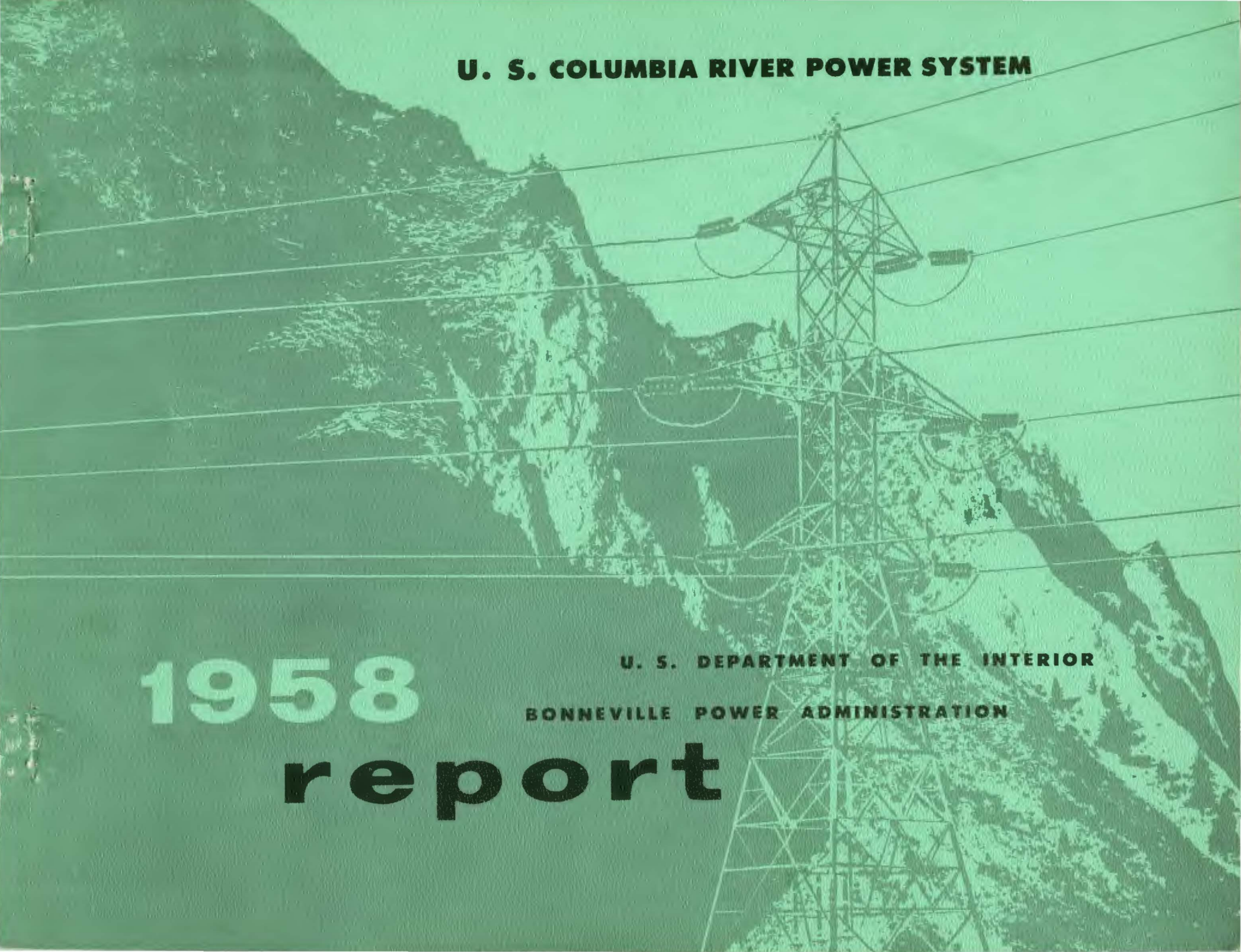


U. S. COLUMBIA RIVER POWER SYSTEM

U. S. DEPARTMENT OF THE INTERIOR

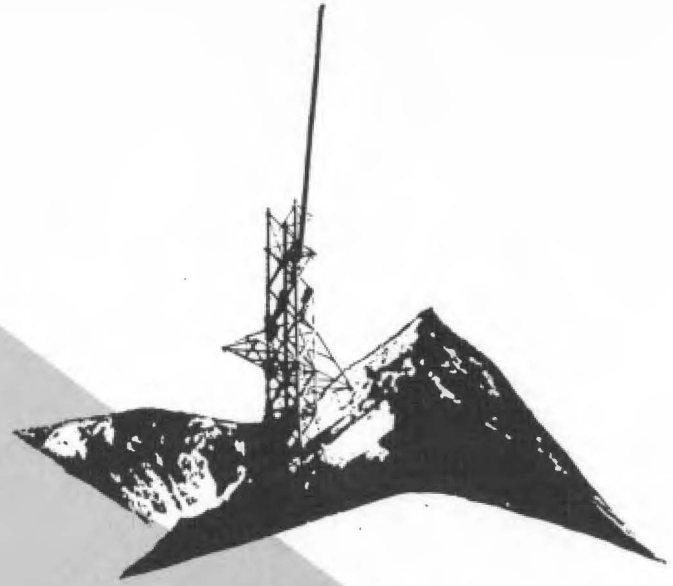
BONNEVILLE POWER ADMINISTRATION

1958 report

1958 REPORT

FISCAL YEAR ENDED JUNE 30, 1958

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



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TRANSMITTAL

December 31, 1958

Hon. Fred A. Seaton
Secretary of the Interior
Washington, D. C.

Dear Mr. Secretary:

I am submitting herewith the Twenty-first Annual Report of Bonneville Power Administration in accordance with requirements of subsection 9 (c) of the Bonneville Project Act. The report presents an accounting of the sale and transmission of electric energy generated by the Corps of Engineers and Bureau of Reclamation at multipurpose dams for which the Administration has been designated the power marketing agency.

Gross revenues for the U. S. Columbia River Power System were $66,729,110 for fiscal year 1958 but operations resulted in the system's first annual deficit, $2,949,501. Gross revenues increased only $329,143 over the previous year, while expenses increased $9,244,376, reflecting the charges on additional facilities placed in service for both generation and transmission.

The gross revenues of $66.7 million for 1958 were about $5.2 million less than the estimate made at the outset of the year. Distributors' loads failed to reach estimates principally because of the economic recession and an unusually mild winter. Industrial sales were substantially below the estimate as the result of curtailment of both interruptible and firm power consumption by the large industries, principally aluminum, served directly by the Federal power system.

Operation and maintenance expenses have kept in approximate balance with the rise of gross revenues in recent years, but depreciation and interest expenses have increased much more rapidly as higher cost capacity has been added to the system.

During the six years following 1952, gross revenues increased 66 percent, kilowatt-hour sales 67 percent, and operation and maintenance expenses 92 percent, but depreciation expense and interest expense increased by 232 percent and 264 percent, respectively. As a result of the increased percentage of gross revenues required in recent years to meet depreciation and interest expenses, the ratio of net revenue to gross revenue has declined steadily since 1952 with a deficit of 4.42 percent of gross recorded in 1958 compared with approximately a 33 percent net revenue ratio in the years 1948-52, inclusive.

