1953

Report on the Columbia River Power System

U. S. DEPARTMENT OF THE INTERIOR

BONNEVILLE POWER ADMINISTRATION

The Columbia River Power System

U.S. Department of the Interior • Bonneville Power Administration

1953 Report

CONSISTING OF

THE BONNEVILLE POWER ADMINISTRATION,

& POWER COMPONENTS OF

THE BONNEVILLE DAM PROJECT,

THE COLUMBIA BASIN PROJECT

(GRAND COULEE DAM)

& THE HUNGRY HORSE PROJECT

Portland 8, Oregon

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Letter of Transmittal

December 31, 1953

The Honorable
The Secretary of Interior
Washington, D. C.

My dear Mr. Secretary:

The sixteenth Annual Report of the Bonneville Power Administration, covering operations of the Columbia river power system, from July 1952 to June 30, 1953, is herewith respectfully submitted in conformity to the requirements of Section 9 (c) of the Bonneville Project Act.

This report covers all principal phases of the management, operation and repayment of the federal investment and transmission facilities of the Bonneville Power Administration and the power component of the Bonneville dam project, U. S. Army Engineers, Department of the Army and the Columbia basin and Hungry Horse projects, Bureau of Reclamation, Department of the Interior during the past fiscal year.

In fiscal year 1953, water conditions, although not of critical year proportions, were much less favorable than in 1952. As a result, gross operating revenues of $39,175,000 were $1,005,000, or 2.5 percent, below the

previous twelve months. The lower gross, together with increased costs for generation, including initial operations of Hungry Horse project on a partially completed basis, and for transmission produced net revenues of $9,567,000, a drop of 39.8 percent from 1952. On a cumulative basis through June 30, 1953, gross revenues of $304,429,000 have produced net revenues of $93,410,000 after payment of all expenses for operation, maintenance, depreciation and interest.

Repayment of the federal investment in the power system continues well ahead of schedule. Total cash receipts of $292,782,000 returned to the Treasury through June 30, 1953, have covered operation and maintenance expenses of $74,865,000 and interest expense of $72,060,000, leaving $145,857,000 repaid on the capital investment. Such repayments represent 26.9 percent of the capital investment in the transmission system, 34.0 percent of the power capital investment at the Bonneville dam project, and 19.6 percent of the power capital investment at the Columbia basin project.

The Administration was operating 5,707 circuit miles of transmission line and 145 substations with a total capacity of 4,300,250 kilovolt amperes at the end of the fiscal year. Addition of 753 circuit miles of transmission line and 13 substations during the year kept the agency well on schedule in construction of new transmission facilities to carry generation from federal dams nearing completion and to meet added power requirements of load centers.

The financial and engineering progress shown in this 1953 report has been characteristic of Bonneville's Annual Reports for the past several years.

This sixteenth Annual Report is the last to be submitted by present management of the Administration; and, for this reason, it seems pertinent here to make some observations as to the future of the Columbia river power system operations.

It is urged that in the future the low rate policy be maintained. Basic to the entire principle of public development of the Columbia river power resources has been the long-term purpose of balancing the Pacific Northwest region's timber-agricultural economy with industrial payroll development. Continuing studies by the Bonneville staff over the past years, as well as the performance record of the agency, have shown that this objective can best be achieved by keeping the wholesale rate for power at a sufficiently low level to offset the disadvantages of high regional freight rates and the consequent high cost of importing raw materials and exporting manufactured products.

Therefore, it is urgently recommended that pending allocations of the cost of new multiple-purpose projects be determined in the light of these factors. Otherwise, the development of new basic industry may be seriously hampered, the future market for industrial power will be sharply limited, and the repayment ability of the program may be impaired.

It must also be pointed out that an early beginning of new multiple-purpose projects, particularly those embodying large, upstream storage capacity, is now imperative if economic development of the Northwest region is to be maintained in sound, dynamic condition. Projects now built or presently under construction are not sufficient of themselves to assure the objectives inherent in the Columbia river development statutes.

Urgent also is new substantive legislation which will permit implementation of the partnership principle of river development. To be fully effective, passage of such legislation should be undertaken at the second session of the 83rd Congress. A simple but very effective measure to accomplish that objective would be to permit purchase by the Department of the Interior of excess generation developed by local regional agencies. Such legislation, if enacted with provisions adequately safeguarding its operation, would not only provide concrete assistance to local agencies in financing such projects but would also preserve the strong controls against monopoly as stated in the Bonneville Project Act.

Unless such controls are maintained, there will be an ever-present danger of a growth of monopoly of a great public resource. There will also be danger of a growing inequity in the cost of wholesale power as among the several classes of wholesale power purchasers.

Each of the past five years I have felt it my duty to report that the level of capital investment in Columbia river development is far too low at the present to permit an adequate stimulation of private industrial enterprise which is so vital to the region's continuing prosperity and which has existed in the recent past.

Careful analysis of the region's needs for the next 20 years shows nearly 6 1/2 million kilowatts of new generation must be provided in the Columbia basin during the next two decades if the full economic potential of the region is to be assured. This requirement is in addition to generating plants now built or building.

The financial requirement for such a program will be on the order of 3 1/2 billions of dollars.

In my opinion there needs to be a very early examination on the part of the federal establishment as to the extent which it may undertake to meet this requirement; and a clear understanding will be required with local utility enterprise, both public and private, as to the extent of local responsibility for such investment.

Sincerely yours,

Paul J. Raver
Administrator

V

Financial Results of Operations

Grand Coulee, World's Largest Hydroelectric Dam

LOW STREAM FLOWS

Lack of precipitation caused stream flows throughout the Pacific Northwest to fall off rapidly in the summer and fall of 1952, and hence the output of power from the Columbia river power system, administered by the Bonneville Power Administrator, decreased to such an extent that curtailment of all interruptible loads was necessary. In addition, the Defense Electric Power Administration issued an order effective November 17, 1952, limiting power consumption of certain purchasers to 90 percent of the amounts used by them during a specified base period, and requested voluntary curtailment of loads generally.

REVENUE DECREASE

As a consequence the gross revenue of the Columbia river power system for the fiscal year 1953 amounted to $39,175,209, a decrease of $1,004,937 or 2.50 percent from the previous year. After deducting all expenses for operation, maintenance, administration, marketing, depreciation and interest, net revenue was $ 9,567,592, a decrease of 39.8 percent from fiscal year 1952. A large part of the decrease in net revenue results from the addition of new and higher cost transmission facilities ahead of new generation with a consequent increase in operation, maintenance, depreciation and interest expense. The remaining decrease in net revenues resulted from the drop of $1,004,937 in gross revenue and increases in expenses at Grand Coulee (which had all 18 generators in service for a full year for the first time in 1953), and inclusion of expenses of one new project, Hungry Horse. The cumulative total net revenue as of June 30, 1953, amounted to $93,409,993. Table I shows a condensed summary of revenues and expenses of the system.

TABLE I

Columbia River Power System

CONDENSED SUMMARY OF REVENUES AND EXPENSES

	Fiscal Year 1952	Fiscal Year 1953	Total to June 30, 1953
Operating Revenues	$40,180,146	$39,175,209	$ 304,429,094
Expenses of operation, maintenance, etc.	$ 9,367,657	$10,856,179	$ 82,619,508
Provision for depreciation	7,147,816	9,410,048	54,135,668
Interest expense	7,608,214	8,983,109	72,635,203
Miscellaneous deductions, net	165,818	358,281	1,628,722
Total deductions	$24,289,505	$29,607,617	$211,019,101
Surplus net revenues from power operations	$15,890,641	$ 9,567,592	$ 93,409,993

HUNGRY HORSE POWER

Energization of the first generator unit at Hungry Horse dam in October 1952 and the second unit two months later in December, coupled with storage benefits from Albeni Falls project, would ordinarily have the effect of increasing revenue had it not been for extraordinary water conditions. However, additional generation scheduled for future years, while increasing gross revenue, will produce less net revenue due to (1) the current high construction costs which increase the interest and depreciation expenses and (2) the relatively higher current cost of operation and maintenance labor, supplies and materials. These factors will conceivably necessitate an increase in the present basic $17.50 kilowatt year rate. Any adjustments necessary can become effective in December 1954 and each fifth year thereafter.

REVENUES BY CUSTOMERS

Sources of revenue by fiscal years to and including 1953 are summarized by customer categories in Table II. The source of almost half the fiscal year 1953 revenue was industrial loads. The aluminum industry accounted for 34.58 percent while other industries paid 12.04 percent. Sales to publicly owned utilities accounted for 35.44 percent while private utilities accounted for 15.92 percent of the total for that year.

Despite the period of power curtailment, sales to the aluminum industry showed a slight increase due mainly to deliveries of interruptible power to the new Alcoa plant at Wenatchee, Washington, for a short time in autumn of 1952 and deliveries since February of this year. Other industrial sales also increased slightly by $65,322 or 1.4 percent.

TABLE II

REVENUES BY CLASS OF CUSTOMER
Through Fiscal Year 1953

Class of Customer	1948 and prior	1949	1950	1951	1952	1953	Total to June 30, 1953	1953 Percentage (dollar revenue)
Industry:								
Aluminum	$ 63,674,780	$11,741,530	$12,133,254	$13,523,276	$13,376,207	$13,545,562	$127,994,609	34.58
Other 1/	16,217,945	2,219,819	2,677,580	3,774,705	4,650,425	4,715,747	34,256,221	12.04
Publicly-owned utilities	14,718,984	5,893,436	8,409,428	9,947,909	12,973,025	13,882,890	65,825,672	35.44
Privately-owned utilities	30,874,617	7,756,301	7,587,963	8,525,609	8,526,775	6,239,276	69,510,541	15.92
Other operating revenues	4,379,840	209,943	389,291	417,529	653,714	791,734	6,842,051	2.02
Total operating revenue	$129,866,166	$27,821,029	$31,197,516	$36,189,028	$40,180,146	$39,175,209	$304,429,094	100.00

1/ Includes Federal Agencies

Sales to privately owned utilities showed a decided decrease of $2,287,499 or 26.8 percent by reason of the four month long inability of the federal system to meet their requirements. Sales to public power distributors increased by $909,865 or 7.0 percent.

FEDERAL INVESTMENT

As summarized in Table IV the federal investment in power projects on the Columbia river and in related transmission facilities amounted to $871,267,934 as of June 30, 1953. This investment comprised the total of all funds appropriated and requisitioned for both construction and operations together with amounts transferred from other federal agencies, plus accumulated interest at 2 1/2 percent per year on the unrepaid balance.

Details of the interest accumulation are shown in Table III.

PAYOUT TOTALS

Except for small amounts transferred to a continuing fund which is maintained to insure continuous operation or meet emergencies, all receipts from power sales and miscellaneous sources are returned to the U. S. Treasury. As of June 30, 1953, repayments have totaled $292,781,912 leaving the unpaid balance of $578,486,022. The latter amount consists of $577,738,004 in unrepaid capital investment plus $748,018 of unrepaid operation and maintenance and interest expense at Hungry Horse dam for the fiscal year 1953.

Of the total repaid $146,924,818 represents payment of current expenses from inception to date and the remaining amount of $145,857,094 is repayment of the capital investment of $723,595,098, consisting primarily of electric utility plant as shown in Table V. The repayment is substantially in excess of scheduled requirements.

TABLE III

Columbia River Power System

SUMMARY OF INTEREST ON FEDERAL INVESTMENT AS OF JUNE 30, 1953

Interest during construction—to be returned during repayment period as part of the Federal Investment:		
Transmission system	$ 3,824,109	
Bonneville Dam	2,332,118	
Columbia Basin Project	9,729,447	
Hungry Horse Project	4,361,688	
Subtotal		$ 20,247,362
Interest on costs allocated to future river regulation—to be returned as part of repayment of future downstream projects:		
Columbia Basin Project	11,630,553	
Hungry Horse Project	84,978	
Subtotal		$ 11,715,531
Interest charged to operations—repaid currently:		
Transmission System	$26,100,501	
Bonneville Dam Project	17,070,745	
Columbia Basin Project	28,888,858	
Hungry Horse Project	575,100	
Subtotal		$ 72,635,204
Gross interest accumulation		$104,598,097

TABLE IV

Columbia River Power System

SUMMARY OF FEDERAL INVESTMENT AND REPAYMENT AS OF JUNE 30, 1953

	Gross Investment	Repoyments	Net Investment
Investment in current expense:			
Operation, maintenance, etc.	$ 75,037,632	$ 74,864,714	$ 172,918 2/
Interest 1/	72,635,204	72,060,104	575,100 2/
Total current expenses	$ 147,672,836	$ 146,924,818	$ 748,018 2/
Investment in capital assets:			
Electric plant, inventories, etc. 3/	669,496,640	145,857,084	523,639,556
Unexpended appropriations	54,098,448	–	54,098,448
Total capital investment	723,595,088	145,857,084	577,738,004
Total federal investment	871,267,924	292,781,902	578,486,022

1/ The Columbia River Power System does not receive appropriations for payment of interest, but imputes and includes in its accounts provisions for interest expense and returns receipts to the Treasury in repayment of such expense.

2/ Represents expenses at Hungry Horse Project which was in service in 1953 on a partially completed basis. These expenses were not covered by receipts returned to the Treasury in that year for the account of the Project, but as of June 30, 1953, the Project had an account due from Bonneville Power Administration of $781,000 for power operations. The transfer of receipts for this account in 1954 will repay these expenses and leave a remainder of $32,982 in repayment of capital investment of the Project.

3/ Includes interest during construction of $20,247,362, which will be repaid to the Treasury as part of the capital cost of electric plant, and $11,715,531 of interest charged to future downstream regulation recoverable from operations of future downstream hydroelectric plants.

TABLE V

Columbia River Power System

SUMMARY OF PLANT ACCOUNTS AS OF JUNE 30, 1953

	Total	Allocation	
		Non-Power	Power
Bonneville Power Administration	$ 299,094,735		$ 299,094,735
Bonneville Dam Project	86,845,427	$ 27,283,837	59,561,590
Columbia Basin Project	468,150,738	261,256,440	206,894,298
Hungry Horse Project	104,286,995	19,288,520	84,998,475
Total	$ 958,377,895	$307,828,797	$ 650,549,098
Less Combined Reserve for Depreciation			$ 52,999,506
Total Less Reserve			$ 597,549,592

RETURN BY PROJECTS

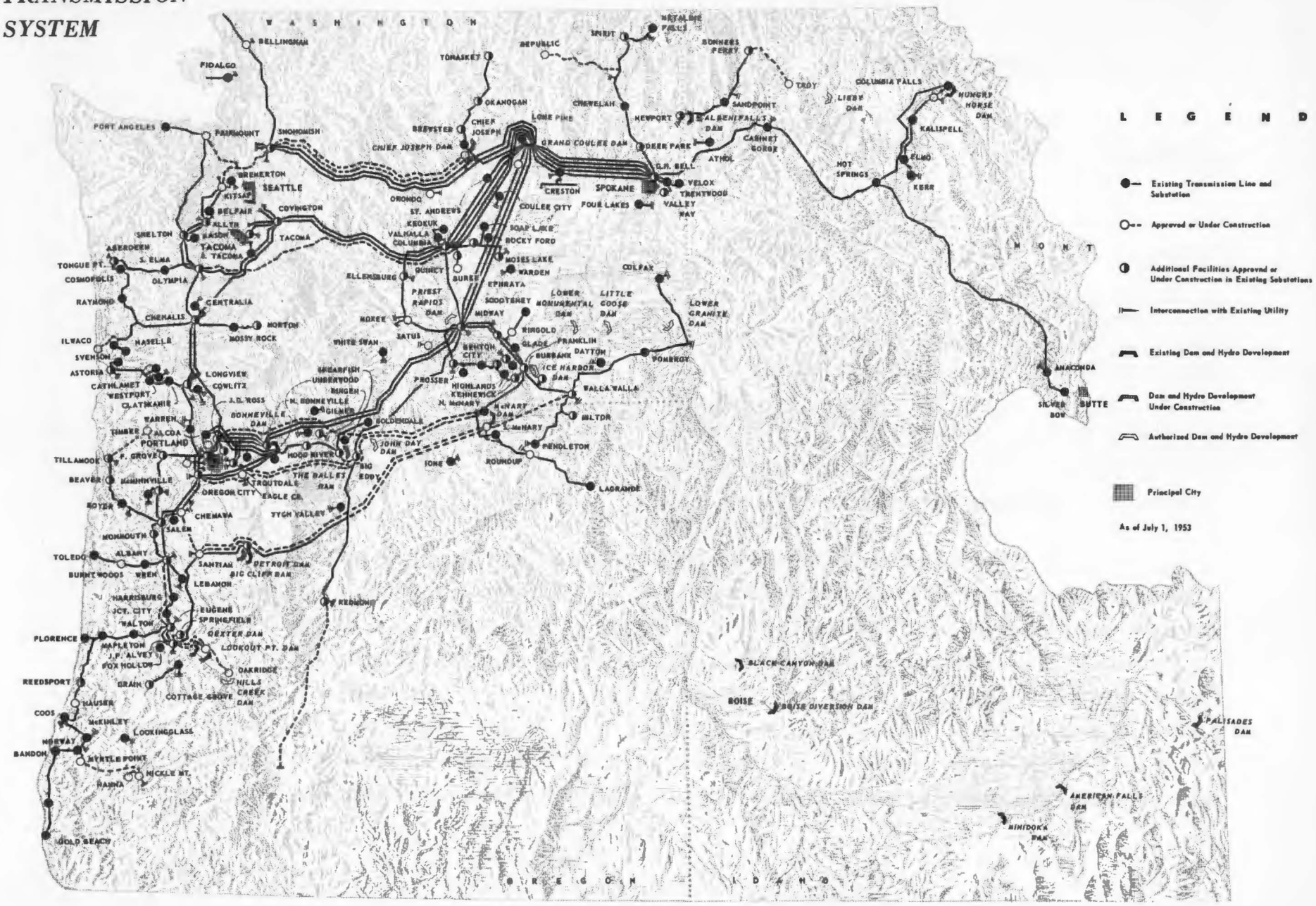
Based on individual projects the return of the power capital investment has been as follows:

Project	Gross Power Capital Investment	Deduct Unexpended Appropriations	Power Capital Investment	Repaid as of June 30, 1953	Percent	Net Power Investment
Bonneville Power Administration	$355,928,323	$50,737,393	$305,190,930	$81,964,087	26.86	$223,226,843
Bonneville Dam Project	59,923,979	99,193	59,824,786	20,343,163	34.00	39,481,623
Columbia Basin Project	220,414,582	813,081	219,601,501	43,100,278	19.63	176,501,223
Hungry Horse Project	87,328,204	2,448,781	84,879,423	449,556	0.53	84,429,867
Total	$723,595,088	$54,098,448	$669,496,640	$145,857,084	21.79	$523,639,556

BASIS FOR REPAYMENT

Foregoing data on repayment of the investment are based on cost accounts maintained in accordance with the Federal Power Commission uniform system of accounts. On a statutory repayment basis, the repayment percentages are the same as in the above table for the Bonneville Power Administration and Bonneville dam, but different for the Columbia Basin Project since in the case of the latter (1) power revenues must pay operation and maintenance costs of Grand Coulee dam and power plant allocated to irrigation, (2) interest expense is computed at 3 percent rather than 2 1/2 percent, and (3) other differences such as the exclusion of interest during construction in the payout accounts of the Columbia Basin Project.

