been expended and \$500,000 remained unexpended. With the exception of those available in the continuing fund, receipts from the sale of electric energy are not available for expenditure and are deposited into the United States Treasury.

Note 5 (continued)

An interest factor is included as a part of the Federal investment, but no funds for this factor were appropriated by the Congress. An interest charge of 2.5 percent a year has been recorded on the net Federal investment in commercial power and investment in certain other purposes. The net cost of materials and services transferred from other Federal agencies, and included in the Federal investment, does not represent appropriations to the System but only the recording of actual or estimated costs of such materials and services. (See note 2.)

The total investment shown on the statement of combined assets and liabilities represents the appropriations, interest, and other resources associated with the acquisition of assets and the operation of facilities on an accumulated basis. The deductions from total investment for funds returned to the United States Treasury and nonreimbursable expenses are also shown on an accumulated basis. Funds returned to the Treasury from commercial power activities apply to repayment of investment used for current operation, maintenance, and interest expenses as well as accumulated investment in fixed assets.

Note 6. Rental of electric property

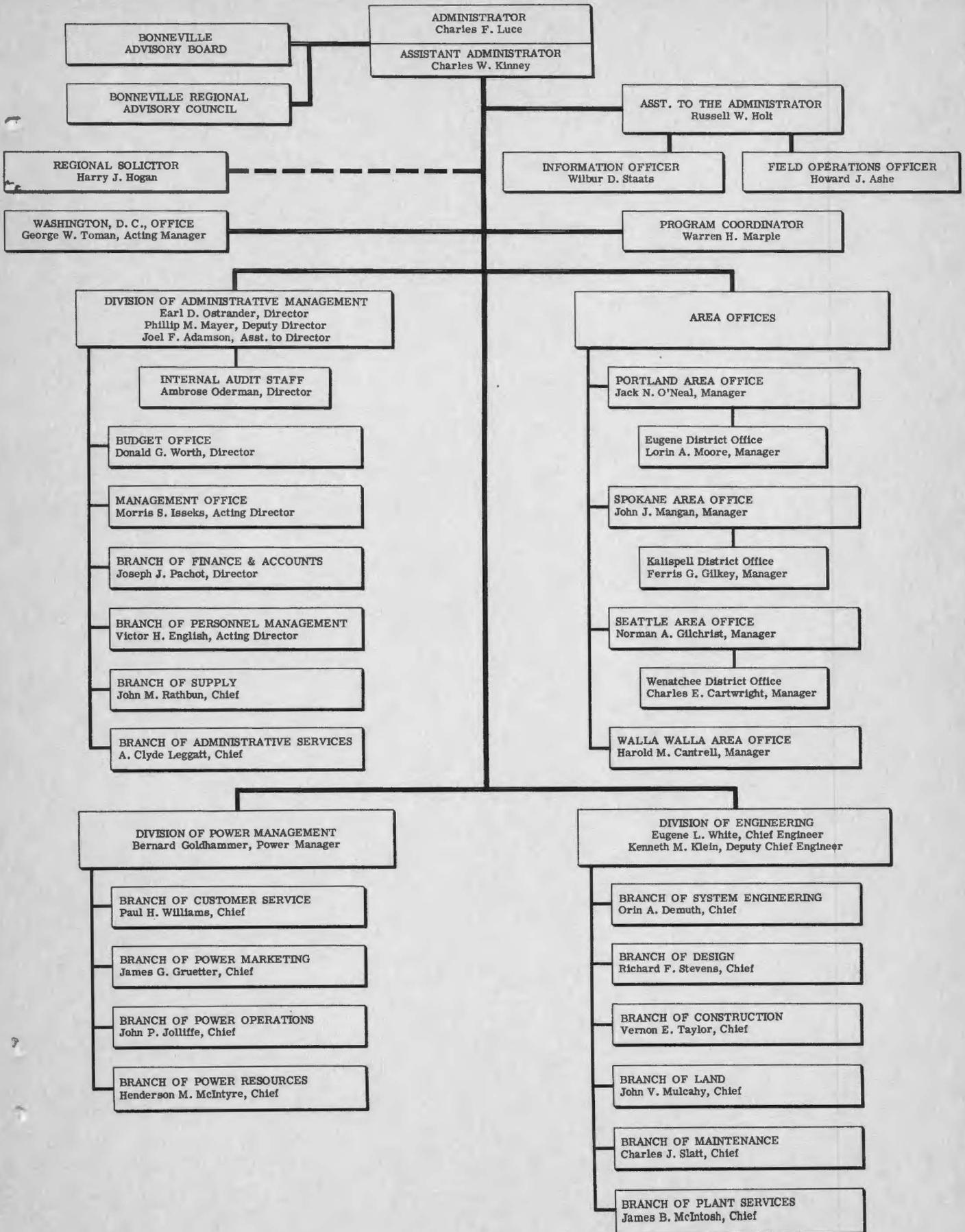
The Bonneville Power Administration charges for the use of transmission facilities to transfer power for other utilities and industrial customers. Revenues of \$2,707,321 were accrued in the Administration accounts in connection with such activities. Additional revenues totaling \$8,636 from rental of electric property