The U. S. Columbia River Power System with only two hydroelectric generating plants, Bonneville and Grand Coulee, had a total capacity of 2,462,400 kilowatts in operation as of June 30, 1952 compared with a total of 5,334,000 kilowatts as of June 30, 1958, an increase of 116.6 percent, or slightly more than double. However, during the same period the investment in fixed assets allocated to power tripled as the result of an increase of 203.2 percent. The transmission plant investment rose only 77.9 percent but the investment in generation facilities increased 320.2 percent.

The power outlook has improved considerably over the past year, primarily as the result of new scheduled generation. Another factor is a small reduction in load forecasts. The Federal Government had under construction on June 30, 1958 an additional 2,484,650 kilowatts of nameplate rating at seven projects. Seventeen non-Federal projects under construction or licensed and scheduled for early construction will add 3,445,250 kilowatts of nameplate rating. This additional power supply will enable the region to meet all firm load requirements through 1964-65. Projects now under consideration should provide the necessary power after that date.

As the result of the improvement in the power situation, the Administration was able to give the private utilities notice pursuant to their 20-year power contracts that Bonneville Power Administration could meet their full requirements for the next four years (1958-59 through 1961-62). As a result, the utilities will now be billed on the regular "C" rate the same as public agencies with generation.

During the winter of 1957-58, interruptible loads declined as the result of a soft aluminum and ferro alloy market. By the end of the fiscal year interruptible loads were practically all off. However, since that date there has been some resumption of sales on an interruptible basis and about half the interruptible load has now been restored.

As of June 30, 1958, the gross Federal investment of the U. S. Columbia River Power System allocated to the commercial power activity for both generation and transmission was $1,937,409,749, including amounts for operation, maintenance and interest expenses as well as for capital investment. Gross cash receipts of $580,481,605 returned to the Treasury during the same period in repayment of such investment left a net unpaid balance as of June 30, 1958 of $1,356,928,144, including unexpended appropriations of $17,716,305.

After payment of operation and maintenance expense of $141,099,993 and interest expense of $189,413,613, the gross cash receipts returned to the Treasury left $249,967,999 in repayment of the invested power capital. This repayment represented 15.72 percent of such invested capital and was $76,345,213 ahead of schedule.

Over 30 billion kilowatt-hours of electric energy was generated at the 12 Federal plants during fiscal year 1958, with energy sales to customers of Bonneville Power Administration totaling 28.4 billion kilowatt-hours, an increase of 0.5 percent over the previous year.

Interruptible energy sales to industries totaled 1.9 billion kilowatt-hours including 514 million kilowatt-hours in provisional sales made possible by generation from storage releases beyond normal operating drawdown of Hungry Horse and Grand Coulee reservoirs.

Since beginning of operation the Administration has sold 247 billion kilowatt-hours of electric energy at a composite rate of 2.36 mills per kilowatt-hour.

The Bonneville Power Administration transmission network was increased during the fiscal year to 7,680 circuit miles of transmission line and 186 substations with a transformer capacity of 12,700,248 kilovolt-amperes. Additions to the U. S. Columbia River Power System in the fiscal year 1958 have a nameplate rating of 632,000 kilowatts.

Fiscal year 1958 saw the completion of negotiations and the signing of 50-year firm contracts for the wheeling of all or most of the non-Federal power to be produced at the following non-Federal hydroelectric plants: Priest Rapids, Rocky Reach and Pelton. A twenty-year contract, cancelable on one-year notice by the customer or three-year by Bonneville Power Administration, for wheeling on an excess capacity basis was executed for the output of the

Swift development and a fifteen-year contract with the California Oregon Power Company for the delivery of energy to the Reynolds Aluminum Plant at Troutdale, Oregon. Negotiations are continuing with some of the distributors for the wheeling of portions of the power to be generated at the Priest Rapids and Rocky Reach projects.

The Administration faces a decision of unusual importance and significance to the Pacific Northwest during the current fiscal year, 1959. A year ago the decision to continue the Administration's basic rate of $17.50 per kilowatt-year to December 20, 1959 was reported, with the statement that continuing studies of the rate level were being undertaken in view of the increasing investment required per kilowatt of generating capacity.

In view of the deficit incurred in 1958 and the present forecasts for even greater deficits in 1959 and 1960, a detailed analysis is now being made of revenues necessary to meet repayment requirements during the fiscal years 1959 to 1965. This study must be completed in the current fiscal year in order to process the rate adjustments, if any, that may be required by December 20, 1959, the next quinquennial rate adjustment date provided by the terms of the Administration's wholesale power contracts.

The Administration has noted in its annual reports for several years that the margin of net revenues has been declining and could be expected to continue downward with the addition of higher cost generating capacity as long as the same wholesale rate level that has been in effect since the commencement of operations is continued. In 1958, for the first time, net results of operations were a deficit. The present forecast is for deficits of $5,635,000 and $6,160,000, respectively, for fiscal years 1959 and 1960.

I would like to say in conclusion that the year has been an outstanding one in many respects, particularly in the mutual understanding and cooperation of all utilities and related agencies, both State and local, in coping with the region's power problems. I also want to acknowledge the cooperation and help of the Secretary's office, the Federal Power Commission, the Corps of Engineers, the Bureau of Reclamation and members of the Northwest Power Pool during the past year.

Sincerely yours,

Wm. A. Pearl

Wm. A. Pearl
Administrator

FINANCIAL RESULTS OF OPERATIONS

A condensed summary of results of commercial power operations of the U. S. Columbia River Power System is presented in table I for the fiscal years 1952 through 1958 and in cumulative total to June 30, 1952 and to June 30, 1958, together with a forecast for fiscal years 1959 and 1960. The data are summarized from cost accounts kept in accordance with the Federal Power Commission's system of accounts for electric utilities.

Gross Revenues

Gross revenues for the U. S. Columbia River Power System were $66,729,110 in 1958, an increase of only $329,143 or one-half of one percent over the previous year. 1/ Gross revenues for 1958 fell about $5,200,000 below the amount that had been estimated at the outset of the year. The principal reasons for this were the failure of distributors' loads to reach estimates because of (1) the economic recession and (2) the unusually mild winter and the curtailment of both interruptible and firm power consumption by the large industries, principally aluminum, served directly by the Federal power system.

Generation units added during the year were as follows:

Project	No. of units	Nameplate rating-kilowatts
Chief Joseph	5	320,000
The Dalles	4	312,000
Total.....	9	632,000

1/ Firm power sales and miscellaneous revenues increased approximately $3,796,000 but non-firm energy sales dropped $3,467,000. Hence, gross revenues rose only $329,000.

Net Revenues Decrease Operations in 1958 resulted in a deficit of $2,949,501 after deducting all expenses of operation, maintenance, depreciation and interest, a decrease of $8,915,233 in net revenues from 1957. Although gross revenues increased $329,143 for 1958 over the previous year, expenses increased $9,244,376, reflecting the cost of operating additional facilities placed in service for both generation and transmission.