BPA TRANSMISSION SYSTEM



U. S. DEPARTMENT OF THE INTERIOR · BONNEVILLE POWER ADMINISTRATION

Summary of Operations

ENERGY PRODUCTION

Energy generated at four federal plants for the Administration totaled 17.6 billion kilowatt hours during fiscal year 1953. Even with two Hungry Horse units added to the system by December 1, 1952, and one Detroit unit coming on for test near the end of June energy generaation was 5 percent less in 1953 than in fiscal year 1952. Below normal precipitation during the first half of the fiscal year reduced stream flow in most of the Columbia river basin to near minimum levels. Generation from stream flow was below the minimum year of 1936-7 during September and December. Total generation at federal plants from July 1939 through June 1953 was 133.2 billion kilowatt hours.

NEW SYSTEM PEAK

A new system peak was reached for the hour 12-1 p.m. on August 13, 1952, before the generators at Hungry Horse were in operation. Coincident demand on Bonneville and Grand

TABLE VI

GENERATION AT BONNEVILLE, DETROIT, GRAND COULEE AND HUNGRY HORSE PLANTS FOR BONNEVILLE POWER ADMINISTRATION, FISCAL YEARS 1939–1953

(Thousands of Kilowatt hours)

Fiscal Years Ending June 30	Bonneville Generation	Detroit Generation	Grand Coulee Generation	Hungry Horse Generation	Total Generation for BPA
1939	34,874				34,874
1940	208,426				208,426
1941	894,177		7,455		901,632
1942	1,807,309		741,844		2,549,153
1943	2,801,480		2,816,956		5,618,436
1944	3,488,874		5,750,949		9,239,823
1945	3,391,127		5,660,446		9,051,573
1946	2,674,834		3,561,329		6,236,163
1947	3,695,255		5,058,482		8,753,737
1948	3,991,860		6,894,047 1/		10,885,907
1949	3,868,558		9,057,230 1/		12,925,788
1950	3,689,309		10,451,524 1/		14,140,833
1951	3,793,276		12,679,108 1/		16,472,384
1952	4,462,935		14,092,466 1/		18,555,401
1953	4,227,463	2,149 2/	13,277,143 1/	126,477 3/	17,633,232
Total	43,029,757	2,149	90,048,979	126,477	133,207,362

1/ Includes energy transferred for Bureau of Reclamation.

2/ Energy from testing operations, generator not in commercial operation during 1953 fiscal year.

3/ Includes 1,078,640 kilowatt-hours delivered to the Administration during testing operations.

Coulee plants was 2,867,000 kilowatts, an increase of 3 percent over the previous fiscal year's maximum demand of 2,784,000 kilowatts occurring during December 1951.

Since the fall of 1946 maximum system demands have continuously exceeded the nameplate rating of installed generators. Energy produced at federal plants for the Administration is shown by years in Table VI with peak demand and energy data in the accompanying chart. Prepared on a quarterly basis the chart shows the general trends of the Bonneville Power Administration system load growth and development.

RECEIPTS AND DELIVERIES

Bonneville Power Administration's transmission grid forms the backbone of the interconnected transmission system of public and private utilities in the Pacific Northwest. As a result electric energy receipts and deliveries on Bonneville's transmission system cover many complex transactions in addition to receipts from Bonneville and Grand Coulee generation, and deliveries by sales.

INTEGRATION BENEFITS

The integrated transmission grid makes possible the fullest utilization of power facilities in the area through diversity in peaking and water capabilities and diversity of system load conditions. Substantial quantities of energy are received and delivered as transfers from other utilities.

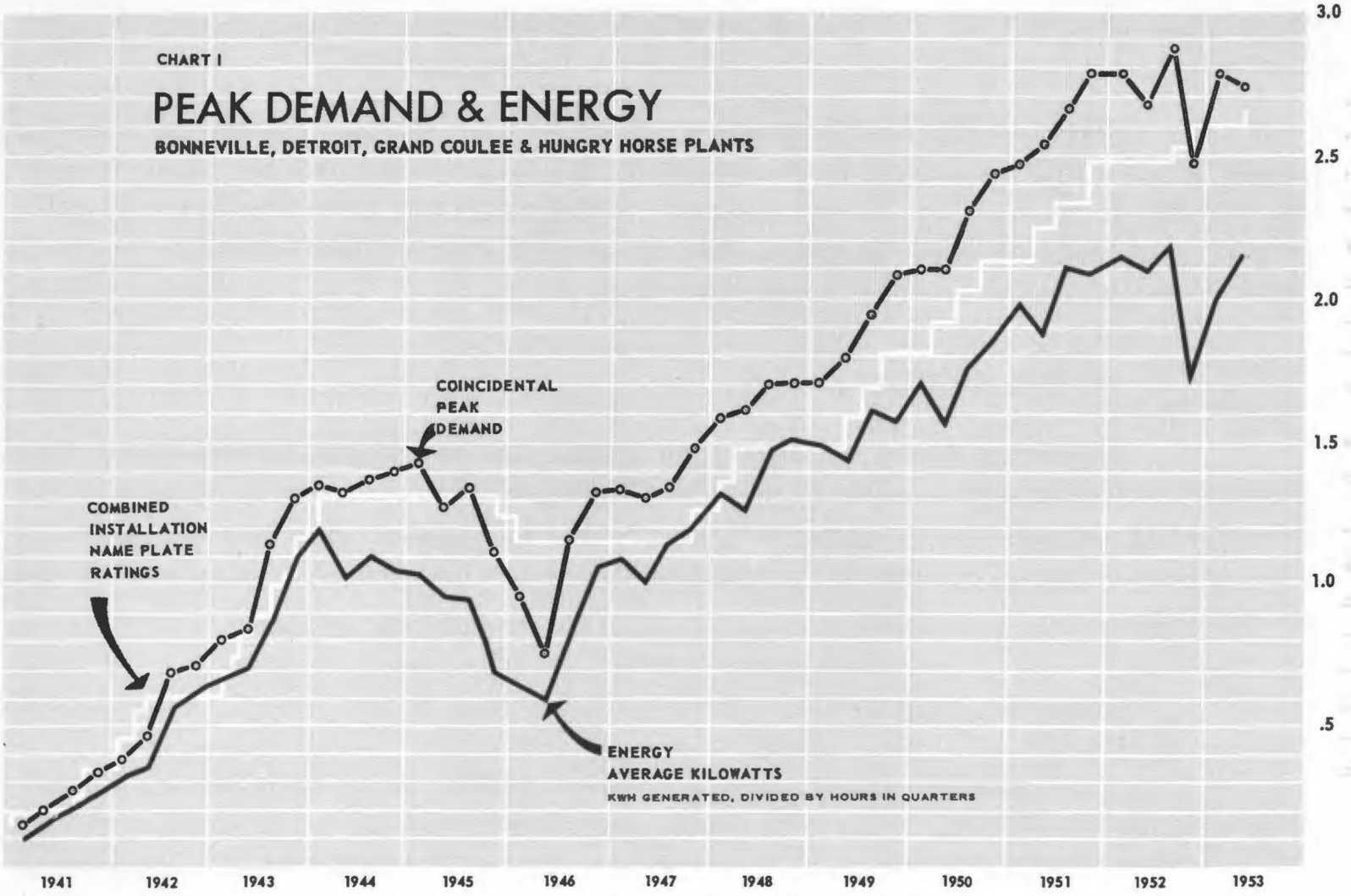


CHART I
PEAK DEMAND & ENERGY
BONNEVILLE, DETROIT, GRAND COULEE & HUNGRY HORSE PLANTS
COINCIDENTAL PEAK DEMAND
COMBINED INSTALLATION NAME PLATE RATINGS
ENERGY
AVERAGE KILOWATTS
KWH GENERATED, DIVIDED BY HOURS IN QUARTERS
3.0
2.5
2.0
1.5
1.0
.5
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953

STORAGE TRANSACTIONS

Transactions also involve storage by the Administration in non federal reservoirs as well as storage by non federal utilities in the Grand Coulee reservoir. Disposition of energy includes deliveries from storage in Grand Coulee or to storage in other reservoirs, energy transfers for the Bureau of Reclamation from Grand Coulee, energy used by the Administration and energy losses in transmission and transformation.

Table VII, electric energy account, summarizes energy receipts and deliveries for fiscal year 1953.

LOW WATER CUTS SALES

Energy sales to customers of the Bonneville Power Administration totaled 16.4 billion kilowatt hours during fiscal year 1953, a decrease of 4 percent from the previous year.

With near minimum stream flows, generation was curtailed and interruptible deliveries to industrial customers were discontinued from early in September 1952 until February 1, 1953. Power curtailment orders by the Defense Electric Power Administration cut down service to the Bonneville Power Administration industrial customers and made possible larger deliveries from the federal system to other public and private utilities in the area.

DELIVERIES AFFECTED

With increased service to the Alcoa Wenatchee plant on an interruptible basis, deliveries to aluminum plants increased 1.2 percent even with the 10 percent curtailment in firm

TABLE VII

ELECTRIC ENERGY ACCOUNT, FISCAL YEAR ENDED JUNE 30, 1953

Energy received (thousands of kilowatt hours):		
Energy generated for Bonneville Power Administration		
Bonneville	4,227,463	
Detroit	2,149	1/
Grand Coulee	13,277,143	2/
Hungry Horse	126,477	3/
Total	17,633,232	
Power purchased and interchanged in	1,953,450	
Total received	19,586,682	
Energy delivered (thousands of kilowatt hours):		
Sales	16,381,690	
Power interchanged out	1,860,427	
Used by Administration	21,977	
Total delivered	18,264,094	
Energy losses in transmission and transformation	1,322,588	
Losses as percent of total energy received	6.8%	
Maximum demand on generating plants (kilowatts)		
August 13, 1952, 12–1 p.m. Pacific Standard Time	2,867,000	
Load factor, total generated for Bonneville Power Administration	70.2%	

1/ Energy from testing operations, generator not in commercial operation during 1953 fiscal year.

2/ Includes 35,899,156 kwh transferred for the Bureau of Reclamation.

3/ Includes 1,078,640 kwh delivered to the Administration during testing operations.

deliveries ordered by the Defense Electric Power Administration from November 17 through January 12, 1953. Deliveries to industries other than aluminum decreased 11.1 percent while federal agencies increased 12.8 percent, publicly owned utilities increased 6.2 percent and privately owned utilities had a decrease of 26.6 percent.

COMPOSITE AVERAGE RATE

The Administration has delivered 123,838,729,000 kilowatt hours of energy at a composite average rate of 2.40 mills per kilowatt hour during the 15 years of operation ending June 30, 1953. Sales to publicly owned utilities for this period were 23.6 billion kilowatt hours at an average rate of 2.78 mills. Privately owned utilities received 29.4 billion kilowatt hours at an average rate of 2.35 mills, and industries 70.8 billion kilowatt hours at an average rate of 2.29 mills.

Power sales to aluminum plants were 58.8 billion kilowatt hours at an average rate of 2.18 mills. Sales to industries other than aluminum including sales to federal agencies were 12 billion kilowatt hours at an average rate of 2.83 mills.

LOAD FACTORS

Since 1942 the proportion of energy sales delivered to aluminum plants with high load factor usage of electric energy has been decreasing, resulting in a tendency toward a higher average price per kilowatt hour. Increasing load factors developed by other customers have counterbalanced this tendency in recent years. For the fiscal year 1953 curtailment of energy

TABLE VIII

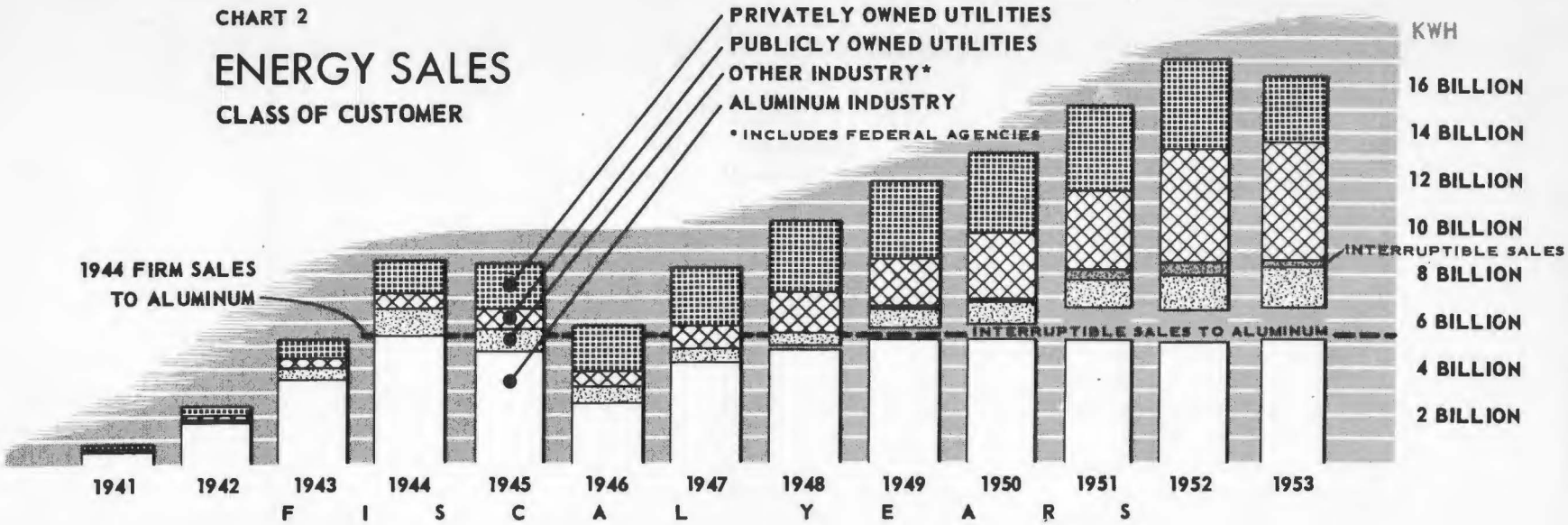
ELECTRIC ENERGY SALES BY CLASS OF CUSTOMER

Fiscal Years 1939–1953

(Thousands of kilowatt–hours)

Fiscal Years Ending June 30	Industry: Aluminum	Industry: Other Industries 1/	Publicly Owned Utilities	Privately Owned Utilities	Total
1941 and prior	522,982	4,829	35,242	536,555	1,099,608
1942	1,845,249	79,155	142,491	357,704	2,424,599
1943	3,588,848	507,196	435,289	739,076	5,270,409
1944	5,453,893	1,022,477	727,642	1,467,304	8,671,316
1945	4,667,381	964,724	823,822	2,057,203	8,513,130
1946	2,492,985	799,378	635,531	1,902,990	5,830,884
1947	4,212,413	626,688	1,044,784	2,377,887	8,261,772
1948	4,902,465	646,913	1,560,754	3,180,993	10,291,125
1949	5,665,746	881,454	2,079,289	3,343,091	11,969,580
1950	5,863,465	1,023,830	2,840,033	3,311,972	13,039,300
1951	6,544,702	1,537,580	3,413,829	3,578,212	15,074,323
1952	6,471,694	1,943,241	4,803,232	3, 792,826	17,010,993
1953	6,546,923	1,947,523	5,103,011	2,784,233	16,381,690
Total to June 30, 1953	58,778,746	11,984,988	23,644,949	29,430,046	123,838,729

1/ Includes Federal agencies.



deliveries because of low stream flows again increased the average rate of 2.35 mills per kilowatt hour as compared to 2.31 and 2.37 for the two previous fiscal years. The same set of rate schedules, based on $17.50 a kilowatt year, is available to all customers, but the average rate varies according to the customer's system load conditions and the rate schedules best adapted to those load conditions.

SALES BY CUSTOMERS

Electric energy sales by class of customer for each of the 14 years' operation are shown in Table VIII. Detail of energy deliveries to these four classes of customers is shown in accompanying chart. The relative size and growth of energy sales to aluminum plants, other industries, privately owned utilities, and publicly owned utilities are shown in the chart, and sales by customers during fiscal year 1953 are detailed in Table IX.