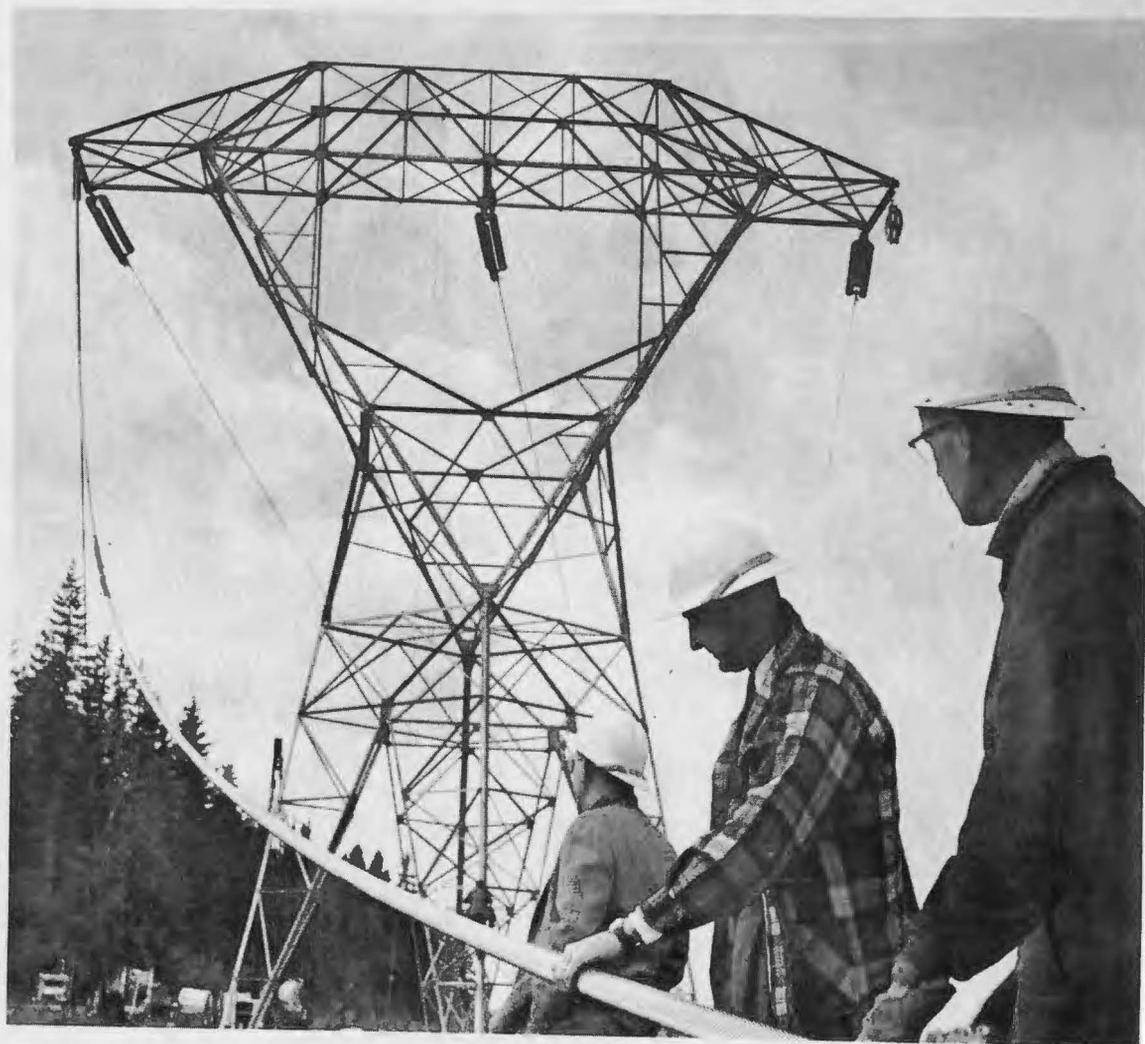
Note 6 (continued)

were accrued in the accounts of the Columbia Basin Project and the Kennewick and Roza Divisions of the Yakima Project.

Note 7. Write-off of unrecovered cost of property

The \$3,075,423 write-off of unrecovered cost of property to power operations during fiscal year 1960 represents the power portion of unrecovered costs arising from the disposal of the community of Coulee Dam. Total unrecovered costs were \$6,209,518; the remaining portion of \$3,134,095 was allocated to irrigation. Unrecovered costs resulted principally from the transfer of municipal-type property, school buildings, and highway improvements to local and State government units without cost, pursuant to the provisions of the Coulee Dam Community Act of 1957 (16 U.S.C. 835 (c) note).





Two engineers check the giant 500,000 volt experimental conductor as the first string of a test installation is being pulled into place.

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