Sales by Groups Table II summarizes by customer categories the sources of revenues by fiscal years to and including 1958. The sales to the aluminum industry decreased $2,534,165 from the previous year. Sales to other industries increased $1,015,510, publicly owned utilities $1,529,450, and sales to privately owned utilities decreased $278,762.

Summary of Expenses In recent years the trend of total operation and maintenance expenses has kept pace approximately with the rise of gross revenues, but depreciation and interest expenses have increased much more rapidly. This situation results from the fact that, although the Administration's rate levels have not been increased, a large amount of additional higher cost capacity has been added to the system.

1958 Revenue Dollar The chart on page 5 shows the source and disposition of the revenue dollar in fiscal year 1958. Operation and maintenance expenses required 27.39 percent of gross revenues. This percentage is up some from that of previous years which held at approximately 25 percent. Depreciation expense was equal to 35.53 percent of the gross revenue in 1958 and has shown a steadily rising trend since 1952 when it was 17.79 percent. Similarly, interest expense in 1958 represented 41.50 percent of gross revenues as against 18.93 percent in 1952, since which year it has shown a steady rise.

TABLE I

U. S. COLUMBIA RIVER POWER SYSTEM

Condensed summary of results of operations

Fiscal years 1952 to 1958, inclusive

Forecast for fiscal years 1959 and 1960

Line No.	Item	Fiscal year 1952	Cumulative total to June 30, 1952	Fiscal year 1953	Fiscal year 1954	Fiscal year 1955	Fiscal year 1956	Fiscal year 1957	Fiscal year 1958	Cumulative total to June 30, 1958	Estimated Fiscal year 1959	Estimated Fiscal year 1960
1.	Sales of electric energy	$39,526	$259,204	$38,383	$44,128	$51,258	$59,790	$64,972	$64,704	$582,439	$69,600	$73,600
2.	Other electric revenue	654	6,050	792	1,190	808	1,203	1,428	2,025	13,496	2,200	2,900
3.	Total operating revenue	40,180	265,254	39,175	45,318	52,066	60,993	66,400	66,729	595,935	71,800	76,500
4.	Less expenses:											
5.	Operation, maintenance, administration, etc.	9,534	73,568	11,215	12,794	13,021	14,813	16,163	18,275	159,449	19,823	20,846
6.	Depreciation 2/	7,340	45,991	9,681	12,042	14,884	18,540	20,255	23,708	145,310	26,799	28,323
7.	Interest, net of interest during construction 2/	8,861	73,637	10,382	14,025	17,610	21,691	24,016	27,696	189,414	30,813	33,491
8.	Total expense 2/	25,735	193,196	31,276	38,861	45,515	55,044	60,434	69,679	494,173	77,435	82,660
9.	Net revenues	$14,445	$ 72,058	$ 7,899	$ 6,457	$ 6,551	$ 5,949	$ 5,966	$(2,950)	$101,762	$(5,635)	$(6,160)
10.	Net revenues (line 9) as a percentage of total operating revenues (line 3)	35.95%	27.17%	20.16%	14.25%	12.58%	9.75%	8.98%	(4.42%)	17.08%	(7.85%)	(8.05%)
11.	Generating costs 3/	$ 9,949	$ 87,740	$12,209	$17,006	$22,428	$29,117	$32,905	$40,264	$241,837	$45,680	$49,228
12.	BPA "production" costs 3/	655	4,632	754	730	483	1,061	1,084	562	9,306	600	600
13.	Total power supply costs	10,604	92,372	12,963	17,736	22,911	30,178	33,989	40,826	251,143	46,280	49,828
14.	Net transmission costs 4/	15,131	100,824	18,313	21,125	22,604	24,866	26,445	28,853	243,030	31,155	32,832
15.	Total expenses (line 8 above)	$25,735	$193,196	$31,276	$38,861	$45,515	$55,044	$60,434	$69,679	$494,173	$77,435	$82,660
16.	Total kilowatt-hours of sales (millions)	17,023	107,472	16,393	18,765	21,823	25,974	28,216	28,365	247,012	29,300	30,900
17.	System maximum generation during the year (kilowatts)	2,784,000		2,867,000	3,301,000	3,651,000	4,479,000	4,887,000	5,024,000		5,300,000	5,500,000
18.	Installed capacity (nameplate ratings) as of June 30 (kilowatts)	2,462,400		2,604,900	3,145,400	3,588,800	4,151,000	4,702,000	5,334,000		5,721,250	6,032,250
19.	Power supply costs per kilowatt-hour sold (mills)	0.623	0.860	0.791	0.945	1.050	1.162	1.205	1.439	1.017	1.580	1.613
20.	Net transmission costs per kilowatt-hour sold (mills)	0.889	0.938	1.117	1.125	1.036	0.957	0.937	1.017	0.984	1.063	1.063
21.	Total expenses per kilowatt-hour sold (mills)	1.512	1.798	1.908	2.070	2.086	2.119	2.142	2.456	2.001	2.643	2.676
22.	Net revenue per kilowatt-hour sold (mills)	0.849	0.670	0.482	0.344	0.300	0.229	0.211	(0.104)	.412	(0.192)	(0.200)
23.	Gross revenue per kilowatt-hour sold (mills)	2.361	2.468	2.390	2.414	2.386	2.348	2.353	2.352	2.413	2.451	2.476
24.	Annual expenses per kilowatt of system maximum generation: (dollars per kilowatt)											
25.	Total power supply costs	$3.81		$ 4.52	$ 5.37	$ 6.28	$ 6.74	$ 6.95	$ 8.13		$ 8.73	$ 9.06
26.	Net transmission costs	5.43		6.39	6.40	6.19	5.55	5.41	5.74		5.88	5.97
27.	Total expense	$9.24		$10.91	$11.77	$12.47	$12.29	$12.36	$13.87		$14.61	$15.03

( ) Denotes red figure.

Note: This table is based on the cost accounts. 1/ Unless otherwise indicated (such as at lines 24-27) dollar data are in 1000s.

1/ The revenue and expense data, lines 1 to 9 inclusive, are taken from the certified cost accounting financial statements in the annual auditors' reports but as explained in footnote 2 the surplus adjustments have been spread back to the years concerned.

2/ The depreciation and interest expense data for fiscal years 1952 to 1955, inclusive, and cumulative to June 30, 1952 have been restated to make the data for these earlier periods comparable with those for 1956 and later periods. In 1956 the former policy of deferring the depreciation and interest expenses on the investment allocated to future downstream river regulation benefits was discontinued and the previously accumulated amounts of such deferred charges were written off against surplus.

3/ Generating costs consist of the total expenses at the dams for operation, maintenance, administration, depreciation, interest, etc., allocated to power. BPA production costs consist of exchange account power purchases, power interchange account transactions, payments for water storage, cash power purchases, etc.

4/ Total BPA expenses (operation, maintenance, depreciation, interest, etc.) minus the "production" costs shown at line 12.