TABLE IX

ENERGY DELIVERIES TO CUSTOMERS OF THE BONNEVILLE POWER ADMINISTRATION • Fiscal Year Ended June 30, 1953

Customers	Energy Deliveries for Year 1/ Kilowatt hours
PUBLICLY OWNED UTILITIES	
MUNICIPALITIES	
Bandon, Oregon	9,686,400
Canby, Oregon	8,923,200
Cascade Locks, Oregon	8,692,800
Centralia, Washington	7,304,360
Cheney, Washington	10,986,400
Drain, Oregon	7,965,600
Ellensburg, Washington	31,503,915
Eugene, Oregon	79,282,867
Forest Grove, Oregon	30,403,200
Grand Coulee, Washington	16,214,400
McCleary, Washington	5,719,200
McMinnville, Oregon	41,387,250
Milton, Oregon	12,676,800
Monmouth, Oregon	8,464,854
Seattle, Washington	872,375,000
Springfield, Oregon	16,560,000
Tacoma, Washington	845,870,000
Total Municipalities (17)	2,014,016,246
PUBLIC UTILITY DISTRICTS	
Benton County PUD #1	89,290,200
Central Lincoln PUD	100,873,200
Chelan Co. PUD #1	160,649,993
Clallam Co. PUD #1	73,055,381
Clark Co. PUD #1	334,287,280
Clatskanie PUD	12,039,600
Cowlitz Co. PUD #1	326,576,699
Douglas Co. PUD #1	90,993,900
Ferry Co. PUD #1	1,026,465
Franklin Co. PUD #1	52,280,301
Grant Co. PUD #2	138,840,884
Grays Harbor Co. PUD #1	204,718,805
Kittitas Co. PUD #1	5,311,800
Klickitat Co. PUD #1	47,572,858
Lewis Co. PUD #1	93,267,955
Mason Co. PUD #3	102,195,600
Northern Wasco PUD	10,122,000
Okanogan Co. PUD #1	75,564,888
Pacific Co. PUD #2	63,365,312
Pend Oreille Co. PUD #1	36,421,716
Skamania Co. PUD #1	18,497,400
Snohomish Co. PUD #1	495,816,101
Stevens Co. PUD #1	16,437,800
Tillamook PUD	49,060,200
Wahkiakum Co. PUD #1	10,709,337
Total Public Utility Districts (25	2,608,975,675
COOPERATIVES	
Benton–Lincoln Elec. Coop.	55,713,546
Benton Rural Elec. Assn.	26,565,353
Big Bend Elec. Coop.	18,705,977
Blachly–Lane Co. Elec. Coop.	11,650,800
Central Electric Coop.	8,884,636
Chelan Co. Electric Coop.	683,700
Clearwater Valley L&P Assn.	26,713,350
Columbia Basin Elec. Coop.	6,267,600
Columbia County REA	13,604,960
Columbia Power Coop.	263,200
Coos–Curry Elec. Coop.	23,145,566
Douglas Elec. Coop.	27,922,718
Eastern Oregon Elec. Coop.	1,463,400
Flathead Elec. Coop.	6,427,728
Hood River Elec. Coop.	10,363,200
Idaho Co. L&P Assn.	7,222,700
Inland Empire RE	50,780,000
Kootenai Co. REA	8,570,590
Lane Co. Elec. Coop.	25,350,785
Lincoln Elec. Coop. – Montana	3,183,672
Lincoln Elec. Coop. – Washington	12,185,842
Midstate Electric Coop.	686,043

Customers	Energy Deliveries for Year 1/ Kilowatt hours
Missoula Elec. Coop.	4,145,437
Nespelem Valley Elec. Coop.	5,752,600
Northern Lights	8,592,800
Okanogan Co. Elec. Coop.	2,785,650
Orcas Power & Light Co.	5,642,000
Pend Oreille Elec. Coop.	5,531,544
Ravalli Co. Elec. Coop.	4,733,630
Salem Electric	28,825,000
Sandy Elec. Coop.	2,648,304
Tanner Mutual P&L Assn.	279,694
Umatilla Elec. Coop. Assn.	16,358,582
Wasco Elec. Coop.	19,809,600
West Oregon Elec. Coop.	14,094,882
Total Cooperatives (35)	465,555,089
Portland State Extension Center	205,920
Vera Irrigation District #15	14,257,600
Total Other (2)	14,463,520
Total Publicly Owned Utilities	5,103,010,530
PRIVATELY OWNED UTILITIES	
British Columbia Elec. Co.	—
California Oregon Power Co.	1,215,064
Interconnected Pool 2/	896,915,145
Montana Power Co.	101,931,801
Mountain States Power Co.	172,957,940
Pacific Power & Light Co.	303,165,000
Portland General Electric Co.	899,868,000
Puget Sound Power & Light Co.	32,179,000
Washington Water Power Co.	165,281,000
WWP — Kootenay Lake	210,720,000
Total Privately Owned Utilities (8)	2,784,232,950
FEDERAL AGENCIES (13)	1,038,455,396

Customers	Energy Deliveries for Year 1/ Kilowatt hours
INDUSTRIES	
ALUMINUM	
Aluminum Co. of America	
Vancouver Plant	1,355,131,830
Wenatchee Plant	204,557,613
Kaiser Alum. & Chem. Corp.	
Spokane Alum. Fab.	245,824,232
Spokane Alum. Red.	2,273,233,641
Tacoma Alum. Red.	496,273,433
Reynolds Metals Co.	
Longview	676,158,580
Troutdale	1,295,744,053
INDUSTRIES	
OTHER	
Carborundum Company	79,650,000
Crown Zellerbach Corp.	
INDUSTRIES	
OTHER	
Carborundum Company	79,650,000
Crown Zellerbach Corp.	90,205,324
Electro—Metallurgical Co.	124,895,071
General Services Adm.	207,278,382
Keokum Electro—Metals Co.	76,419,929
Pacific Carbide & Alloys Co.	30,332,735
Pennsylvania Salt Mfg. Co.	120,045,163
Rayonier Corp.	19,727,600
Victor Chemical Works	160,513,292
Total Industries (16)	7,455,990,878
Total Sales of Electric Energy (116) 3/	16,381,689,754

1/ Includes energy deliveries carried on exchange accounts.
2/ Includes MSP Co., PP & L Co., PGE Co., PSP & L Co. and WWP Co.
3/ 115 customers as of June 30, 1953; service to one customer discontinued during year.

TABLE X

ELECTRIC ENERGY SALES BY RATE SCHEDULES

Fiscal Year Ending June 30, 1953

Rate Schedule	Energy Thousands of kilowatt-hours	Revenue	Mills per kilowatt-hour
C–3, C–4:			
Industries	8,069,222	$16,880,432	2.09
Utilities	3,881,699	8,094,174	2.09
Subtotal	11,950,921	24,974,606	2.09
F–2, F–3, F–4:			
Industries	182,321	666,472	3.66
Utilities	64,101	395,864	6.18
Subtotal	246,422	1,062,336	4.31
A–4: Utilities	23,552	74,438	3.16
E–3, E–4: Utilities	2,792,770	8,884,047	3.18
Experimental, H–2, H–3 and exchange:			
Industries and Utilities	1,368,025	3,420,062	2.50
Total sales	16,381,690	$38,415,489	2.35
Reconciliation with accounting records		– 32,014	
Other electric revenues		791,734	
Total operating revenues		$39,175,209	

RATE SCHEDULES

A summary of energy sales for the fiscal year 1953 classified by rate schedules is shown in Table X. Just less than three-fourths of the energy sales for the year were made under the C-4 wholesale rate schedule at an average rate of 2.09 mills per kilowatt hour. This is the kilowatt year rate for firm power delivered anywhere from the transmission system and is also used with special measured demand provisions for sales of interruptible power. Sales are generally made under this rate to industries operating at high load factor and to utilities having substantial generating facilities. Other sales were made principally under the E schedule to utilities purchasing all or substantially all of their power requirements from the Administration. Sales under the F schedule were made to the utilities and industries requiring power at low load factor use and under the H schedule for dump, exchange, or experimental purposes.

CUSTOMERS SERVED

The Administration was serving 115 customers at the end of the fiscal year 1953. There were 78 publicly owned distributors of power, 16 industrial customers, 13 federal agencies, and 8 privately owned utilities. Three customers were added during the year--Flathead Electric Cooperative, Midstate Electric Cooperative, and the U. S. Army Corps of Engineers at Midway.

TRENDS

The use of electric energy in homes and farms continues to increase faster in the Northwest than in the United States, but for the first time in 15 years the average cost per kilo-

TABLE XI

Residential and Rural Service

AVERAGE USE PER CUSTOMER AND AVERAGE PRICE PER KILOWATT HOUR

Calendar Year	Kilowatt hours per Customer: U.S. Total	Kilowatt hours per Customer: Oregon and Washington
1938	902	1,410
1939	953	1,467
1940	1,006	1,589
1941	1,044	1,776
1942	1,088	2,024
1943	1,135	2,279
1944	1,225	2,504
1945	1,305	2,801
1946	1,418	3,219
1947	1,546	3,696
1948	1,676	4,160
1949	1,806	4,503
1950	1,951	4,867
1951	2,137	5,205
1952	2,289	5,632

Calendar Year	Price per Kilowatt hour: U.S. Total (Cents)	Price per Kilowatt hour: Oregon and Washington (Cents)
1938	4.02	2.65 1/
1939	3.87	2.55 1/
1940	3.74	2.27
1941	3.65	2.08
1942	3.57	1.94
1943	3.50	1.84
1944	3.41	1.74
1945	3.32	1.69
1946	3.13	1.58
1947	3.00	1.49
1948	2.92	1.41
1949	2,87	1.38
1950	2.81	1.36
1951	2.74	1.34
1952	2.71	1.34

1/ Partially estimated from State Commission data.

Source: Edison Electric Institute.

watt hour in Oregon and Washington did not go down. During the calendar year 1952 electric energy for residential and farm use cost the consumers an average of 1.34 cents per kilowatt hour--the same as during 1951. For the United States as a whole the decrease in average cost is showing the same tendency but to a lesser degree. The trends of average use and price for residential and farm electric service in the Pacific Northwest are compared with those for the United States in Table XI.

GENERATION ADDED

Installation of generators at Hungry Horse project was completed in fiscal year 1953. Units 1 and 2 were in operation by December 1, 1952, and the remaining two units were installed and ready for testing by the end of the fiscal year. The first unit of the Detroit project began operations June 26, 1953. Capability of the federal system was increased during the 1952-53 power season by the availability of new storage in the amount of 548,000 acre feet at the Hungry Horse reservoir and 1,155,000 acre feet at the Albeni Falls reservoir.

PROJECTS SUMMARIZED

Federal projects existing, under construction, and authorized for construction by the Corps of Engineers and the Bureau of Reclamation are shown in Table XII. Existing projects account for 8,671,900 acre feet of usable storage and 2,312,000 average kilowatts of normal prime power. Projects under construction will provide 3,074,000 acre feet of usable storage with 2,217,000 average kilowatts of prime power. Projects authorized by the Congress, but for

TABLE XII

GENERAL SPECIFICATIONS – EXISTING, AND AUTHORIZED PROJECTS

Installations and Capabilities Correspond To A Coordinated System of Operation

	Location	Stream	Plant Installations: Number Units	Plant Installations: Total Capacity Kilowatts 1/	Nominal Prime Power Average Kilowatts 2/	Pool Elevation (Feet)	Usable Storage (Acre-Feet)	Average Head (Feet)	Initial Date in Service	Principal Purposes 4/
EXISTING PROJECTS										
Minidoka	Idaho	Snake	7	13,400	5,000	4,245.0	95,200	48	May 1909	P, I.
Boise Diversion	Idaho	Boise	3	1,500	2,000	2,800.0	–	31	1912	P, I.
Black Canyon	Idaho	Payette	2	8,000	8,000	2,497.0	14,500	88	1925	P, I.
Bonneville	Wash.–Ore.	Columbia	10	518,400	458,000	72.0	–	59	Jan. 1938	P, N.
Grand Coulee	Washington	Columbia	18	1,944,000	1,631,000	1,288.0	5,118,000	326	Mar. 1941	P,I,FC.,N
Anderson Ranch	Idaho	S. Fk. Boise	2	27,000	21,000	4,196.0	464,200	260	Dec. 1950	P, I, FC.
Hungry Horse	Montana	S. Fk. Flathead	4	285,000	187,000	3,560.0	2,980,000	364	Oct. 1952	P,I,FC.,N
					2,312,000		8,671,900			
PROJECTS UNDER CONSTRUCTION										
Detroit	Oregon	N. Santiam	2	100,000	29,000	1,569.0	351,000	299	June 1953	P, I, N, FC
McNary	Wash.-Ore.	Columbia	14	980,000	583,000	340.0	–	83	Nov. 1953	P, I, N.
Big Cliff	Oregon	N. Santiam	1	18,000	10,000	1,206.0	–	91	Apr. 1954	P.
Albeni Falls	Idaho	Pend Oreille	3	42,600	29,000	2,062.5	1,155,000	24	Aug. 1954	P,FC.,N
Lookout Point	Oregon	M. Fk. Willamette	3	114,000	36,000	929.0	368,000	228	Oct. 1954	P, I, N, FC.
Dexter	Oregon	M. Fk. Willamette	1	15,000	12,000	695.0	–	53	Apr. 1955	P.
Chief Joseph	Washington	Columbia	16	1,024,000	815,000	937.5	–	169	Sept. 1955	P, I.
Chandler	Washington	Yakima	2	12,000	11,000	620.0	–	118	Sept. 1955	P, I.
Palisades	Idaho	Snake	4	114,000	41,000	5,620.0	1,200,000	144	Dec. 1956	P, I, FC.
The Dalles	Wash.-Ore.	Columbia	14	1,092,000	651,000	160.0	–	87	Nov. 1957	P, N.
					2,217,000		3,074,000			
AUTHORIZED PROJECTS										
Roza	Washington	Yakima	2	10,000	6,000	1,220.6	–	140	Oct. 1956	P, I.
American Falls	Idaho	Snake	3	30,000	–	4,354.5	1,700,000	80	Oct. 1957	P, I.
Ice Harbor	Washington	Snake	3	195,000	137,000	440.0	–	97	Dec. 1957	P, I, N.
Libby	Montana	Kootenai	6	600,000	264,000	2,459.0	5,175,000	267	Sept. 1959	P, FC., N
Hills Creek	Oregon	M. Fk. Willamette	1	20,000	14,000	1,510.0	221,000	204	Dec. 1959	P, I, N, FC.
Lower Monumental	Washington	Snake	3	180,000	130,000	533.0	–	92	Dec. 1960	P, I, N.
Little Goose	Washington	Snake	3	195,000	139,000	633.0	–	99	Dec. 1961	P, N.
Lower Granite	Washington	Snake	3	165,000	114,000	715.0	–	80	Dec. 1962	P, N.
Priest Rapids	Washington	Columbia	18	954,000	735,000	550.0	5/	146	Dec. 1962	P, N, FC.
John Day	Wash.-Ore.	Columbia	13	1,105,000	675,000	255.0	5/	94	Dec. 1964	P, I, N, FC.
Cougar 6/	Oregon	S. Fk. McKenzie	1	25,000	14,000	1,683.0	182,000	418	–	P, I, N, FC.
Green Peter 6/	Oregon	M. Santiam	2	81,000	22,000	984.0	322,000	315	–	P, I, N, FC.
White Bridge 7/	Oregon	M. Santiam	1	15,000	9,000	670.0	–	93	–	P.
					2,259,000		7,600,000			
Less Irrigation Pumping Requirements				–	–35,000 3/		–			
Totals			30 Projects	9,883,900	6,753,000		19,345,900			

1/ Name-plate rating.

2/ Average capability during an 8-month storage drawdown period. (Sept. 1936 through Apr. 1937)

3/ Pumping requirements of 28,000 average kilowatts for 450,000 acres of the Columbia Basin Project and of 7,000 average kilowatts in the Upper Snake Basin including 367,000 acres of new irrigated land.

4/ P – Power; I – Irrigation; N – Navigation; FC – Flood Control.

5/ Project designs provide for flood control storage of 2,100,000 acre-feet at Priest Rapids and 2,000,000 acre-feet at John Day.

6/ Power facilities are not authorized.

7/ White Bridge is not authorized but is required for reregulating purposes with installation of generating units at Green Peter.

which no funds have been appropriated, would add 7,600,000 acre feet of usable storage and 2,259,000 average kilowatts of normal prime power. Complete development of these multipurpose projects will provide a total of 19.3 million acre feet of usable storage for power use and 6.8 million kilowatts of prime power.

NON FEDERAL ADDITIONS

Additions were made to the generating facilities of several non federal utilities during the fiscal year. Two units with total rated capacity of 180,000 kilowatts were installed at the Ross plant of the City of Seattle and 135,000 kilowatts of new capacity were added at the Rock Island plant by the Chelan County PUD. The Washington Water Power Company installed the first three units with total rated capacity of 150,000 kilowatts at Cabinet Gorge plant, and the Portland General Electric Company reconstructed its Sullivan plant with an increase in rated capacity of 10,500 kilowatts. Future additions presently scheduled by the non federal utilities are shown in Table XIII.

NORTHWEST POWER POOL

Generation during fiscal year 1953 by the principal electric utility systems of the Pacific Northwest is shown in Table XIV. All of the utilities are members of the Northwest Power Pool. The Utah Power & Light Company and British Columbia Electric Company are also members of the pool but are not included since their major service areas are outside the Pacific Northwest region.