TABLE II

U. S. COLUMBIA RIVER POWER SYSTEM

Revenue by class of customer

Fiscal years ended June 30

Class of customer	1953 and prior	1954	1955	1956	1957	1958	Total to June 30, 1958	1958 percentage dollar revenue
Industry:								
Aluminum	$127,994,609	$15,944,356	$16,909,588	$20,098,110	$20,025,700	$17,491,535	$218,463,898	26.21
Other 1/	34,256,315	5,417,177	6,821,850	8,186,874	8,451,336	9,466,846	72,600,398	14.19
Publicly owned utilities	65,825,672	14,882,997	17,601,135	19,505,231	22,044,831	23,574,281	163,434,147	35.33
Privately owned utilities	69,510,541	7,882,879	9,926,150	11,999,475	14,450,108	14,171,346	127,940,499	21.24
Other operating revenue	6,841,957	1,190,284	807,759	1,202,933	1,427,992	2,025,102	13,496,027	3.03
Total operating revenue	$304,429,094	$45,317,693	$52,066,482	$60,992,623	$66,399,967	$66,729,110	$595,934,969	100.00

1/ *Includes sales to Federal agencies.*

Net-to-Gross Ratio Declines As a result of the increasing proportions of gross revenues required in recent years to meet depreciation and interest expenses, the ratio of net revenue to gross revenue has declined steadily. In 1958 there was a deficit of 4.42 percent of gross compared with approximately a 33 percent net revenue ratio in each of the years 1948 to 1952, inclusive, after which the spread narrowed steadily to the current deficit of 4.42 percent.

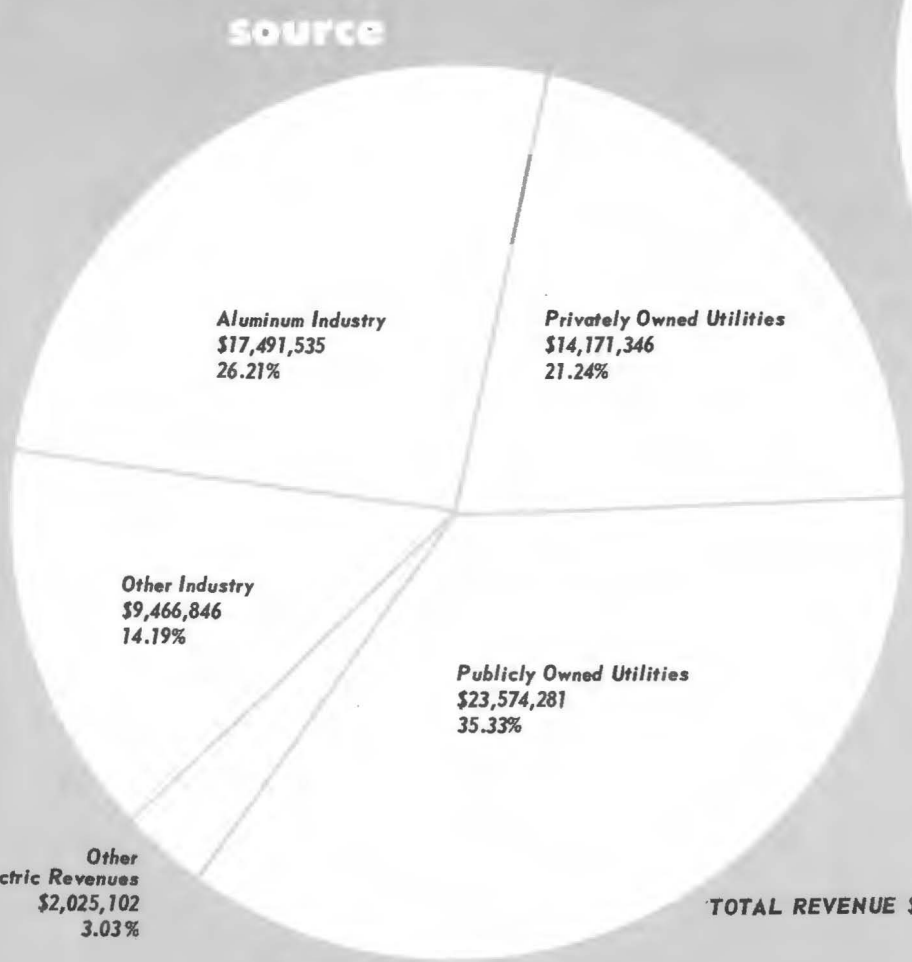
Chart 1

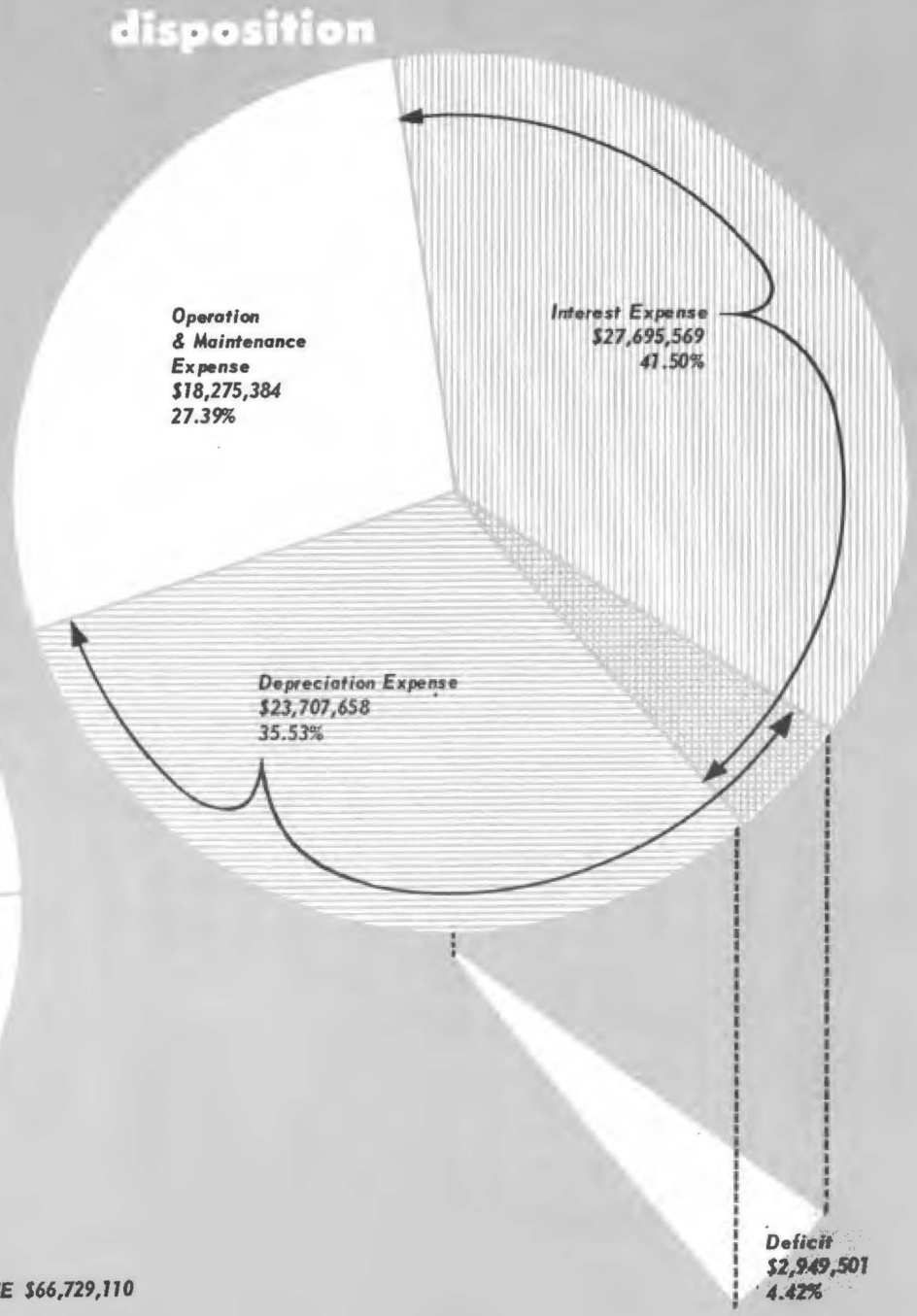
U. S. COLUMBIA RIVER POWER SYSTEM

Source and Disposition of the Revenue Dollar

(Commercial Power Operations Only)

F.Y. 1958





TOTAL REVENUE $66,729,110

These ratios of expenses and net revenues to gross revenues have changed substantially from those of 1952 and immediately preceding years. Up to and including 1952 only the Bonneville and Grand Coulee Dams were in operation but in each succeeding year additional projects; namely, Hungry Horse, Detroit-Big Cliff, Albeni Falls, McNary, Lookout Point-Dexter, Chief Joseph, Chandler and The Dalles have been brought into service.

New Projects' Cost Levels Higher These new projects were built at construction cost levels much higher than those which prevailed when Bonneville and Grand Coulee projects were constructed. Accordingly, they represent a considerably increased capital investment per kilowatt of capacity, a fact revealed by the upward trends of depreciation and interest expense since 1952. Specifically, during the six years following 1952, gross revenues increased 66 percent, kilowatt-hours sold increased 67 percent, and operation and maintenance expenses increased 92 percent, but depreciation expense and interest expense increased by 232 percent and 264 percent, respectively, during this period.

Table I shows total expenses of $69,679,000 in 1958 and $60,434,000 in 1957, an increase of $9,245,000 (15.3 percent). These total costs, which include all expenses of operation, maintenance, administration, depreciation, interest, etc., in accordance with generally accepted cost accounting practice, may be summarized as follows:

Project	Fiscal year 1957	Fiscal year 1958	Increase or (decrease)
Bonneville	$ 2,508,454	$ 2,656,728	$ 148,274
Columbia Basin (Grand Coulee)	8,163,872	8,189,074	25,202
Hungry Horse	3,376,673	3,401,386	24,713
Albeni Falls	1,643,909	1,607,327	(36,582)
McNary	9,729,000	11,765,648	2,036,648
Detroit-Big Cliff	1,920,940	1,965,031	44,091
Lookout Point-Dexter	1,783,541	1,895,236	111,695
Chief Joseph	3,466,408	6,027,865	2,561,457
Chandler	201,560	215,487	13,927
The Dalles	110,863	2,539,491	2,428,628
Generation subtotal	32,905,220	40,263,273	7,358,053
Transmission (Bonneville Power Administration)	27,529,015	29,415,338	1,886,323
Total	$60,434,235	$69,678,611	$9,244,376

The increases at some of the projects are due in part to increased maintenance costs. The increases at Chief Joseph and The Dalles projects were caused by additional generators placed in service during the year. At McNary part of the increased cost for 1958 is due to increased maintenance expense, and part of the increased cost is due to the fact that all the generators were not installed for the complete year in 1957.

Plant Investment Increase

As of June 30, 1952, the U. S. Columbia River Power System had only two hydroelectric generating projects, Bonneville and Grand Coulee, in operation with a total capacity of 2,462,400 kilowatts, but the system has increased by 2,871,600 kilowatts, or 116.6 percent, to a total of 5,334,000 kilowatts as of June 30, 1958.

This increase during the past six years represents the completion of Hungry Horse with 285,000 kilowatts, Detroit with 100,000 kilowatts, Big Cliff with 18,000 kilowatts,

Albeni Falls with 42,600 kilowatts, Lookout Point with 120,000 kilowatts, Dexter with 15,000 kilowatts, McNary with 980,000 kilowatts, Chandler with 12,000 kilowatts, Chief Joseph with 960,000 kilowatts (representing fifteen of a scheduled total of sixteen generators) and The Dalles with 339,000 kilowatts (representing two small fishway units of 13,500 kilowatts each and four of a scheduled fourteen main generator units).

Although the installed capacity increased by 116.6 percent, the investment in dams, reservoirs, powerplants, transmission lines, etc., has increased even more. As of June 30, 1958, the investment in fixed assets allocated to power was 203.2 percent greater than the corresponding figure six years earlier. These data are summarized as follows:

Operating projects only	June 30 (Thousands of dollars) 1952	1958	Percent increase
Multipurpose projects:			
Allocated to power	$266,562	$1,120,191	320.2
Allocated to nonpower	265,433	527,326	98.7
Total multipurpose	531,995	1,647,517	209.7
Transmission (100% to power)	249,039	443,133	77.9
Total	$781,034	$2,090,650	167.7
Recapitulation:			
Power	$515,601	$1,563,324	203.2
Nonpower	265,433	527,326	98.7
Total	$781,034	$2,090,650	167.7

Table III shows for each individual project, as of June 30, 1958, the amounts of the fixed plant investment in total and as allocated to power and to nonpower functions making up the June 30, 1958 totals shown in the foregoing tabulation. In the six years from June 30, 1952 to June 30, 1958, the amount of the power investment at the Bonneville and Columbia Basin (Grand Coulee) projects increased by a relatively small amount, the bulk of the increase thus being accounted for by the additional projects that have come into service since 1952 and by additional transmission facilities.

For the total system the plant account for the operating projects as of June 30, 1958 was $2,090,650,277 of which $1,563,323,682 was allocated to power and $527,326,595 to nonpower purposes as detailed in footnote 1 of table III. These plant account data include interest during construction except on the nonpower amounts at the Columbia Basin, Hungry Horse, Chandler, and the Foster Creek division of the Chief Joseph project. For a summary of the total amounts of interest included in the power accounts of the operating projects see table IV.

Repayment of Federal Investment

As of June 30, 1958 the gross Federal investment of the U. S. Columbia River Power System allocated to the commercial power activity for both generation and transmission was $1,937,409,749, which amount is exclusive of such portion of the investment made to June 30, 1958 in multipurpose projects under construction but not in operation as may ultimately be allocated to commercial power.