TABLE XIII

NON-FEDERAL UTILITIES

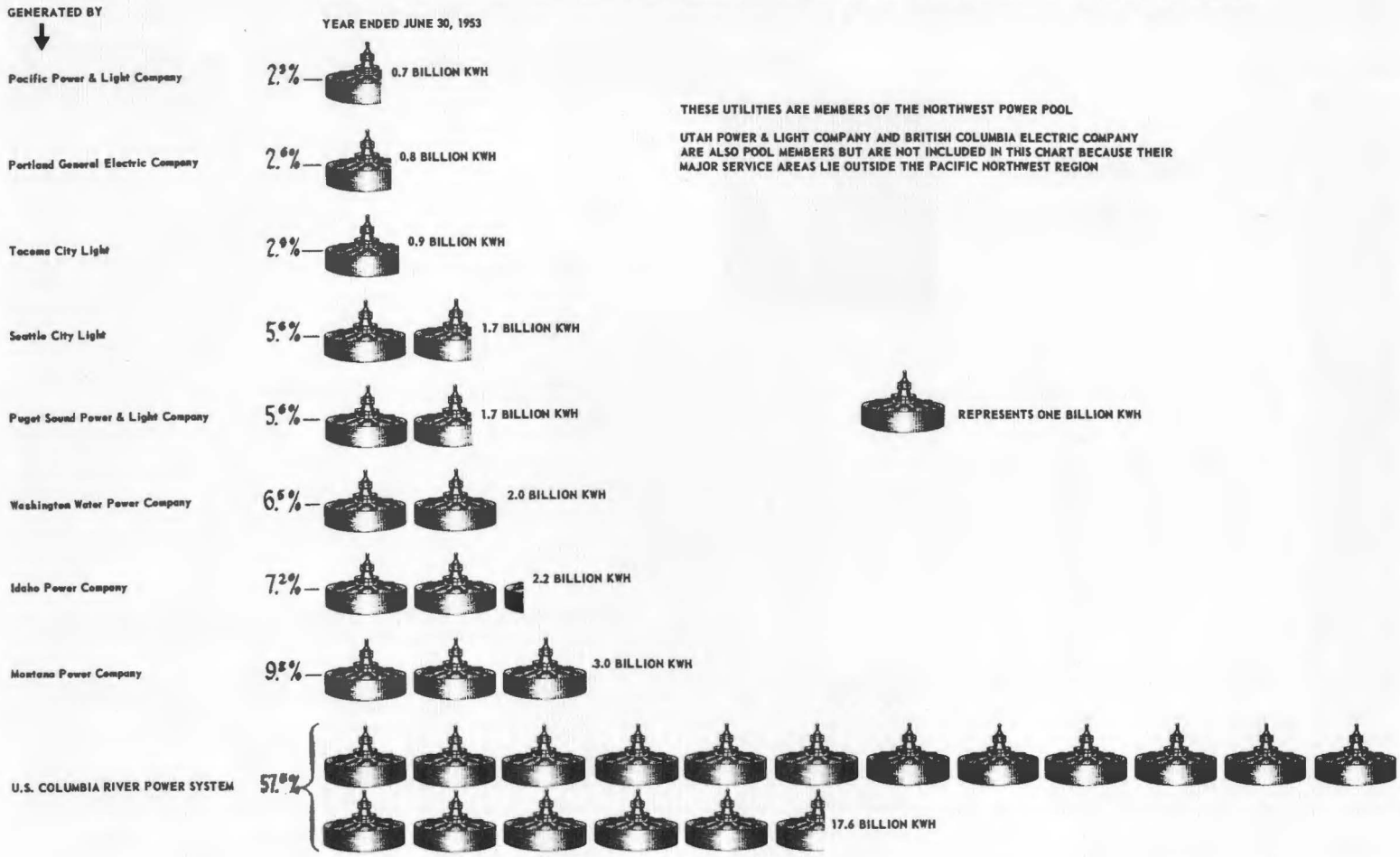
Generator Installation Schedule
July 28, 1953

Utility and Plant	Unit	Name-Plate Rating Thousands of Kilowatts	Date in Service
Pacific Power & Light Co.			
Yale 190,000 acre-feet of usable storage			
	#1	54	August 1953
	#2	54	October 1953
		108	
Washington Water Power Co.			
Cabinet Gorge	#4	50	August 1953
Portland General Electric Co.			
Oak Grove (Frog Lake Forebay)	–	1/	September 1953
Timothy Meadows 60,000 acre-feet of storage		2/	March 1955
City of Seattle			
Ross 1,018,000 acre-feet of usable storage			
	#3	90	December 1953
Pend Oreille PUD			
Box Canyon	#1	15	June 1954
	#2	15	August 1954
	#3	15	October 1954
	#4	15	November 1954
		60	
City of Tacoma			
Steam Plant #2	#2	20	August 1954
	#3 3/	4	December 1954
	#4 3/	4	March 1955
		28	
Montana Power Co.			
Kerr 1,220,000 acre-feet of usable storage			
	#3	56	September 1954
Thompson Falls	#7 to #13	35	September 1956
California Oregon Power Co.			
Lemolo #1	–	29	December 1954
Lemolo #2	–	33	December 1955
McCloud #1	–	50	December 1955
Big Bend #2	–	50	December 1956
Iron Gate	–	9	December 1957
Salt Caves	–	70	December 1957
McCloud #2	–	50	December 1958
Keno	–	48	December 1960
Big Bend #1, #3	–	50	December 1962
McCloud #3	–	50	December 1963
		439	
City of Centralia			
Yelm	#3	5	July 1955

1/ Will add 18,000 kilowatts of peaking capacity.
2/ Will add 10,000 kilowatts of prime power at downstream plants.
3/ Gas turbines.

CHART 3

POWER GENERATED BY NORTHWEST UTILITIES



SOURCE: WEEKLY OPERATING REPORTS, N.W. POWER POOL

CHART 4

NORTHWEST POWER POOL

NET OPERATIONS YEAR ENDING JUNE 30, 1953 BPA SUPPLIED 73% OF NET ENERGY REQUIREMENTS

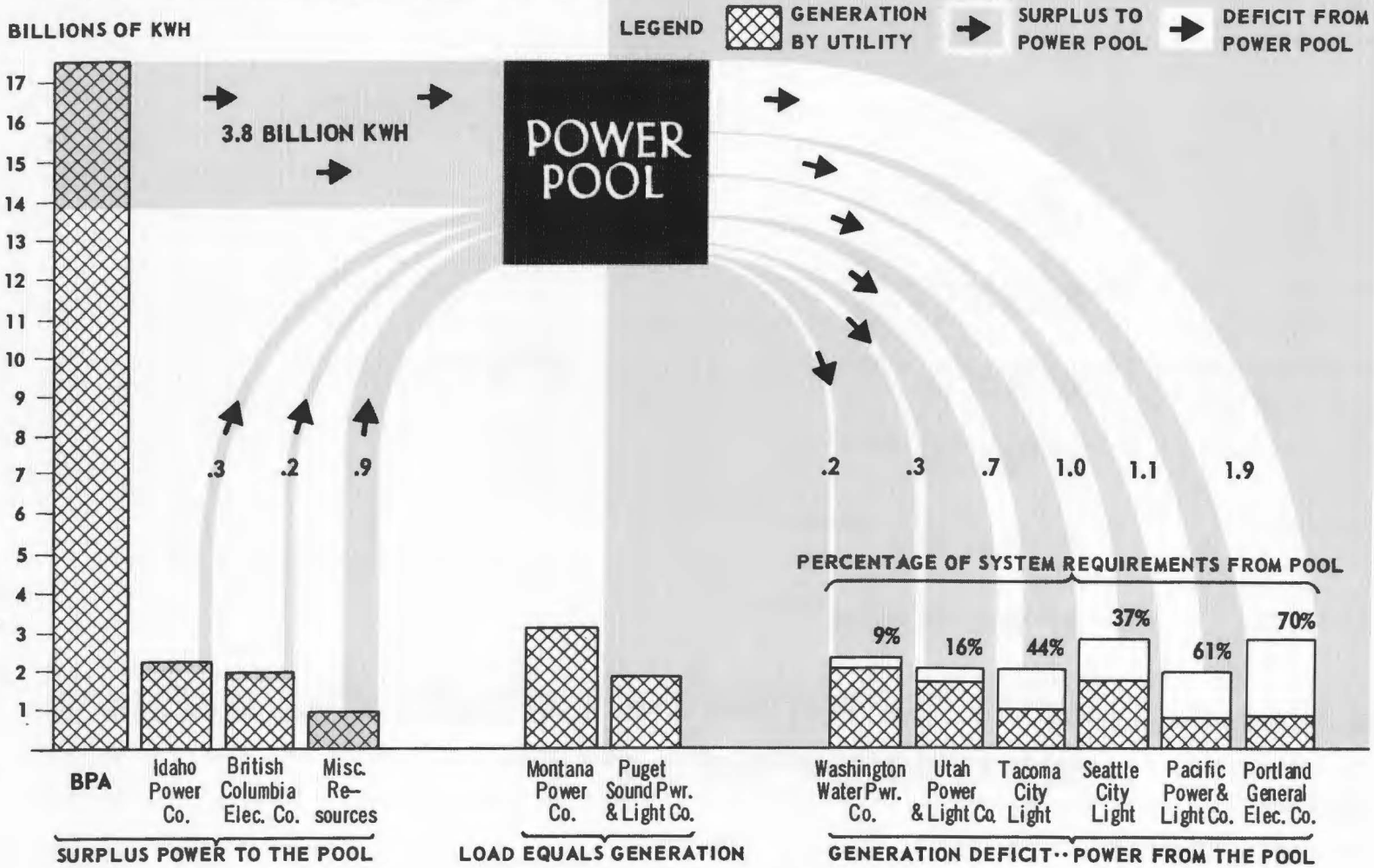


TABLE XIV

GENERATION BY THE PRINCIPAL ELECTRIC UTILITY SYSTEMS OF THE PACIFIC NORTHWEST

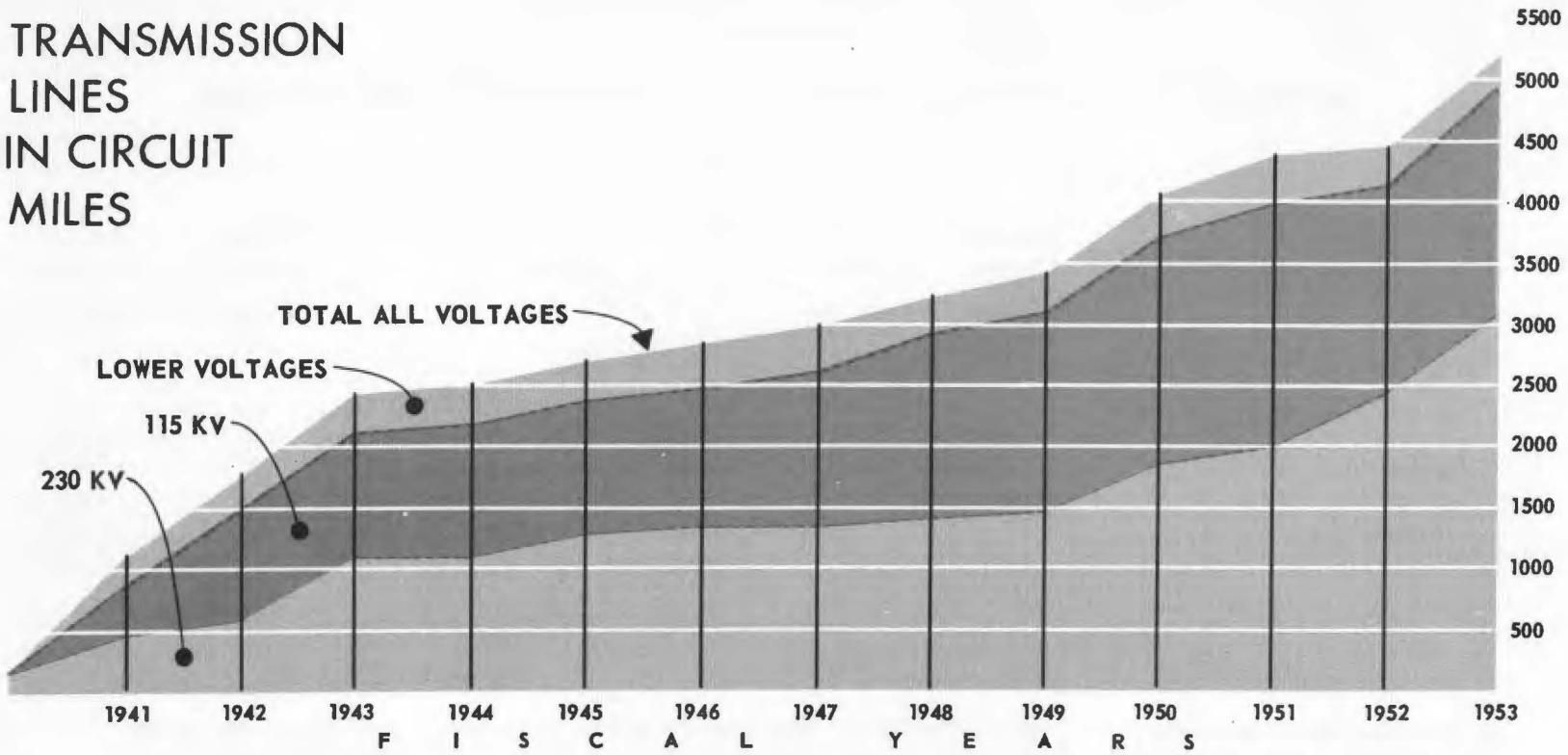
Fiscal Year 1953

Utilities	Kilowatt-Hours Billion	Percent of Total Generation Percent	Utilities	Kilowatt-Hours Billion	Percent of Total Generation Percent
Publicly Owned:			Privately Owned:		
Bonneville Power Administration	17.6	57.5	Puget Sound Power & Light Co.	1.7	5.6
Seattle City Light	1.7	5.6	Washington Water Power Co.	2.0	6.5
Tacoma City Light	0.9	2.9	Pacific Power & Light Co.	0.7	2.3
			Portland General Electric Co.	0.8	2.6
Total Publicly Owned	20.2	66.0	Montana Power Co.	3.0	9.8
			Idaho Power Co.	2.2	7.2
			Total Privately Owned	10.4	34.0
Total Generation 1/	30.6	100.0			

1/ The above utilities are members of the Northwest Power Pool. Utah Power & Light Co. and British Columbia Electric Co. are also members of the Pool, but are not included above because their major service areas lie outside the Pacific Northwest region.

The Administration supplied 57.5 percent of the total energy generated by the major utilities serving the region. In addition to the power requirements of industries and non pool member utilities served by the Administration, a maximum hourly delivery of nearly 900,000 kilowatts and approximately 3,800,000,000 kilowatt hours of energy was provided for use by other pool member utilities to meet their requirements.

CHART 5



TRANSMISSION ADDITIONS

Coinciding with the initial power production from the Hungry Horse project, the Administration energized during fiscal year 1953 a 241 mile 230,000 volt transmission line from Spokane to Hungry Horse dam to integrate the new generation into the BPA system. A 230,000

volt 147 mile transmission line was placed in service between Hot Springs and Anaconda, Montana, with a 150,000 kva substation at Anaconda, providing a high voltage transmission tie between the BPA main grid and Western Montana.

Completion of a 51 mile 115,000 volt transmission line from Bandon extended the BPA transmission system to Port Orford and Gold Beach on the Oregon coast. Increased transmission capacity to the Spokane area was provided with the energization of the 230,000 volt Grand Coulee-Spokane line no. 5.

SUBSTATIONS ADDED

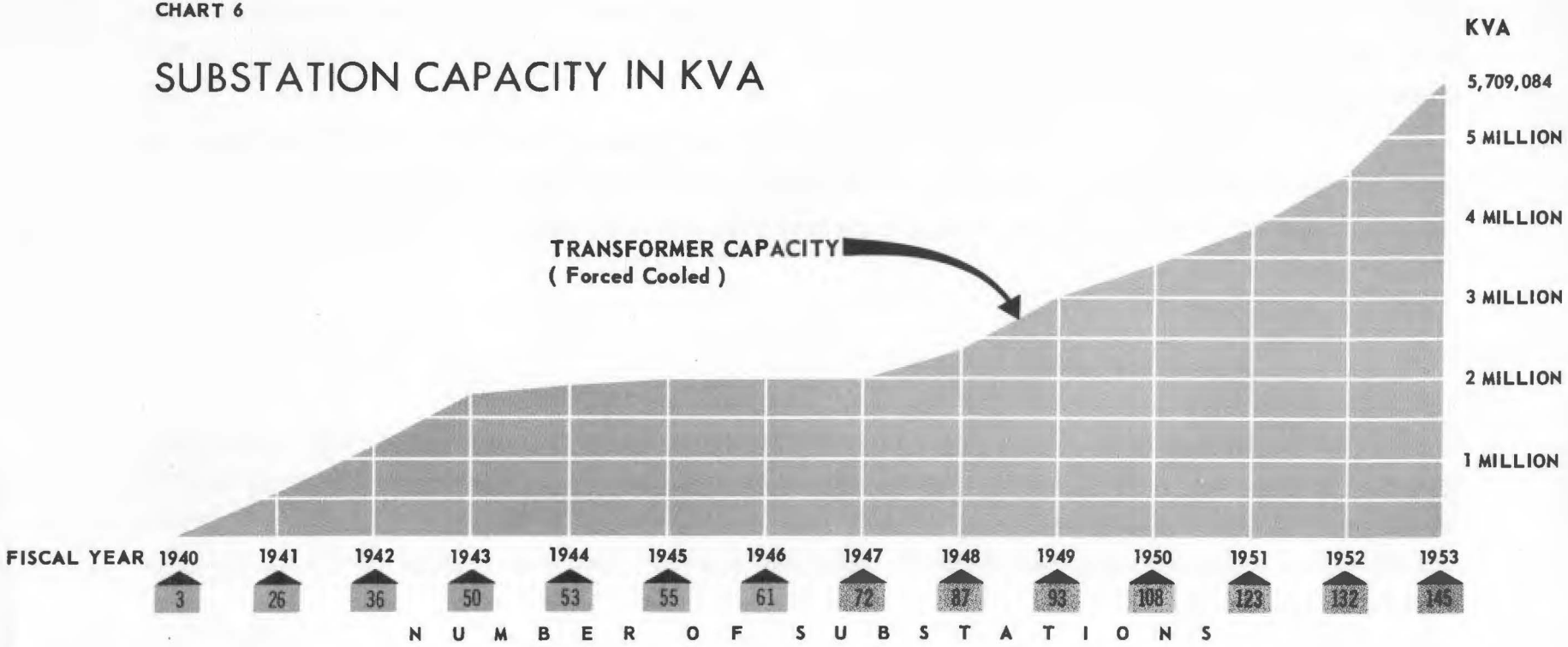
During this fiscal year 11 new customer service substations were energized, ranging in capacity from 6,000 to 20,000 kilovolt amperes. Other major additions during the fiscal year included energization of 250,000 kva transformers at the St. Johns and J. P. Alvey substations and the energization of the St. Andrews series capacitor station on Grand Coulee-Columbia line no. 3.