This gross investment includes all funds appropriated, net of expired appropriations returned to the Treasury, for both construction and operation, including maintenance, administration, etc. Included also are indirect items such as WPA expenditures and other

TABLE III

U. S. COLUMBIA RIVER POWER SYSTEM

Summary of amount and allocation of investment in fixed assets
(Plant accounts)
as of June 30, 1958

Operating projects only

Project	Total	Allocation 2/ Nonpower 1/	Allocation 2/ Power
Bonneville Power Administration	$ 443,133,054	$ –	$ 443,133,054
Bonneville Dam	86,737,598	27,238,476	59,499,122
Columbia Basin (Grand Coulee)	528,592,522	323,452,550	205,139,972
Hungry Horse	106,354,857	19,451,731	86,903,126
Albeni Falls	31,438,720	290,725	31,147,995
McNary Dam	305,308,958	26,448,621	278,860,337
Detroit-Big Cliff	65,862,443	24,230,800	41,631,643
Lookout Point-Dexter	93,057,887	51,486,784	41,571,103
Chief Joseph	155,514,795	2,461,640	153,053,155
Chandler	35,113,081	30,749,882	4,363,199
The Dalles	239,536,362	21,515,386	218,020,976
Total plant	$2,090,650,277	$527,326,595	1,563,323,682
Less combined reserve for depreciation			132,590,915
Total less reserve			$1,430,732,767

1/ Segregation of nonpower by purpose:

	Specific facilities	*Allocation of joint facilities*	*Total*
Irrigation	*$277,616,602*	*$ 85,718,582*	*$363,335,184*
Flood control	*–*	*85,575,756*	*85,575,756*
Navigation	*43,240,080*	*34,061,162*	*77,301,242*
Other	*1,114,413*	*–*	*1,114,413*
Total	*$321,971,095*	*$205,355,500*	*$527,326,595*

2/ Allocations are tentative or interim except for Bonneville Dam and Columbia Basin project.

TABLE IV

U. S. COLUMBIA RIVER POWER SYSTEM

Summary of interest on Federal investment allocated to commercial power as of June 30, 1958

Operating projects only

Interest during construction, to be returned during repayment period as part of the Federal investment:	Bonneville Power Administration	$ 7,020,753	
	Bonneville Dam	2,335,609	
	Columbia Basin	9,687,396	
	Hungry Horse	4,708,542	
	McNary	19,182,533	
	Albeni Falls	1,029,562	
	Detroit-Big Cliff	2,593,654	
	Lookout Point-Dexter	2,880,509	
	Chief Joseph	11,115,076	
	Chandler	164,751	
	The Dalles	13,217,097	
	Subtotal		73,935,482
Interest charged to operations – repaid currently:	Bonneville Power Administration	57,724,937	
	Bonneville Dam	21,705,804	
	Columbia Basin	60,552,416	
	Hungry Horse	11,168,393	
	McNary	20,670,019	
	Albeni Falls	2,938,703	
	Detroit-Big Cliff	4,615,792	
	Lookout Point-Dexter	3,286,500	
	Chief Joseph	5,476,567	
	Chandler	205,253	
	The Dalles	1,069,229	
	Subtotal		189,413,613
	Gross interest accumulation		$263,349,095

funds, properties or services received from other Federal agencies, plus a gross interest accumulation at the rate of 2-1/2 percent per annum on the unamortized balance of the investment.

Investment Summarized The amount and repayment status of the gross Federal power investment as of June 30, 1958 are summarized in table V. The principal components of the gross total of $1,937,409,749 are expenses in the amount of $141,099,993 for operation, maintenance, etc., interest expense of $189,413,613, invested capital of $1,589,179,838 and unexpended (i.e., uninvested) appropriations of $17,716,305.

Unpaid Balance The gross cash receipts of $580,481,605 returned to the Treasury in repayment of the Federal power investment resulted in a net investment amount as of June 30, 1958 of $1,356,928,144 including unexpended funds of $17,716,305. This balance consists solely of capital, inasmuch as receipts have been applied first to the payment of expenses of operation, maintenance, interest, etc., in the total amount of $330,513,606, leaving receipts of $249,967,999 applied to repayment of the capital investment, representing repayment of 15.72 percent of the invested capital.

As of June 30, 1958, the amount and repayment of the commercial power invested capital of the individual projects are shown in table VI.

Repayment Status The repayment of $249,967,999 on the invested power capital to June 30, 1958 exceeds the estimated scheduled capital repayment requirements by $76,345,213, consisting of $49,417,763 in excess of schedule for Bonneville Power Administration, $12,000,506

TABLE V

U. S. COLUMBIA RIVER POWER SYSTEM

Summary of Federal investment in operating projects allocated to commercial power and status of repayment as of June 30, 1958

Operating projects only 1/

	Gross investment	Repayments	Net investment
Investment in current expenses:			
Operation, maintenance, etc. 2/	$ 141,099,993	$141,099,993	-
Interest 3/	189,413,613	189,413,613	-
Total current expenses	330,513,606	330,513,606	-
Capital investment:			
Invested capital 4/	1,589,179,838	249,967,999	$1,339,211,839
Unexpended (uninvested) appropriations	17,716,305	-	17,716,305
Gross capital investment	1,606,896,143	249,967,999	1,356,928,144
Total Federal investment	$1,937,409,749	$580,481,605	$1,356,928,144

1/ Consists of Bonneville Dam, Columbia Basin Project, Hungry Horse, Albeni Falls, Detroit-Big Cliff, Lookout Point-Dexter, McNary, Chief Joseph, Chandler, The Dalles projects and Bonneville Power Administration. Excluded are Ice Harbor, Cougar, Hills Creek, Roza and John Day, which were under construction but with no generator units in service as of June 30, 1958.

2/ Table I on an accumulative basis to June 30, 1958 shows expenses of operation, maintenance, etc., in the amount of $159,449,030 as against the total of $141,099,993 shown above. The data on Table I are accrued cost accounts, including non-cash exchange account transactions and the capital costs of abandoned projects written off to expense. These items account for the difference in the total expense shown on Table I from the total shown in this table which is prepared on a cash payout basis. For the same reason this table uses as gross repayments only the actual cash receipts of $580,481,605 as against total accrued operating revenues of $595,934,969 shown on Table I. The difference between the accrued revenues and the cash receipts consists of non-cash exchange account transactions included in accrued revenues and uncollected accounts receivable on hand as of June 30, 1958.

3/ The Columbia River Power System does not make actual payments for interest either from appropriations or revenues, but imputes and includes in its accounts provisions for interest expense and applies receipts returned to the Treasury in repayment of such expenses. For the details of interest included in the power accounts of the operating projects see Table IV.

4/ The invested capital consists primarily of the fixed plant account allocated to power in the amount of $1,563,323,682 including interest during construction, together with inventories and other miscellaneous assets, less funds received from non-Federal sources such as trade creditors represented by Accounts Payable and other accrued liabilities such as the employees' accrued leave.

TABLE VI

U. S. COLUMBIA RIVER POWER SYSTEM

Summary of status of repayment of Federal power investment

Cumulative total to June 30, 1958

(Payout data)

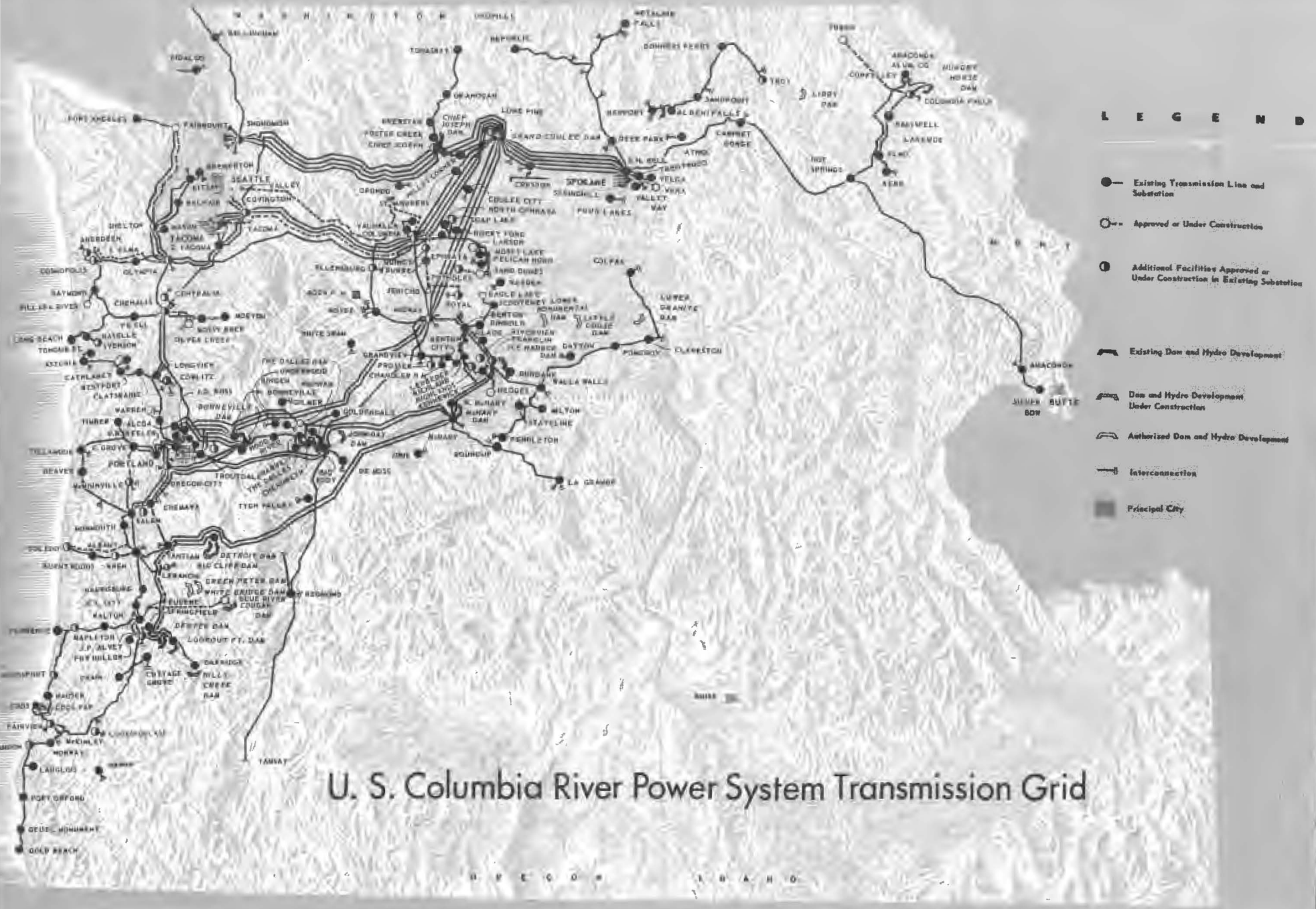
Operating projects only

Line No.	Item	Bonneville Dam	Columbia Basin Project	Hungry Horse	Albeni Falls	McNary	Detroit-Big Cliff	Lookout Point-Dexter	Chief Joseph	Chandler	The Dalles	Total generating projects	Bonneville Power Administration	Columbia River Power System total
1.	Project cash receipts	$ 9,812	$ 2,262,422	$ 940,695	$ 11,063	$ 189,005	$ 16,577	$ 9,494	$ 7,059	$ -	$ 9,056	$ 3,455,183	$577,026,422	$ 580,481,605
2.	Revenues allocated to projects from BPA sales	61,425,430	148,758,680	19,591,210	5,775,000	45,910,000	9,240,000	6,500,000	10,950,000	615,000	2,620,000	311,385,320	(311,385,320)	-
3.	Total project cash receipts	61,435,242	151,021,102	20,531,905	5,786,063	46,099,005	9,256,577	6,509,494	10,957,059	615,000	2,629,056	314,840,503	265,641,102	580,481,605
4.	Less:													
5.	Expenses of operation, maintenance, etc.	12,914,932	25,084,896	1,846,710	785,988	5,058,416	1,297,696	803,855	1,897,505	139,751	867,842	50,697,591	90,402,402	141,099,993
6.	Interest expense	21,705,804	60,552,416	11,168,393	2,938,703	20,670,019	4,615,792	3,286,500	5,476,567	205,253	1,069,229	131,688,676	57,724,937	189,413,613
7.	Total deductions	34,620,736	85,637,312	13,015,103	3,724,691	25,728,435	5,913,488	4,090,355	7,374,072	345,004	1,937,071	182,386,267	148,127,339	330,513,606
8.	Net cash receipts available for amortization	26,814,506	65,383,790	7,516,802	2,061,372	20,370,570	3,343,089	2,419,139	3,582,987	269,996	691,985	132,454,236	117,513,763	249,967,999
9.	Less: Scheduled amortization	14,814,000	65,383,790	5,560,000	1,443,000	10,758,000	2,441,000	1,694,000	2,668,000	269,996	495,000	105,526,786	68,096,000	173,622,786
10.	Amortization in excess of schedule	$12,000,506	$ 0	$ 1,956,802	$ 618,372	$ 9,612,570	$ 902,089	$ 725,139	$ 914,987	$ 0	$ 196,985	$ 26,927,450	$ 49,417,763	$ 76,345,213
11.	Total power capital investment	$60,583,623	$208,226,356	$87,918,874	$31,325,250	$279,556,795	$41,937,091	$41,642,341	$153,315,144	$4,373,805	$218,537,400	1,127,416,679	479,479,464	1,606,896,143
12.	Less unexpended appropriations	535,044	575,509	113,074	162,947	688,222	103,933	57,031	394,406	31,196	1,433,292	4,094,654	13,621,651	17,716,305
13.	Invested capital	60,048,579	207,650,847	87,805,800	31,162,303	278,868,573	41,833,158	41,585,310	152,920,738	4,342,609	217,104,108	1,123,322,025	465,857,813	1,589,179,838
14.	Less amortization to June 30, 1958 (line 8 above)	26,814,506	65,383,790	7,516,802	2,061,372	20,370,570	3,343,089	2,419,139	3,582,987	269,996	691,985	132,454,236	117,513,763	249,967,999
15.	Remainder to be amortized	$33,234,073	$142,267,057	$80,288,998	$29,100,931	$258,498,003	$38,490,069	$39,166,171	$149,337,751	$4,072,613	$216,412,123	$ 990,867,789	$348,344,050	$1,339,211,839
16.	Percentage repaid (line 14 ÷ line 13)	44.65	31.49	8.56	6.61	7.30	7.99	5.82	2.34	6.22	0.32	11.79	25.23	15.72

( ) Denotes red figures.

for the Bonneville Dam project, $9,612,570 for McNary, and $5,314,374 for the other generating projects, except that the Columbia Basin and Chandler projects were considered as just on schedule as of that date. However, these amounts of repayment in excess of schedule are tentative, pending the formalization of the cost allocations and repayment schedules for most of the projects.