SYSTEM GROWTH

A total of 753 circuit miles of transmission line and 13 substations were added to the system during fiscal year 1953, giving the Administration a total of 5,707 circuit miles of transmission lines and 145 substations. This includes 3,060 circuit miles of 230,000 volt line, 2,419 circuit miles of 115,000 volt line, and 228 miles of lower voltage line.

CHART 6

SUBSTATION CAPACITY IN KVA



Substation transformer capacity was increased by 1,192,400 kilovolt amperes, bringing the total capacity to 4,300,250 kilovolt amperes under self-cooled conditions and a maximum of 5,709,084 kilovolt amperes with forced cooling. Three new 50,000 kva synchronous condensers were energized, bringing the total system capacity of this type of equipment to 557,500 kilovolt amperes. Static capacitors with a capacity of 116,965 reactive kilovolt amperes were installed, bringing the total on the system to 859,515 reactive kilovolt amperes.

NEW CONSTRUCTION

With McNary dam scheduled to start producing power in November 1953, major construction was underway during the fiscal year to provide the transmission facilities required to bring McNary generation into the Bonneville system. To provide additional transmission capacity to the rapidly growing Puget Sound area, construction continued on a 300,000 volt transmission line from Columbia to Olympia. This line will be connected to an existing circuit from Grand Coulee to Columbia, providing a through circuit from Grand Coulee to Olympia. The 230,000 volt circuit is scheduled to be placed in service December 1953 with plans to raise the voltage to 300,000 volts in the fall of 1954.

Clearing for the Columbia-Olympia 300 kv Line

Auditors' Report

FINANCIAL STATEMENTS

FOR THE

FISCAL YEAR ENDED

JUNE 30, 1953

COLUMBIA RIVER POWER SYSTEM

Consisting of

Bonneville Power Administration &

the commercial power components of

Bonneville Dam Project,

Columbia Basin Project

& Hungry Horse Project

COLUMBIA RIVER POWER SYSTEM

(Consisting of
Bonneville Power Administration
and the commercial
power components
of Bonneville Dam Project,
Columbia Basin Project,
and Hungry Horse Project.)

FINANCIAL STATEMENTS

FOR THE FISCAL YEAR ENDED JUNE 30, 1953

United States General Accounting Office
Division of Audits

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON 25

December 9, 1953

The Honorable,
The Secretary of the Interior.

Dear Mr. Secretary:

The General Accounting Office has examined the statement of combined assets and liabilities of the COLUMBIA RIVER POWER SYSTEM as of June 30, 1953, and the related statement of revenues and expenses for the fiscal year then ended. The Columbia River Power System consists of Bonneville Power Administration, Department of the Interior, which is the transmitting and marketing agency, and the generating facilities for commercial power purposes of Bonneville Dam Project, built and operated by the Corps of Engineers, United States Army, and Columbia Basin and Hungry Horse Projects, built and operated by the Bureau of Reclamation, Department of the Interior. The individual statements of assets and liabilities and related statements of revenues and expenses of the Administration and the Projects were also examined. The examination was made in accordance with generally accepted auditing standards and included such tests of the accounting records and such other auditing procedures as were considered necessary in the circumstances.

The financial statements of the System for June 30, 1952, included in schedules 1 and 2, were examined by Arthur Andersen & Co., independent public accountants, and have been included in this report unchanged except for the restatement of balances of unexpended appropriations as explained in note 4 of schedule 15.

The accounts on which these financial statements are based have been maintained to the extent practicable in accordance with the uniform system of accounts prescribed by the Federal Power Commission under the Federal Power Act.

In the opinion of the General Accounting Office, the accompanying financial statements present fairly the position of Columbia River Power System and of the Administration and the Projects at June 30, 1953, and the results of their operations for the year ended that date in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year, except for the following matters as to which it is not practicable to determine the full effect on the financial statements as of June 30, 1953.

1. A uniform policy has not been followed in all cases by the Administration and the Projects in the accounting treatment of property costs and operating expenses of the System, as described in notes 1 and 3 of schedule 15. Although the Administration and the Projects differ in their accounting treatment of these costs, the General Accounting Office does not believe that the stated results of commercial power operations have been materially affected for the fiscal year 1953 by these differences.

2. Construction costs of Hungry Horse Project have not been allocated to power and nonpower purposes by the Secretary of the Interior. A tentative allocation of these costs, made by the Bureau of Reclamation as explained in note 2 of schedule 15, has been used in preparing the accompanying financial statements. When a firm allocation of costs is made by the Secretary of the Interior, the accounts and financial statements relating to this project will be adjusted accordingly.

3. Interest and depreciation ($13,189,147) on the part of the cost of joint facilities at Columbia Basin and Hungry Horse Projects allocated to future downstream river regulation have been deferred to future periods on the basis that these amounts will be recovered from the operations of additional downstream hydroelectric plants now under construction or contemplated. While deferment of these charges is consistent with the allocations of costs of these projects, the propriety of excluding these items from current power costs is dependent upon the construction of the contemplated downstream plants.

4. During the fiscal year 1953, benefits accrued to the System from additional power generated at the Columbia Basin and Bonneville Dam Projects as a result of the operation of storage facilities at the Albeni Falls Project under construction by the Corps of Engineers. The gross operating revenues from operation of these storage facilities were estimated by the Administration and the Corps to be about $950,000. No costs of the Albeni Falls Project have been included in the financial statements. At June 30, 1953, this project was only about 60 percent complete and an allocation of the construction costs had not been made.

5. Potential reimbursements, if any, for benefits in fiscal year 1953 to downstream non-Federal power plants from storage at Columbia Basin, Hungry Horse, and Albeni Falls Projects have also not been included in the accompanying financial statements for the reasons set forth in note 8 of schedule 15.

Sincerely yours,

Lindsay C. Warren

Comptroller General
of the United States

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM
(Consisting of Bonneville Power Administration and the commercial power components of Bonneville Dam Project, Columbia Basin Project, and Hungry Horse Project)

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UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM
(Consisting of Bonneville Power Administration and the commercial power components of Bonneville Dam Project, Columbia Basin Project, and Hungry Horse Project) (note 10)

STATEMENT OF COMBINED ASSETS AND LIABILITIES ALLOCATED TO COMMERCIAL POWER (INCLUDING FUTURE DOWNSTREAM RIVER REGULATION)--JUNE 30, 1953 AND 1952

ASSETS	1953	1952
ELECTRIC UTILITY PLANT, at original cost, including interest during construction (notes 1 and 2):		
Specific power facilities (powerhouses, generating equipment and transmission plant)	$474,798,005	$398,746,269
Joint facilities (dams, reservoirs, fishways, general service facilities, etc):		
Present commercial power production	121,258,477	75,483,458
Future downstream river regulation	54,492,616	41,372,352
	650,549,098	515,602,079
Less reserve for depreciation (note 3):		
Specific power facilities	46,883,302	39,068,910
Joint facilities:		
Present commercial power production	4,055,781	3,657,971
Future downstream river regulation	2,060,423	1,896,163
	52,999,506	44,623,044
Original cost less reserve	597,549,592	470,979,035
INTEREST AND DEPRECIATION CHARGES ON JOINT FACILITIES ALLOCATED TO FUTURE DOWNSTREAM RIVER REGULATION--recoverable from operations of future downstream hydroelectric plants (note 7)	13,189,147	11,521,144
CURRENT ASSETS:		
Unexpended funds in U. S. Treasury appropriated by the Congress for construction and for operation and maintenance (note 4)	54,098,448	38,682,517
Special deposits	3,433,493	1,264,660
Accounts receivable:		
Customers	6,616,108	8,962,303
Other	839,440	587,461
Materials and supplies	8,572,851	6,136,875
	73,560,340	55,633,816
SPECIAL DEPOSITS:		
Customer's deposit, see contra	622,058	675,377
Cash held for construction of property for others, see contra	75,000	51,018
	697,058	726,395
OTHER ASSETS AND DEFERRED CHARGES	1,391,186	1,260,413
	$686,387,323	$540,120,803

LIABILITIES	1953	1952
INVESTMENT OF UNITED STATES GOVERNMENT AND ACCUMULATED NET REVENUES:		
Total investment of U. S. Government (including unexpended appropriations of $54,098,448 at June 30, 1953, and $38,682,517 at June 30, 1952) (schedule 5)	$871,267,924	$695,368,117
Less funds returned to U. S. Treasury (schedule 5)	292,781,902	251,845,394
Net investment of U. S. Government	578,486,022	443,522,723
Accumulated net revenues:		
Balance at beginning of year	83,578,661	69,139,613
Add net revenues for the year (schedule 2)	9,831,332	14,439,048
Balance at end of year	93,409,993	83,578,661
Total	671,896,015	527,101,384
CURRENT AND ACCRUED LIABILITIES:		
Accounts payable	11,349,199	9,518,253
Employees' accrued leave (note 1)	2,255,572	2,594,356
	13,604,771	12,112,609
DEFERRED CREDITS:		
Customer's deposit, see contra	622,058	675,377
Deposits for construction of property for others, see contra	75,000	51,019
Other	13,953	4,888
	711,011	731,284
CONTRIBUTION IN AID OF CONSTRUCTION--by State of Washington	175,526	175,526
	$686,387,323	$540,120,803

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM

(Consisting of Bonneville Power Administration and the commercial power components of Bonneville Dam Project, Columbia Basin Project, and Hungry Horse Project) (note 10)

STATEMENT OF COMBINED REVENUES AND EXPENSES ALLOCATED TO COMMERCIAL POWER (INCLUDING FUTURE DOWNSTREAM RIVER REGULATION)--FOR THE FISCAL YEARS ENDED JUNE 30, 1953 AND 1952

	1953	1952
OPERATING REVENUES:		
Sales of electric energy	$38,383,475	$39,526,432
Other electric revenues	791,734	653,714
Total operating revenues	39,175,209	40,180,146
OPERATING EXPENSES (notes 1 and 2):		
Purchased power	616,876	624,119
Operation:		
Specific power facilities	7,364,308	6,250,954
Joint facilities	457,302	235,365
Maintenance:		
Specific power facilities	2,229,509	1,894,550
Joint facilities	200,743	271,885
Depreciation (note 3):		
Specific power facilities	8,871,154	6,771,359
Joint facilities	810,025	568,405
Less amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 7)	271,131*	191,948*
Gain or loss on sales and abandonment of property	12,559*	90,784
Total operating expenses	20,266,227	16,515,473
Net operating revenues	18,908,982	23,664,673
INTEREST AND OTHER DEDUCTIONS:		
Interest on Federal investment	12,526,703	9,651,559
Less:		
Amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 7)	1,396,872*	1,253,180*
Amount charged to construction	2,146,722*	790,165*
Miscellaneous income deductions (net)	358,281	165,818
Total interest and other deductions	9,341,390	7,774,032
Net revenues for the year	9,567,592	15,890,641
ADJUSTMENTS APPLICABLE TO PRIOR YEARS	263,740	1,451,593*
Net revenues for the year after adjustments	$ 9,831,332	$14,439,048

*Denotes red figure

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM

(Consisting of Bonneville Power Administration and the commercial power components of Bonneville Dam Project, Columbia Basin Project, and Hungry Horse Project) (note 10)

STATEMENT COMBINING ASSETS AND LIABILITIES ALLOCATED TO COMMERCIAL POWER (INCLUDING FUTURE DOWNSTREAM RIVER REGULATION)--JUNE 30, 1953

ASSETS	Bonneville Power Administration (schedule 7)	Bonneville Dam Project (schedule 9)	Columbia Basin Project (schedule 11)	Hungry Horse Project (schedule 13)	Eliminations	Combined (to schedule 1)
ELECTRIC UTILITY PLANT, at original cost, including interest during construction (notes 1 and 2):						
Specific power facilities (powerhouses, generating equipment, and transmission plant)	$299,094,735	$38,620,787	$110,722,374	$26,360,109	$ -	$474,798,005
Joint facilities (dams, reservoirs, fishways, general service facilities, etc.):						
Present commercial power production	-	20,940,803	54,697,782	45,619,892	-	121,258,477
Future downstream river regulation	-	-	41,474,142	13,018,474	-	54,492,616
	299,094,735	59,561,590	206,894,298	84,998,475	-	650,549,098
Less reserve for depreciation (note 3):						
Specific power facilities	34,087,865	5,333,958	7,260,650	200,829	-	46,883,302
Joint facilities:						
Present commercial power production	-	1,284,454	2,684,807	86,520	-	4,055,781
Future downstream river regulation	-	-	2,035,733	24,690	-	2,060,423
	34,087,865	6,618,412	11,981,190	312,039	-	52,999,506
Original cost less reserve	265,006,870	52,943,178	194,913,108	84,686,436	-	597,549,592
INTEREST AND DEPRECIATION CHARGES ON JOINT FACILITIES ALLOCATED TO FUTURE DOWNSTREAM RIVER REGULATION--recoverable from operations of future downstream hydroelectric plants (note 7)	-	-	13,079,479	109,668	-	13,189,147
CURRENT ASSETS:						
Unexpended funds in U. S. Treasury appropriated by the Congress for construction and for operation and maintenance (note 4)	50,737,393	99,193	813,081	2,448,781	-	54,098,448
Special deposits	626,618	-	139,244	2,667,631	-	3,433,493
Accounts receivable:						
Customers	6,616,108	-	-	-	-	6,616,108
Other	708,237	-	34,153	878,050	781,000	839,440
Materials and supplies	7,105,994	62,213	1,066,711	337,933	-	8,572,851
	65,794,350	161,406	2,053,189	6,332,395	781,000	73,560,340
SPECIAL DEPOSITS:						
Customer's deposit, see contra	622,058	-	-	-	-	622,058
Cash held for construction of property for others, see contra	75,000	-	-	-	-	75,000
Payments to U. S. Treasury for the account of Bonneville Dam Project in excess of costs charged to power operations (note 5)	13,528,457	-	-	-	13,528,457	-
	14,225,515	-	-	-	13,528,457	697,058
OTHER ASSETS AND DEFERRED CHARGES	1,008,232	16,032	326,041	40,881	-	1,391,186
	$346,034,967	$53,120,616	$210,371,817	$91,169,380	$14,309,457	$686,387,323

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM

(Consisting of Bonneville Power Administration and the commercial power components of Bonneville Dam Project, Columbia Basin Project, and Hungry Horse Project) (note 10)

STATEMENT COMBINING ASSETS AND LIABILITIES ALLOCATED TO COMMERCIAL POWER (INCLUDING FUTURE DOWNSTREAM RIVER REGULATION)--JUNE 30, 1953

LIABILITIES	Bonneville Power Administration (schedule 7)	Bonneville Dam Project (schedule 9)	Columbia Basin Project (schedule 11)	Hungry Horse Project (schedule 13)	Eliminations	Combined (to schedule 1)
INVESTMENT OF UNITED STATES GOVERNMENT AND ACCUMULATED NET REVENUES:						
Investment of U. S. Government (including unexpended appropriations of $54,098,448) (schedule 5)	$433,689,507	$85,056,338	$264,445,857	$88,076,222	$ -	$871,267,924
Less funds returned to U. S. Treasury in repayment of Federal investment (including amounts for operating expenses and interest) (schedule 5)	159,725,271	45,475,522	87,131,553	449,556	-	292,781,902
Net investment of U. S. Government	273,964,236	39,580,816	177,314,304	87,626,666	-	578,486,022
Accumulated net revenues:						
Balance at beginning of year	55,670,613	-	27,908,048	-	-	83,578,661
Add net revenues for the year (schedule 4)	5,463,415	-	4,577,395	209,478*	-	9,831,332
Balance at end of year	61,134,028	-	32,485,443	209,478*	-	93,409,993
Total	335,098,264	39,580,816	209,799,747	87,417,188	-	671,896,015
CURRENT AND ACCRUED LIABILITIES:						
Accounts payable	7,970,120	11,343	396,544	3,752,192	781,000	11,349,199
Employees' accrued leave (note 1)	2,255,572	-	-	-	-	2,255,572
	10,225,692	11,343	396,544	3,752,192	781,000	13,604,771
DEFERRED CREDITS:						
Customer's deposit, see contra	622,058	-	-	-	-	622,058
Deposits for construction of property for others, see contra	75,000	-	-	-	-	75,000
Other	13,953	-	-	-	-	13,953
	711,011	-	-	-	-	711,011
CONTRIBUTION IN AID OF CONSTRUCTION--by State of Washington	-	-	175,526	-	-	175,526
EXCESS OF PAYMENTS TO U. S. TREASURY BY BONNEVILLE POWER ADMINISTRATION OVER COSTS CHARGED TO POWER OPERATIONS (note 5)	-	13,528,457	-	-	13,528,457	-
	$346,034,967	$53,120,616	$210,371,817	$91,169,380	$14,309,457	$686,387,323

*Denotes red figure

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM

(Consisting of Bonneville Power Administration and the commercial power components of Bonneville Dam Project, Columbia Basin Project, and Hungry Horse Project) (note 10)

STATEMENT COMBINING REVENUES AND EXPENSES ALLOCATED TO COMMERCIAL POWER (INCLUDING FUTURE DOWNSTREAM RIVER REGULATION)--FOR THE FISCAL YEAR ENDED JUNE 30, 1953

	Bonneville Power Administration (schedule 8)	Bonneville Dam Project (schedule 10)	Columbia Basin Project (schedule 12)	Hungry Horse Project (schedule 14)	Eliminations	Combined (to schedule 2)
OPERATING REVENUES:						
Sales of electric energy	$38,383,475	$ -	$ -	$ -	$ -	$38,383,475
Less amounts allocated to (note 5):						
Bonneville Dam Project	2,725,789*	2,725,789	-	-	-	-
Columbia Basin Project	10,912,430*	-	10,912,430	-	-	-
Hungry Horse Project	781,000*	-	-	781,000	-	-
Payment for river regulation at Bonneville Dam Project	-	-	187,570	-	187,570	-
Other electric revenues	565,973	-	180,872	44,889	-	791,734
Total operating revenues	24,530,229	2,725,789	11,280,872	825,889	187,570	39,175,209
OPERATING EXPENSES (notes 1 and 2):						
Purchased power	616,876	-	-	-	-	616,876
Operation:						
Specific power facilities	5,877,909	359,866	1,019,394	107,139	-	7,364,308
Joint facilities	-	90,547	312,417	54,338	-	457,302
Payment for river regulation	-	187,570	-	-	187,570	-
Maintenance:						
Specific power facilities	1,648,626	264,821	304,688	11,374	-	2,229,509
Joint facilities	-	103,855	96,821	67	-	200,743
Depreciation (note 3):						
Specific power facilities	6,679,536	554,252	1,436,537	200,829	-	8,871,154
Joint facilities	-	127,477	571,338	111,210	-	810,025
Less amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 7)	-	-	246,441*	24,690*	-	271,131*
Net gain on sales and abandonment of property	12,559*	-	-	-	-	12,559*
Total operating expenses	14,810,388	1,688,388	3,494,754	460,267	187,570	20,266,227
Net operating revenues	9,719,841	1,037,401	7,786,118	365,622	-	18,908,982
INTEREST AND OTHER DEDUCTIONS:						
Interest on Federal investment	4,988,440	1,037,866	4,520,165	1,980,232	-	12,526,703
Less:						
Amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 7)	-	-	1,311,894*	84,978*	-	1,396,872*
Amount charged to construction	811,306*	465*	14,797*	1,320,154*	-	2,146,722*
Miscellaneous income deductions (net)	79,292	-	278,989	-	-	358,281
Total interest and other deductions	4,256,426	1,037,401	3,472,463	575,100	-	9,341,390
Net revenues for the year	5,463,415	-	4,313,655	209,478*	-	9,567,592
ADJUSTMENTS APPLICABLE TO PRIOR YEARS	-	-	263,740	-	-	263,740
Net revenues for the year after adjustments	$ 5,463,415	$ -	$ 4,577,395	$ 209,478*	$ -	$ 9,831,332

*Denotes red figure

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM

(Consisting of Bonneville Power Administration and the commercial power components of Bonneville Dam Project, Columbia Basin Project, and Hungry Horse Project) (note 10)

ANALYSIS OF THE INVESTMENT OF THE UNITED STATES GOVERNMENT ALLOCATED TO COMMERCIAL POWER (INCLUDING FUTURE DOWNSTREAM RIVER REGULATION)--FOR THE PERIOD FROM INCEPTION TO JUNE 30, 1953

	Bonneville Power Administration (schedule 7)	Bonneville Dam Project (schedule 9)	Columbia Basin Project (schedule 11)	Hungry Horse Project (schedule 13)	Combined
INVESTMENT OF UNITED STATES GOVERNMENT:					
Congressional appropriations:					
Expended	$330,412,101	$59,366,382	$182,841,407	$80,183,693	$652,803,583
Unexpended (note 4)	50,237,393[a]	99,193	813,081	2,448,781	53,598,448[a]
Total	380,649,494	59,465,575	183,654,488	82,632,474	706,402,031
Allotments of Public Works Administration Funds	10,750,000	6,100,000	26,350,800	-	43,200,800
Expenditures of Works Progress Administration	5,038,383	-	1,635,747	-	6,674,130
Subtotal	396,437,877	65,565,575	211,641,035	82,632,474	756,276,961
Cost of materials and services furnished by other Federal agencies agencies (net)	5,906,313	87,900	2,555,964	421,982	8,972,159
Interest on Federal investment:					
Charged to operations	26,100,501	17,070,745	28,888,858	575,100	72,635,204
Charged to construction	3,824,109	2,332,118	9,729,447	4,361,688	20,247,362
Charged to future downstream river regulation	-	-	11,630,553	84,978	11,715,531
Revenues transferred to the continuing fund:					
Expended	920,707	-	-	-	920,707
Unexpended	500,000	-	-	-	500,000
Total investment of U. S. Government	433,689,507	85,056,338	264,445,857	88,076,222	871,267,924
LESS FUNDS RETURNED TO U. S. TREASURY FOR (note 6):					
Operation and maintenance expenses	51,660,683	8,061,614	15,142,417	-	74,864,714
Interest expense charged to operations	26,100,501	17,070,745	28,888,858	-	72,060,104
Total expense	77,761,184	25,132,359	44,031,275	-	146,924,818
Repayment of capital investment	81,964,087	20,343,163	43,100,278	449,556	145,857,084
Total funds returned to U. S. Treasury (schedule 6)	159,725,271	45,475,522	87,131,553	449,556	292,781,902
Net investment of U. S. Government	$273,964,236	$39,580,816	$177,314,304	$87,626,666	$578,486,022

[a]Exclusive of $500,000 unexpended balance in the continuing fund. This item is included as a part of revenues transferred to the continuing fund.

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM

(Consisting of Bonneville Power Administration and the commercial power components of Bonneville Dam Project, Columbia Basin Project, and Hungry Horse Project) (note 10)

ANALYSIS OF FUNDS RETURNED TO U. S. TREASURY

FOR THE FISCAL YEAR ENDED JUNE 30, 1953	Bonneville Power Administration	Bonneville Dam Project	Columbia Basin Project	Hungry Horse Project	Combined
SALES OF ELECTRIC ENERGY	$ 38,383,475	$ -	$ -	$ -	$ 38,383,475
Add:					
Decrease in uncollected sales, represented by reduction in accounts receivable from customers	2,346,195	-	-	-	2,346,195
Deduct noncash (exchange) power sales	1,155,311	-	-	-	1,155,311
	1,190,884	-	-	-	1,190,884
Cash receipts from sales of electric energy deposited in U. S. Treasury	39,574,359	-	-	-	39,574,359
OTHER RECEIPTS	660,979	-	251,614	91,297	1,003,890
Total receipts deposited in U. S. Treasury	40,235,338	-	251,614	91,297	40,578,249
ALLOCATION OF RECEIPTS AMONG PROJECTS:					
Transfer of receipts to U. S. Treasury accounts relating to the generating projects	14,600,000*	3,687,570	10,912,430	-	-
Payment for river regulation	-	187,570*	187,570	-	-
Funds returned to U. S. Treasury	$ 25,635,338	$ 3,500,000	$11,351,614	$ 91,297	$ 40,578,249

FOR THE PERIOD FROM INCEPTION TO JUNE 30, 1953					
SALES OF ELECTRIC ENERGY	$297,587,044	$ 92	$ -	$ -	$297,587,136
Less:					
Uncollected sales, represented by accounts receivable from customers	6,616,108	-	-	-	6,616,108
Noncash (exchange) power sales	7,160,436	-	-	-	7,160,436
Uncollectible power sales written off	2,524	-	-	-	2,524
	13,779,068	-	-	-	13,779,068
Cash receipts from sales of electric energy deposited in U. S. Treasury	283,807,976	92	-	-	283,808,068
OTHER RECEIPTS	7,211,405	-	1,312,873	449,556	8,973,834
Total receipts deposited in U. S. Treasury	291,019,381	92	1,312,873	449,556	292,781,902
ALLOCATION OF RECEIPTS AMONG PROJECTS:					
Transfer of receipts to U. S. Treasury accounts relating to the generating projects	131,294,110*	47,538,700	83,755,410	-	-
Payment for river regulation	-	2,063,270*	2,063,270	-	-
Funds returned to U. S. Treasury	$159,725,271	$45,475,522	$87,131,553	$449,556	$292,781,902

*Denotes red figure

The accompanying notes (schedule 15) are an integral part of this statement.

SCHEDULE 7

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

BONNEVILLE POWER ADMINISTRATION

STATEMENT OF ASSETS AND LIABILITIES--JUNE 30, 1953

ASSETS

ELECTRIC UTILITY PLANT (transmission lines, substations, etc.) at original cost, including interest during construction (notes 1 and 2)	$299,094,735	
Less reserve for depreciation (note 3)	34,087,865	
Original cost less reserve		$265,006,870
CURRENT ASSETS:		
Unexpended funds in U. S. Treasury appropriated by the Congress for construction and for operation and maintenance (note 4)	50,737,393	
Special deposits	626,618	
Accounts receivable:		
Customers	6,616,108	
Other	708,237	
Materials and supplies	7,105,994	65,794,350
SPECIAL DEPOSITS:		
Customer's deposit, see contra	622,058	
Cash held for construction of property for others, see contra	75,000	
Payments to U. S. Treasury for the account of Bonneville Dam Project in excess of costs charged to power operations (note 5)	13,528,457	14,225,515
OTHER ASSETS AND DEFERRED CHARGES		1,008,232
		$346,034,967

LIABILITIES

INVESTMENT OF UNITED STATES GOVERNMENT AND ACCUMULATED NET REVENUES:		
Congressional appropriations (including allotments, WPA expenditures, and unexpended appropriations of $50,237,393)	$396,437,877	
Cost of materials and services furnished by other Federal agencies (net)	5,906,313	
Revenues transferred to continuing fund (including unexpended balance of $500,000)	1,420,707	
Interest on Federal investment	29,924,610	
Investment of U. S. Government (schedule 5)	433,689,507	
Less funds returned to U. S. Treasury in repayment of Federal investment (including amounts for operating expenses and interest) (schedule 5)	159,725,271	
Net investment of U. S. Government		$273,964,236
Accumulated net revenues:		
Balance at beginning of year	55,670,613	
Add net revenues for the year (schedule 8)	5,463,415	
Balance at end of year		61,134,028
Total		335,098,264
CURRENT AND ACCRUED LIABILITIES:		
Accounts payable (including $781,000 due to Hungry Horse Project, see note 5)	7,970,120	
Employees' accrued leave	2,255,572	10,225,692
DEFERRED CREDITS:		
Customer's deposit, see contra	622,058	
Deposits for construction of property for others, see contra	75,000	
Other	13,953	711,011
		$346,034,967

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

BONNEVILLE POWER ADMINISTRATION

STATEMENT OF REVENUES AND EXPENSES FOR THE FISCAL YEAR ENDED JUNE 30, 1953

OPERATING REVENUES:		
Sales of electric energy		$38,383,475
Less amounts allocated to (note 5):		
Bonneville Dam Project	$ 2,725,789	
Columbia Basin Project	10,912,430	
Hungry Horse Project	781,000	14,419,219
		23,964,256
Other electric revenues		565,973
Total operating revenues		24,530,229
OPERATING EXPENSES (notes 1 and 2):		
Purchased power	616,876	
Operation	5,877,909	
Maintenance	1,648,626	
Depreciation (note 3)	6,679,536	
Net gain on sales and abandonment of property	12,559*	14,810,388
Net operating revenues		9,719,841
INTEREST AND OTHER DEDUCTIONS:		
Interest on Federal investment	4,988,440	
Less amount charged to construction	811,306*	
Miscellaneous income deductions (net)	79,292	4,256,426
Net revenues for the year		$ 5,463,415

*Denotes red figure

The accompanying notes (schedule 15) are an integral part of this statement.

SCHEDULE 9

UNITED STATES OF AMERICA

CORPS OF ENGINEERS--U. S. ARMY

BONNEVILLE DAM PROJECT

STATEMENT OF ASSETS AND LIABILITIES--JUNE 30, 1953

ASSETS	Total	Amounts allocated to Nonpower	Amounts allocated to Power
PROPERTY, PLANT, AND EQUIPMENT, at original cost, including interest during construction (notes 1 and 2):			
Specific power facilities (powerhouse and generating equipment)	$ 38,620,787	$ -	$38,620,787
Specific navigation facilities (shiplock)	6,343,034	6,343,034	-
Joint facilities (dam, reservoir, fishways, etc.)	41,881,606	20,940,803	20,940,803
	86,845,427	27,283,837	59,561,590
Less reserve for depreciation (note 3):			
Specific power facilities	5,333,958	-	5,333,958
Specific navigation facilities	420,675	420,675	-
Joint facilities	2,568,908	1,284,454	1,284,454
	8,323,541	1,705,129	6,618,412
Original cost less reserve	78,521,886	25,578,708	52,943,178
CURRENT ASSETS:			
Unexpended funds in U. S. Treasury appropriated by the Congress for construction and for operation and maintenance (note 4)	134,026	34,833	99,193
Materials and supplies	110,601	48,388	62,213
	244,627	83,221	161,406
DEFERRED CHARGES	28,501	12,469	16,032
	$ 78,795,014	$25,674,398	$53,120,616
LIABILITIES			
INVESTMENT OF UNITED STATES GOVERNMENT:			
Congressional appropriations (including allotments and unexpended appropriations of $134,026)	$ 95,078,112	$29,512,537	$65,565,575
Cost of materials and services furnished by other Federal agencies (net)	175,400	87,500	87,900
Interest on Federal investment	29,999,379	10,596,516	19,402,863
Investment of U. S. Government (schedule 5)	125,252,891	40,196,553	85,056,338
Less:			
Funds returned to U. S. Treasury in repayment of Federal investment allocated to power (including amounts for operating expenses and interest) (schedule 5)	45,475,522	-	45,475,522
Net expense of nonreimbursable portion of project (including $1,091,353 for the year ended June 30, 1953)	14,525,948	14,525,948	-
	60,001,470	14,525,948	45,475,522
Net investment of U. S. Government	65,251,421	25,670,605	39,580,816
ACCOUNTS PAYABLE	15,136	3,793	11,343
EXCESS OF PAYMENTS TO U. S. TREASURY BY BONNEVILLE POWER ADMINISTRATION OVER COSTS CHARGED TO POWER OPERATIONS (note 5):			
Balance beginning of year	12,566,676	-	12,566,676
Excess for the year ended June 30, 1953	961,781	-	961,781
Balance at end of year	13,528,457	-	13,528,457
The accompanying notes (schedule 15) are an integral part of this statement.	$ 78,795,014	$25,674,398	$53,120,616

UNITED STATES OF AMERICA

CORPS OF ENGINEERS--U. S. ARMY

BONNEVILLE DAM PROJECT

STATEMENT OF REVENUES AND EXPENSES FOR THE FISCAL YEAR ENDED JUNE 30, 1953

	Total	Amounts allocated to Nonpower	Amounts allocated to Power
OPERATING REVENUES:			
Receipts from sales of electric energy by Bonneville Power Administration allocated to Bonneville Dam Project applied to the repayment of operating and interest expenses allocated to power (note 5)	$2,725,789	$ -	$2,725,789
OPERATING EXPENSES (notes 1 and 2):			
Operation:			
Specific power facilities	359,866	-	359,866
Specific navigation facilities	44,969	44,969	-
Joint facilities	181,094	90,547	90,547
Payment for river regulation	187,570	-	187,570
Maintenance:			
Specific power facilities	264,821	-	264,821
Specific navigation facilities	42,538	42,538	-
Joint facilities	207,710	103,855	103,855
Depreciation (note 3):			
Specific power facilities	554,252	-	554,252
Specific navigation facilities	39,307	39,307	-
Joint facilities	254,954	127,477	127,477
Total operating expenses	2,137,081	448,693	1,688,388
Net operating revenues	588,708	448,693*	1,037,401
INTEREST DEDUCTIONS:			
Interest on Federal investment	1,680,601	642,735	1,037,866
Less amount charged to construction	540	75	465
Net interest deduction	1,680,061	642,660	1,037,401
Net revenues for the year	$1,091,353*	$1,091,353*	$ -

*Denotes red figure

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION--COLUMBIA BASIN PROJECT

STATEMENT OF ASSETS AND LIABILITIES--JUNE 30, 1953

ASSETS	Total	Amounts allocated to Nonpower	Amounts allocated to Commercial power (including future downstream river regulation)
PROPERTY, PLANT, AND EQUIPMENT, at original cost, including interest during construction on facilities allocated to commercial power (notes 1 and 2):			
Specific power facilities (powerhouses and generating equipment):			
Commercial power	$110,722,374	$ -	$110,722,374
Irrigation pumping	1,598,482	1,598,482	-
Joint facilities (dam, reservoir, and general service facilities):			
Present commercial power production	54,697,782	-	54,697,782
Future downstream river regulation	41,474,142	-	41,474,142
Irrigation	70,918,216	70,918,216	-
Flood control and navigation	1,000,000	1,000,000	-
Specific irrigation facilities (equalizing reservoir, canals, and pumping plant)	183,412,597	183,412,597	-
Farmland held for resale	4,327,145	4,327,145	-
	468,150,738	261,256,440	206,894,298
Less reserve for depreciation (note 3):			
Specific power facilities:			
Commercial power	7,260,650	-	7,260,650
Irrigation pumping	42,629	42,629	-
Joint facilities:			
Present commercial power production	2,684,807	-	2,684,807
Future downstream river regulation	2,035,733	-	2,035,733
Irrigation	1,150,402	1,150,402	-
Specific irrigation facilities (equalizing reservoir, canals, and pumping plant)	1,437,653	1,437,653	-
	14,611,874	2,630,684	11,981,190
Original cost less reserve	453,538,864	258,625,756	194,913,108
INTEREST AND DEPRECIATION CHARGES ON JOINT FACILITIES ALLOCATED TO FUTURE DOWNSTREAM RIVER REGULATION--recoverable from operations of future downstream hydroelectric plants (note 7)	13,079,479	-	13,079,479
CURRENT ASSETS:			
Unexpended funds in U. S. Treasury appropriated by the Congress for construction and for operation and maintenance (note 4)	3,733,874	2,920,793	813,081
Special deposits	1,309,853	1,170,609	139,244
Accounts receivable	68,630	34,477	34,153
Materials and supplies	1,974,874	908,163	1,066,711
	7,087,231	5,034,042	2,053,189
OTHER ASSETS AND DEFERRED CHARGES	2,301,173	1,975,132	326,041
	$476,006,747	$265,634,930	$210,371,817

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION--COLUMBIA BASIN PROJECT

STATEMENT OF ASSETS AND LIABILITIES--JUNE 30, 1953

LIABILITIES	Total	Amounts allocated to Nonpower	Amounts allocated to Commercial power (including future downstream river regulation)
INVESTMENT OF UNITED STATES GOVERNMENT AND ACCUMULATED NET REVENUES:			
Congressional appropriations (including allotments, WPA expenditures, and unexpended appropriations of $3,733,874)	$475,746,960	$264,105,925	$211,641,035
Cost of materials and services furnished by other Federal agencies (net)	5,244,222	2,688,258	2,555,964
Interest on portion of Federal investment allocated to commercial power	50,248,858	-	50,248,858
Investment of U. S. Government (schedule 5)	531,240,040	266,794,183	264,445,857
Less:			
Funds returned to U. S. Treasury in repayment of Federal investment (including amounts for operating expenses and interest) (schedule 5)	89,136,354	2,004,801	87,131,553
Nonreimbursable expenses	142,738	142,738	-
	89,279,092	2,147,539	87,131,553
Net investment of U. S. Government	441,960,948	264,646,644	177,314,304
Accumulated net revenues:			
Balance at beginning of year	26,047,463	1,860,585*	27,908,048
Add net revenues for the year (schedule 12)	4,268,470	308,925*	4,577,395
Balance at end of year	30,315,933	2,169,510*	32,485,443
Total	472,276,881	262,477,134	209,799,747
ACCOUNTS PAYABLE	3,416,427	3,019,883	396,544
CONTRIBUTIONS IN AID OF CONSTRUCTION--by State of Washington	313,439	137,913	175,526
	$476,006,747	$265,634,930	$210,371,817

*Denotes red figure

The accompanying notes (schedule 15) are an integral part of this statement.

SCHEDULE 12

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION--COLUMBIA BASIN PROJECT

STATEMENT OF REVENUES AND EXPENSES FOR THE FISCAL YEAR ENDED JUNE 30, 1953

	Total	Amounts allocated to Nonpower	Amounts allocated to Commercial power (including future downstream river regulation)
OPERATING REVENUES (note 8):			
Receipts from sales of electric energy by Bonneville Power Administration allocated to Columbia Basin Project (note 5)	$10,912,430	$ -	$10,912,430
Payment for river regulation	187,570	-	187,570
Irrigation revenues	336,809	336,809	-
Other electric revenues	180,872	-	180,872
Total operating revenues	11,617,681	336,809	11,280,872
OPERATING EXPENSES (notes 1 and 2):			
Operation:			
Specific power facilities	1,034,471	15,077	1,019,394
Specific irrigation facilities	96,970	96,970	-
Joint facilities	562,333	249,916	312,417
Maintenance:			
Specific power facilities	309,194	4,506	304,688
Specific irrigation facilities	54,994	54,994	-
Joint facilities	174,272	77,451	96,821
Depreciation (note 3):			
Specific power facilities	1,457,077	20,540	1,436,537
Joint facilities	571,338	-	571,338
Less amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 7)	246,441*	-	246,441*
Total operating expenses	4,014,208	519,454	3,494,754
Net operating revenues	7,603,473	182,645*	7,786,118
INTEREST AND OTHER DEDUCTIONS:			
Interest on Federal investment	4,520,165	-	4,520,165
Less:			
Amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 7)	1,311,894*	-	1,311,894*
Amount charged to construction	14,797*	-	14,797*
Miscellaneous income deductions (net)	327,828	48,839	278,989
Total interest and other deductions	3,521,302	48,839	3,472,463
Net revenues for the year	4,082,171	231,484*	4,313,655
Adjustments applicable to prior years--credit	324,377	60,637	263,740
Net revenues for the year after adjustments	$ 4,406,548	$170,847*	$ 4,577,395
Net revenues after adjustments distributed to:			
Nonreimbursable expenses (navigation)	$ 5,824*	$ 5,824*	$ -
Accounts with water users	143,902	143,902	-
Accumulated net revenues	4,268,470	308,925*	4,577,395
Total, as above	$ 4,406,548	$170,847*	$ 4,577,395

*Denotes red figure

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION--HUNGRY HORSE PROJECT

STATEMENT OF ASSETS AND LIABILITIES--JUNE 30, 1953

ASSETS	Total	Amounts allocated to Nonpower	Amounts allocated to Commercial power (including future downstream river regulation)
PROPERTY, PLANT, AND EQUIPMENT, at original cost, including interest during construction (notes 1 and 2):			
Specific power facilities (powerhouse and generating equipment)	$ 26,360,109	$ -	$26,360,109
Joint facilities (dam, reservoir, and general service facilities):			
Present commercial power production	45,619,892	-	45,619,892
Future downstream river regulation	13,018,474	-	13,018,474
Flood control	19,288,520	19,288,520	-
	104,286,995	19,288,520	84,998,475
Less reserve for depreciation (note 3):			
Specific power facilities	200,829	-	200,829
Joint facilities:			
Present commercial power production	86,520	-	86,520
Future downstream river regulation	24,690	-	24,690
	312,039	-	312,039
Original cost less reserve	103,974,956	19,288,520	84,686,436
INTEREST AND DEPRECIATION CHARGES ON JOINT FACILITIES ALLOCATED TO FUTURE DOWNSTREAM RIVER REGULATION--recoverable from operations of future downstream hydroelectric plants (note 7)	109,668	-	109,668
CURRENT ASSETS:			
Unexpended funds in U. S. Treasury appropriated by the Congress for construction and for operation and maintenance (note 4)	2,970,495	521,714	2,448,781
Special deposits	3,234,758	567,127	2,667,631
Accounts receivable (including $781,000 due from Bonneville Power Administration, see note 5)	909,142	31,092	878,050
Materials and supplies	429,885	91,952	337,933
	7,544,280	1,211,885	6,332,395
OTHER ASSETS AND DEFERRED CHARGES	41,698	817	40,881
	$111,670,602	$20,501,222	$91,169,380

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION--HUNGRY HORSE PROJECT

STATEMENT OF ASSETS AND LIABILITIES--JUNE 30, 1953

LIABILITIES	Total	Amounts allocated to Nonpower	Amounts allocated to Commercial power (including future downstream river regulation)
INVESTMENT OF UNITED STATES GOVERNMENT AND ACCUMULATED NET REVENUES:			
Congressional appropriations (including unexpended appropriations of $2,970,495)	$102,461,290	$19,828,816	$82,632,474
Cost of materials and services furnished by other Federal agencies (net)	523,243	101,261	421,982
Interest on Federal investment allocated to commercial power	5,021,766	-	5,021,766
Investment of U. S. Government (schedule 5)	108,006,299	19,930,077	88,076,222
Less:			
Funds returned to U. S. Treasury in repayment of Federal investment (including amounts for operating expenses and interest) (schedule 5)	604,893	155,337	449,556
Nonreimbursable expenses	22,126	22,126	-
	627,019	177,463	449,556
Net investment of U. S. Government	107,379,280	19,752,614	87,626,666
Net loss for the year (schedule 14)	209,478	-	209,478
Total	107,169,802	19,752,614	87,417,188
ACCOUNTS PAYABLE	4,500,800	748,608	3,752,192
	$111,670,602	$20,501,222	$91,169,380

The accompanying notes (schedule 15) are an integral part of this statement.

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION--HUNGRY HORSE PROJECT

STATEMENT OF REVENUES AND EXPENSES FOR THE FISCAL YEAR ENDED JUNE 30, 1953

		Amounts allocated to	
	Total	Nonpower	Commercial power (including future downstream river regulation)
OPERATING REVENUES:			
Receipts from sales of electric energy by Bonneville Power Administration allocated to Hungry Horse Project (note 5)	$ 781,000	$ -	$ 781,000
Other electric revenues	44,889	-	44,889
Total operating revenues	825,889	-	825,889
OPERATING EXPENSES (notes 1 and 2):			
Operation:			
Specific power facilities	107,139	-	107,139
Joint facilities	76,464	22,126	54,338
Maintenance:			
Specific power facilities	11,374	-	11,374
Joint facilities	67	-	67
Depreciation (note 3):			
Specific power facilities	200,829	-	200,829
Joint facilities	111,210	-	111,210
Less amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 7)	24,690*	-	24,690*
Total operating expenses	482,393	22,126	460,267
Net operating revenues	343,496	22,126*	365,622
INTEREST AND OTHER DEDUCTIONS:			
Interest on Federal investment	1,980,232	-	1,980,232
Less:			
Amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 7)	84,978*	-	84,978*
Amount charged to construction	1,320,154*	-	1,320,154*
Net interest deduction	575,100	-	575,100
Net loss for the year	$ 231,604	$22,126	$ 209,478

*Denotes red figure

The accompanying notes (schedule 15) are an integral part of this statement.

COLUMBIA RIVER POWER SYSTEM

NOTES TO FINANCIAL STATEMENTS ON SCHEDULES 1 TO 14, INCLUSIVE

1. COST ACCOUNTING PRACTICES

Under governmental accounting procedures the costs of administrative and other services rendered by other Federal agencies are not distributed among or charged to the agencies or projects benefiting from such services. It is not practicable to make a constructive determination in all cases of the amounts of such costs applicable to an individual project or agency, but Bonneville Power Administration has recorded actual or estimated costs for many of these services. The Administration includes in its accounts amounts for rentals, materials and other services furnished without charge by the General Services Administration and other Federal agencies, death and disability claims on account of the Administration's employees paid by the Bureau of Employees' Compensation, Department of Labor, and the amounts applicable to the Administration's operations of the cost of the Civil Service Retirement System. It is not the practice of the Corps of Engineers or the Bureau of Reclamation to include in their accounts amounts incurred by other Federal agencies and not assignable to the projects pursuant to law or administrative policy. Similarly, general administrative expenses of regional offices and of the Washington, D. C., and Denver offices are not included in project property costs and operating expenses by the Bureau of Reclamation and the expenses of the Washington, D. C., central office are likewise not included by the Corps of Engineers.

Expenditures for preliminary surveys and investigations are included in property costs by the Administration and the Bureau of Reclamation but not by the Corps of Engineers.

The Administration and the Corps of Engineers include in property costs and operating expenses provision for accrued annual and sick leave of employees. Such provisions have not been made at the Hungry Horse Project and the making of such provisions was discontinued in fiscal year 1953 by the Columbia Basin Project, but at both projects the amounts of wages and salaries paid to employees while on sick or annual leave were charged to the appropriate property or operating expense accounts.

The Administration and the projects have included interest at the rate of 2.5 percent on the net unpaid Federal investment with appropriate charges to expense and to property costs (interest during construction). At the Columbia Basin and Hungry Horse Projects interest is computed only on the property costs and operating expenses allocated to commercial power. At the Columbia Basin Project interest is recorded in memorandum accounts kept under an agreement with Bonneville Power Administration for the purpose of presenting statements of the results of power operations, inasmuch as the Bureau of Reclamation considers that the payment of interest is not required by reclamation laws. The interest accounts at the Hungry Horse Project are also maintained on a memorandum basis.

2. ALLOCATION OF JOINT COSTS AND EXPENSES

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

Bonneville Dam Project. Property, plant and equipment determined to be jointly useful for power generation and for other purposes, consisting principally of the dam, reservoir and fishways, has been allocated 50 percent to power and 50 percent to nonpower purposes by the Federal Power Commission under the provisions of the Bonneville Project Act. Operation and maintenance expenses applicable to joint facilities have been administratively allocated to power and to nonpower operations in the same proportion as the related property costs.

Columbia Basin Project. Property, plant and equipment costs 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 future downstream river regulation) and 44 percent to nonpower purposes after assigning $1,000,000 to flood control and navigation. Specific power facilities (principally powerhouses and generating equipment), exclusive of the cost of the three generating units and related electrical facilities installed in addition to the original fifteen units, have been allocated to commercial power and to irrigation pumping power in proportion to the relative value of the power delivered for each purpose. The cost of the three additional 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 provisions of the Reclamation Project Act of 1939 (43 U. S. C. 485h); however, other methods of allocating costs between commercial power and irrigation pumping power are being considered. The expenses of operating and maintaining the joint facilities have been allocated in the same proportions as the related property costs for the purposes of the presentation of the financial statements of the commercial power operation. However, the Bureau of Reclamation considers that substantially all of such expenses are costs of commercial power operations.

The memorandum of agreement between the Administration and the Bureau provides that all of the expenses of operating and maintaining the Grand Coulee Dam, reservoir, appurtenant works, and the power plant, except the portions of the latter allocated to irrigation works as pumping power, shall be returned from commercial power revenues together with that portion of the construction costs, including the construction costs of the irrigation works not repayable by water users. It is estimated that over the repayment period for the Columbia Basin Project commercial power revenues will return about $450,600,000 of construction costs and expenses allocated to irrigation.

Hungry Horse Project. An allocation of the construction costs of Hungry Horse Project has not been made by the Secretary of the Interior. A tentative allocation has been made of the estimated total construction costs of $102 million, exclusive of interest during construction, by the Bureau of Reclamation. That allocation is as follows:

	Direct power	Joint Dollars	Joint Percent	Total
	(in thousands of dollars)			
Downstream power:				
Grand Coulee Dam . . .	$ -	$20,181	26.35	$ 20,181
Bonneville Dam.	-	5,189	6.77	5,189
Chief Joseph Dam . . .	-	3,506	4.58	3,506
McNary Dam	-	9,132	11.92	9,132
Subtotal	-	38,008	49.62	38,008
At site power	25,407	18,916	24.70	44,323
Subtotal	25,407	56,924	74.32	82,331
Flood control & navigation	-	19,669	25.68	19,669
Total.	$25,407	$76,593	100.00	$102,000

Construction costs, together with related interest and depreciation expenses, allocated to downstream river regulation at the Chief Joseph and McNary Projects are deferred for return from the sale of electric energy to be generated at those projects which are not now in service. For the purposes of this report, property costs have been allocated in accordance with the percentages shown in the tabulation above. Operating expenses for fiscal year 1953 have been administratively allocated to power and nonpower activities on the basis of a work performance analysis, but no part of the operating expenses has been allocated to future downstream river regulation. When an allocation of costs has been made by the Secretary of the Interior it will be applied retroactively and the accounts will be revised to show such allocation.

3. DEPRECIATION POLICY

Depreciation of the property of Bonneville Power Administration and the Hungry Horse Project has been computed on the straight line method. Depreciation of the property of Bonneville Dam and the Columbia Basin Projects has been computed on the compound interest method using an interest factor of 2.5 percent. The Columbia Basin and Hungry Horse Projects have computed depreciation only on the portions of property cost allocated to commercial power, the specific power plant costs allocated to irrigation pumping, and the costs of construction equipment and related general service facilities.

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 one hundred years except for a maximum of one hundred fifty years at the Hungry Horse Project. All costs of land, land rights, surveys, and clearing allocated to commercial power are being charged to depreciation expense over a period of one hundred years, except that the Hungry Horse Project has made no charge to depreciation expense to June 30, 1953, for costs of land, land rights, and clearing and Bonneville Power Administration and the Bonneville Dam Project do not make any charge to depreciation expense for amounts paid to former owners for fee title to lands acquired from them.

A composite depreciation reserve is maintained for each class of property and, with certain exceptions at the Columbia Basin Project, the original cost of property retired or abandoned, less applicable net salvage, is removed from the plant costs and charged to the related reserve. This policy is not followed at the Columbia Basin Project, however, for nonpower plant facilities not depreciated.

A uniform depreciation policy, including method and maximum service lives, is under consideration by the Department of the Interior for application by the several power agencies of the Department.

4. UNEXPENDED APPROPRIATIONS

Funds in the United States Treasury represent unexpended appropriations by the Congress as follows:

Appropriated for	Total	Amount allocated to power
Bonneville Power Administration:		
Construction	$49,738,134	$49,738,134
Operation and maintenance	499,259	499,259
Continuing fund	500,000	500,000
Total	50,737,393	50,737,393
Bonneville Dam Project:		
Construction	23,608	17,472
Operation and maintenance	110,418	81,721
Total	134,026	99,193
Columbia Basin Project:		
Construction and rehabilitation	2,806,764	223,181
Operation and maintenance	927,110	589,900
Total	3,733,874	813,081
Hungry Horse Project:		
Construction and rehabilitation	2,949,496	2,431,752
Operation and maintenance	20,999	17,029
Total	2,970,495	2,448,781
Grand total	$57,575,788	$54,098,448

At June 30, 1953, Bonneville Power Administration had obligated $39,706,927 (construction, $39,575,132 and operation and maintenance, $131,795) and $11,030,466 (construction, $10,163,002, operation and maintenance, $367,464, and continuing fund $500,000) was unobligated.

Under the Interior Department Appropriation Act, 1954, 67 Stat. 261, additional funds of $38,866,000 for construction and $6,004,000 for operation and maintenance became available to Bonneville Power Administration on July 1, 1953.

Funds that have been appropriated for construction remain available until expended. Except for the Corps of Engineers (Bonneville Dam Project), funds appropriated for operation and maintenance may be obligated only for the year for which the funds are appropriated. The continuing fund is maintained in the United States Treasury for Bonneville Power Administration to defray emergency expenses and to insure continuous operation. The fund was authorized by the Bonneville Project Act, as amended (16 U.S.C. 832 j), to be derived from receipts from sale of electric energy not to exceed $500,000.

The unexpended balances of appropriations have been included in the statements of assets and liabilities of Bonneville Power Administration and the Projects as of June 30, 1953. This treatment represents a change from that of previous years when cash balances were included in the financial statements only to the extent of estimated normal working capital cash requirements, estimated at about one month's expenditures. The June 30, 1952, balance of unexpended appropriations shown in schedule 1, originally reported as $6,016,968, has been restated accordingly to $38,682,517 and the investment of the United States Government has been increased by $32,665,549.

The Projects are authorized to enter into contracts for construction of property or purchase of equipment to be completed in fiscal years subsequent to the execution of the contract, subject to the availability of funds. Bonneville Power Administration, however, must have appropriations available prior to the execution of such contracts. Accordingly, the Administration has substantial unexpended but obligated appropriations for construction. Although current assets and the investment of the United States Government as set forth in schedules 1, 3, 5, and 7 include the Administration's total unexpended appropriations, the Administration considers that the portions of such unexpended appropriations in excess of a normal working capital balance, estimated at about one month's expenditures, have not been invested by the United States Government but represent a line of credit available to the Administration. As of June 30, 1953, the Administration considered that $4,643,123 of its total unexpended appropriations of $50,737,393, including the continuing fund, represented working capital cash and the remainder of $46,094,270 represented amounts available for future expenditures.

5. ALLOCATION OF REVENUE

The allocation of revenue to the Projects has been determined in accordance with memoranda of agreement between the Bonneville Power Administration and the Corps of Engineers, United States Army, for the Bonneville Dam Project, and the Bureau of Reclamation, Department of the Interior, for the Columbia Basin and Hungry Horse Projects.

Bonneville Dam Project. Under the terms of an agreement between the Corps of Engineers, United States Army, and Bonneville Power Administration, the Administration is required to deposit as miscellaneous receipts in the United States Treasury for the account of Bonneville Dam Project, scheduled amounts of the receipts from the sale of power generated at that project, representing the portion of such receipts properly allocable to the return of the reimbursable power costs of Bonneville Dam Project. These amounts are not dependent upon the quantity of electric energy generated and delivered to the Administration by Bonneville Dam Project from year to year but are designed to return the plant costs of Bonneville Dam Project allocated to power, including necessary replacements, over a fifty-year period beginning July 1, 1944, together with interest at 2.5 percent per annum and annual operating and maintenance expenses allocated to power.

The Bonneville Project Act provides that rate schedules shall be drawn having regard to the recovery of the cost of producing electric energy at the Bonneville Dam Project, including the amortization of the capital investment allocated to power over a reasonable period of years. Since the repayment plan contemplates the amortization of the cost of power facilities within a shorter period than the estimated service lives of such facilities, the receipts allocated to Bonneville Dam Project to date have exceeded the accumulated power expenses to date (including depreciation of power facilities based upon their estimated service lives). Accordingly, the excess of such payments over costs charged to power operations at the project has been treated in the accounts of Bonneville Power Administration as advance payments to the United States Treasury for the account of the project. These payments have been recorded by the project as excess payments to the United States Treasury by the Administration over costs charged to power operations. The amounts in these accounts will be transferred to the income account in subsequent periods in amounts equivalent to the provisions for depreciation that will be charged to the income account in those subsequent periods when the plant costs allocated to power have been repaid and deposits in the United States Treasury by Bonneville Power Administration for the account of the Bonneville Dam Project will be equal only to power operating expenses exclusive of provisions for depreciation.

During 1953 Bonneville Power Administration deposited $3,687,570 in the United States Treasury for the account of Bonneville Dam Project in accordance with the terms of the agreement. Of this amount $2,725,789, equivalent to operating expenses (including depreciation) and interest on the Federal investment allocated to power, has been treated as current year's revenue and the excess, $961,781 ($13,528,457 in total to June 30, 1953), was recorded as excess of payments by Bonneville Power Administration over costs charged to power operations. This excess, together with the amount represented by the provision for depreciation expense, has been applied to the repayment of the capital investment of the Bonneville Dam Project allocated to power.

Of the $3,687,570 deposited for 1953, $3,500,000 was covered into the general fund (miscellaneous receipts) and $187,570 into the reclamation fund in the Treasury. The latter amount constitutes payments for river regulation benefits received from storage operations of Grand Coulee Dam.

Columbia Basin Project. Reclamation laws, as supplemented by the act of August 30, 1953, and Executive Order No. 8526 require that payments be made, from time to time, into the reclamation fund in the United States Treasury for the account of Columbia Basin Project from revenues received by Bonneville Power Administration from the sale of electric energy equal to the portion of such revenues properly allocable to the project. Under the terms of the agreement of January 31, 1946, between Bonneville Power Administration and the Bureau of Reclamation, entered into to effectuate these requirements, the Administration is required to make payments which in any year are not dependent upon the quantity of energy generated by the project and delivered to the Administration. These payments are designed to pay into the reclamation fund over a period of years, not in excess of the life of the project, the operation and maintenance expenses of the dam and the power plant; the cost, exclusive of interest during construction, of facilities allocated to power; the portion of the cost, exclusive of interest during construction, of facilities allocated to irrigation which exceeds the repayment ability of the water users (estimated, upon completion of the project, to be approximately $450,600,000); and an annual amount equal to 3 percent of the unrepaid cost, exclusive of interest during construction, allocated to present power production. A schedule of estimated payments is provided in the agreement, but provision is made for annual adjustments of the schedule to show the application of actual payments to the return of such amounts. Provision is made also for payments in excess of the annual amounts set out in the schedule or less than such amounts in the event that prior excess payments have been made. The amounts paid into the reclamation fund for the project each year are not in repayment of specific expenses applicable to specific years but represent lump-sum payments against the total amounts provided for in the agreement. Accordingly, the amount payable for the year ended June 30, 1953, under the terms of the agreement has been treated in the accompanying financial statements as current year's revenues.

Hungry Horse Project. A definitive agreement between the Bonneville Power Administration and the Bureau of Reclamation covering the

delivery of energy generated at Hungry Horse Project and the allocation of revenues to that project has not been executed, but an exchange of letters provided for the allocation by the Administration of $781,000 of revenues to the project for fiscal year 1953. The actual deposit of that sum in the reclamation fund for the account of the Hungry Horse Project will be made in fiscal year 1954. This amount is shown in the accounts as of June 30, 1953, as payable by the Administration to the Hungry Horse Project and as receivable by the latter from the Administration. The amount of $781,000 is the total allocable to the Hungry Horse Project for energy delivered to the Administration by the project and for benefits to downstream system power plants in fiscal year 1953.

6. AMOUNT AND REPAYMENT OF THE INVESTMENT OF UNITED STATES GOVERNMENT ALLOCATED TO COMMERCIAL POWER (INCLUDING FUTURE DOWNSTREAM RIVER REGULATION)

All funds expended by the Columbia River Power System for property, plant, equipment, or other assets and for expenses of operation and maintenance are obtained from congressional appropriations, except that Bonneville Power Administration may use the continuing fund to defray emergency expenses and to assure continuous operation. The continuing fund, however, is regarded as a continuing appropriation and is accounted for in the same manner as other appropriations in reports to the Bureau of the Budget and the Congress.

All receipts from the sale of electric energy or from miscellaneous sources are not available to the power system for expenditure except to the extent of funds transferred to the Administration's continuing fund. To June 30, 1953, receipts transferred to the continuing fund totaled $1,420,707, of which $920,707 had been expended and $500,000 of unexpended and unobligated cash remained in the fund.

The investment of the United States Government allocated to commercial power (including future downstream river regulation) includes, in addition to the congressional appropriations and the continuing fund: (1) allotments from Public Works Administration funds, (2) Works Progress Administration expenditures for clearing of rights-of-way and reservoir areas, etc., (3) the actual or estimated cost of materials and services furnished by other Federal agencies without charge, less the amount of such items furnished to other agencies by the power system, and (4) interest at 2.5 percent on the net unpaid balance of the Federal investment.

The composition of the investment of the United States Government in the power system is shown in schedule 5. This schedule shows the total Federal investment in the power system and the status of repayment of that investment. Included are unexpended appropriations, consisting principally of those of the Administration and considered by the Administration as having been invested at June 30, 1953, only to the extent of working capital requirements for reasons set forth in note 4.

The capital investment is represented by property, plant and equipment, materials, supplies, unexpended appropriations, etc., with interest during construction included in property and plant costs. The remainder of the investment is represented by expenses incurred for operation, maintenance, marketing, administration, etc., and interest expense, other than interest during construction and interest on the capital investment allocated to future downstream river regulation deferred for recovery from the operations of future downstream hydroelectric plants as explained in note 7. Such deferred interest is a part of the Federal investment, but it is included as an item among the assets of the System as a deferred charge against future power operations.

Plans for repayment of construction costs from power receipts provide for such repayment over a period of years. Neither those plans nor applicable laws require the repayment of specific or fixed amounts in any one year. On the other hand, the payout schedules contemplate that expenses for operation, maintenance, and interest are repayable annually as incurred. Accordingly, for the purpose of schedule 5 it has been determined administratively that power receipts returned to the United States Treasury shall be applied to repayments in the following order of priority: (1) the expenses of operation, maintenance, etc., (2) interest expense, exclusive of interest during construction and deferred interest on investment allocated to future downstream river regulation, and (3) capital investment.

Receipts from sales of electric energy by Bonneville Power Administration allocated to the Hungry Horse Project amounted to $781,000 for fiscal year 1953. The Administration will cover this amount into the Treasury in fiscal year 1954 for the account of the Hungry Horse Project. As shown in schedule 14, the net loss for the project was $209,478 for fiscal year 1953. The amount of $449,566 shown as repayment of capital investment in this project represents funds received by the project during construction and deposited in the Treasury.

7. INTEREST AND DEPRECIATION CHARGES ON THE COST OF JOINT FACILITIES ALLOCATED TO FUTURE DOWNSTREAM RIVER REGULATION

Interest and depreciation charges on the portion of the cost of joint fa-

cilities of Columbia Basin and Hungry Horse Projects allocated to future downstream river regulation have been deferred to future periods on the basis that these charges will be recovered from the operations of additional downstream hydroelectric plants now under construction or contemplated. The deferment of these charges is consistent with the allocation of costs of these projects, but their exclusion from present power costs is dependent upon the construction of the contemplated downstream plants.

The downstream hydroelectric plants to which the allocation to future downstream river regulation is related include both Federal and non-Federal plants. The one downstream non-Federal plant for which an allocation of the costs of the Columbia Basin Project was made by the Secretary of the Interior in 1945 did receive river regulation benefits from the project in fiscal year 1953. However. no part of the deferred charges for interest and depreciation at the Columbia Basin Project for this downstream non-Federal plant was charged to operations in 1953 because no decision has been rendered by the Federal Power Commission on the amounts payable by the plant for river regulation benefits and no revenues on account of such benefits were accrued in the accounts of the Columbia Basin Project.

Downstream non-Federal plants will benefit also from storage operations of Hungry Horse Project, and the Federal Power Commission may determine that such benefits were received in fiscal year 1953 and require payments therefor by the beneficiaries. However, the allocation by the Bureau of Reclamation of costs of Hungry Horse Project (note 2) makes no allocation of costs of that project to downstream non-Federal plants. Accordingly, no part of the depreciation or interest at the Hungry Horse Project has been deferred for river regulation benefits to non-Federal plants and no revenues have been accrued for such benefits.

8. REVENUES FROM DOWNSTREAM NON-FEDERAL PLANTS

The Federal Power Act provides that a licensed project receiving benefits from the upstream improvements of another licensed project or of the Federal Government shall make payments to the upstream project on account of such benefits. It is the responsibility of the Federal Power Commission to determine the amount, if any, that non-Federal power installations in the Columbia River and tributaries will have to pay for downstream benefits received or to be received from the Federal storage projects; namely, Hungry Horse Project, Albeni Falls Project, and Columbia Basin Project (Grand Coulee Dam) of the Columbia River Power System. During the fiscal year 1953 benefits were received by the non-Federal projects but no revenues have been accrued in the accounts of the Columbia River Power System for such benefits because the Federal Power Commission has not rendered a decision as to the amounts payable, if any, by the beneficiaries.

9. CONTINGENT LIABILITIES

The Administration and the projects are contingently liable under pending litigations which, in some instances, involve claims of substantial amount. In the opinion of legal counsels for the Administration and for the projects, any actual liability which may result from such litigations will not be material in relation to the size and scope of the System's operations.

10. PROJECTS NOT INCLUDED

Bonneville Power Administration has been appointed marketing agent for surplus electric energy to be generated by the following projects which are presently under construction:

Albeni Falls Dam Project
Chandler Hydroelectric Plant of the Kennewick Division of the Yakima (Irrigation) Project
Chief Joseph Dam Project
McNary Dam Project
The Dalles Dam Project
Willamette Basin Project (with hydroelectric plants of the Detroit, Big Cliff, Lookout Point, and Dexter Dams)

The only power operations at these projects in 1953 consisted of storage operations at Albeni Falls which provided benefits to downstream projects of the System and the commencement of power operations by one generator at Detroit Dam power plant on June 28, 1953.

Pending an allocation of costs between power and other purposes for the projects listed above, no amounts have been included in the accompanying financial statements of the Columbia River Power System for expenses or construction costs or other assets or liabilities of these projects to June 30, 1953. The omission of the accounts of these projects from the System statements does not materially affect the results of operation for fiscal year 1953.

The Hungry Horse Project was not included in the financial statements of the System at June 30, 1952; therefore the accompanying financial statements include the operations of this project for the first time. The first generator at Hungry Horse power plant was placed in service October 1, 1952.

Bonneville Power Administration has also been designated marketing agent for surplus electric energy to be generated at other Federal projects, the construction of which has been authorized but not commenced at June 30, 1953.

COLUMBIA RIVER POWER SYSTEM

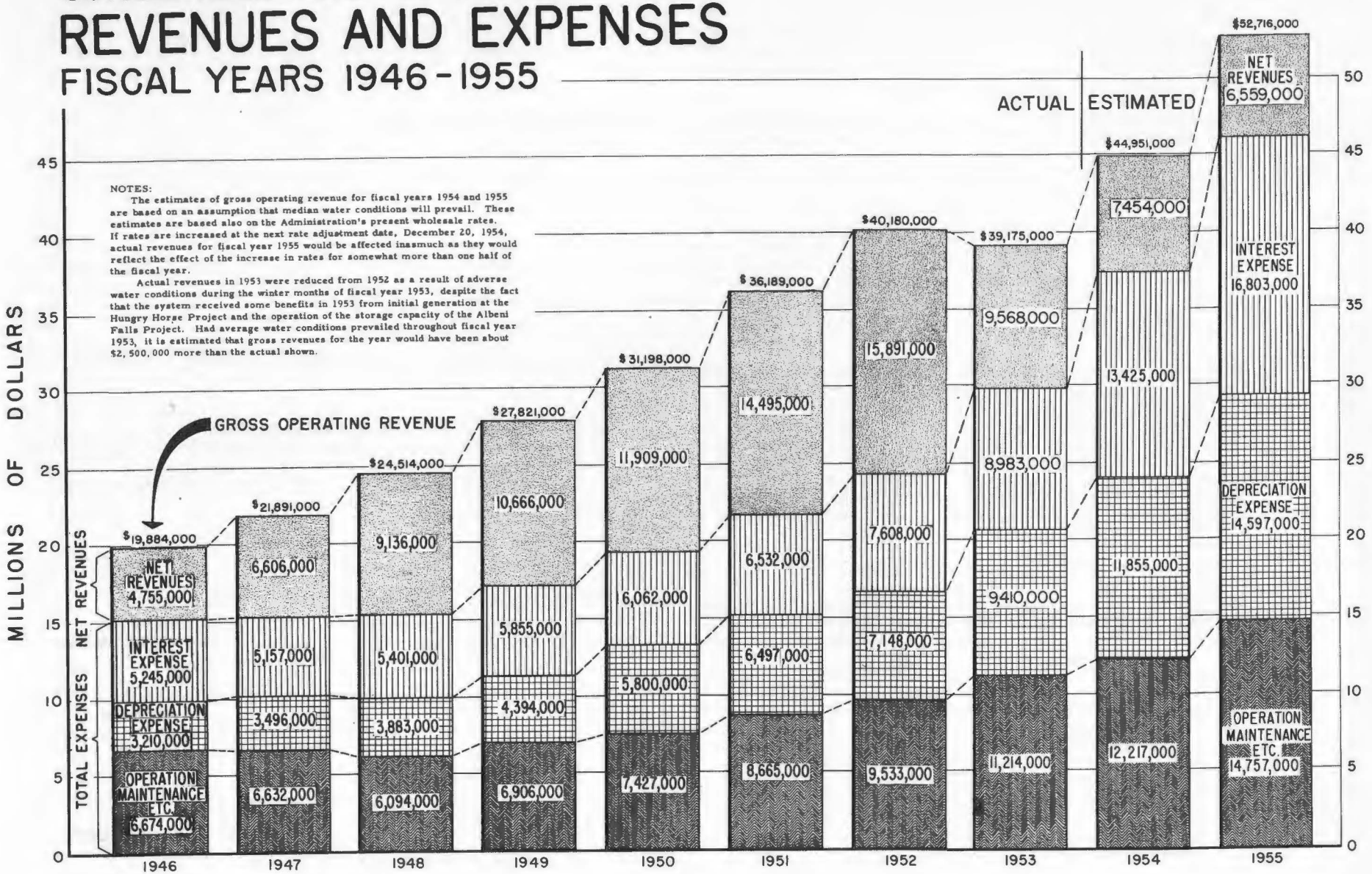
CONDENSED AND COMBINED REVENUES AND EXPENSES

FISCAL YEARS 1946-1955

NOTES:

The estimates of gross operating revenue for fiscal years 1954 and 1955 are based on an assumption that median water conditions will prevail. These estimates are based also on the Administration's present wholesale rates. If rates are increased at the next rate adjustment date, December 20, 1954, actual revenues for fiscal year 1955 would be affected inasmuch as they would reflect the effect of the increase in rates for somewhat more than one half of the fiscal year.

Actual revenues in 1953 were reduced from 1952 as a result of adverse water conditions during the winter months of fiscal year 1953, despite the fact that the system received some benefits in 1953 from initial generation at the Hungry Horse Project and the operation of the storage capacity of the Albeni Falls Project. Had average water conditions prevailed throughout fiscal year 1953, it is estimated that gross revenues for the year would have been about $2,500,000 more than the actual shown.



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