The data in table VI show substantial repayment on the capital investment of the Bonneville Power Administration, Bonneville Dam project and Columbia Basin project which have been in operation several years, and only a nominal percentage of repayment for the other projects which have only recently come into service.


U. S. Columbia River Power System Transmission Grid
LEGEND
Existing Transmission Line and Substation
Approved or Under Construction
Additional Facilities Approved or Under Construction in Existing Substation
Existing Dam and Hydro Development
Dam and Hydro Development Under Construction
Authorized Dam and Hydro Development
Interconnection
Principal City
WASHINGTON
OREGON
IDAHO
MONT.
SEATTLE
TACOMA
SPOKANE
PORTLAND
BONNEVILLE DAM
GRAND COULEE DAM
CHIEF JOSEPH DAM
DETROIT DAM
BIG CLIFF DAM
GREEN PETER DAM
WHITE BRIDGE DAM
BLUE RIVER DAM
COUGAR DAM
DEXTER DAM
LOOKOUT PT. DAM
DARRINGTON
WILLOW CREEK DAM
J.P. ALVEY
FOX HOLLOW
ROCKY REACH
ROCKY FORD
LARSON
MOSES LAKE
PELICAN HORN
SAND DUNES
NASHEM
EAGLE LAKE
SCHOTERNEY
LOWER CONTINENTAL
LITTLE COULEE DAM
LOWER GRANITE DAM
DAYTON
CLARKSTON
POMEROY
ROYAL
BENTON
KENNEWICK
PASCO
PRESTON
CHANDLER
GRANDVIEW
PROSSER
BURBANK
WALLA WALLA
HODGES
NUMBAY
NUMBAY DAM
WILTON
STATELINE
PENDLETON
ROUNDUP
LA GRANDE
DE MOIS
JOHN DAY DAM
TYGH VALLEY
TROUTDALE
GARRISON
THE DALLES DAM
DOWNEY
BOARDMAN
BIG EDDY
THE DALLES
DESCHUTES
OREGON CITY
CHEMAWA
SALEM
MONMOUTH
ALBANY
SANTIAM
LEBANON
REDMOND
EUGENE
SPRINGFIELD
KALTON
DEXTER DAM
LOOKOUT PT. DAM
DARRINGTON
COTTAGE GROVE
WILLOW CREEK DAM
MAPLETON
J.P. ALVEY
FOX HOLLOW
HAGER
COOS BAY
FAIRVIEW
McKINLEY
MORRAY
LANGLOIS
PORT ORFORD
GOLD BEACH
GEORGE MONUMENT
YAMSAY
ASTORIA
CATHLAMET
WESTPORT
CLATSKANIE
WARREN
TIMBER
ALCOA
WARRENTON
TILLAMOOK
BEAVER
WOODVILLE
LONG BEACH
TOKOLOKE PT.
RAYMOND
PILLAR ROCK
OLYMPIA
ABERDEEN
SHELTON
BREMERTON
BELLINGHAM
FAIRHAVEN
SHOWOMISH
FORT WORDEN
FORT WORDEN
TOWNSEND
PORT ANGELES
CHEHALIS
CENTRALIA
MOSSYROCK
MOSSY ROCK
OLYMPIA
COLUMBIA
VALHALLA
COULEE CITY
NORTH CONRAD
SOAP LAKE
ELLENSBURG
JERICHO
MOSES LAKE
WENATCHEE
CHELAN

SUMMARY OF OPERATIONS

Energy Production Over 30 billion kilowatt-hours of electric energy was generated at the 12 Federal plants for the Administration during the fiscal year 1958. This was an increase of 0.7 percent over the 1957 fiscal year. The addition of 5 generating units at Chief Joseph and 4 units at The Dalles added 632,000 kilowatts to the system giving a total of 5,334,000 kilowatts nameplate rating as of June 30, 1958.

New System Peak A new system peak was established during the 5-6 p.m. hour on November 21, 1957, before 3 units at Chief Joseph and 2 units at The Dalles were added to the system. Maximum coincident demand on the 12 Federal plants was 5,024,000 kilowatts, an increase of 2.8 percent over the previous year's maximum demand of 4,887,000 kilowatts which occurred on January 25, 1957. Energy produced at Federal plants for the Administration is shown by years in table VII and illustrated in the accompanying chart. Prepared on a quarterly basis, the chart shows the general trends of the Bonneville Power Administration's system-load growth.

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 North-

TABLE VII

Generation at Federal plants for the Bonneville Power Administration
Fiscal years 1939-58

Fiscal years ending June 30	Generation thousands of kwh	Maximum demand kw	Load factor %
1939-41	1,144,932	210,000	
1942	2,549,153	468,000	62.2
1943	5,618,436	841,000	76.3
1944	9,239,823	1,355,000	77.6
1945	9,051,573	1,427,000	72.4
1946	6,236,163	1,346,000	52.9
1947	8,753,737	1,335,000	74.9
1948	10,885,907	1,610,000	77.0
1949	12,925,788	1,797,000	82.1
1950	14,140,834	2,106,000	76.7
1951	16,472,384	2,535,000	74.2
1952	18,555,401	2,784,000	75.9
1953	17,633,232	2,867,000	70.2
1954	20,195,833	3,301,000	69.8
1955	23,253,186	3,651,000	72.7
1956	27,599,380	4,479,000	70.1
1957	29,984,219	4,887,000	70.0
1958	30,201,078	5,024,000	68.6
Total	264,441,059	5,024,000	

Plants	Generation 1/ millions of kwh: F. Y. 1958	Generation 1/ millions of kwh: Total to June 30, 1958	Date in service 2/	Operating agency
Albeni Falls	21/	727	Mar. 25, 1955	Army Engrs.
Big Cliff	95	402	June 12, 1954	Army Engrs.
Bonneville	3,784	63,949	June 6, 1938	Army Engrs.
Chandler	88	180	Feb. 13, 1956	USBR
Chief Joseph 3/	5,872	12,107	Aug. 20, 1955	Army Engrs.
Detroit 4/	355	1,999	July 1, 1953	Army Engrs.
Dexter	77	245	May 19, 1955	Army Engrs.
Grand Coulee 3/	11,784	155,826	Sept. 28, 1941	USBR
Hungry Horse	785	4,649	Oct. 29, 1952	USBR
Lookout Point 4/	317	1,324	Dec. 16, 1954	Army Engrs.
McNary	5,602	21,793	Nov. 6, 1953	Army Engrs.
The Dalles	1,225	1,240	May 13, 1957	Army Engrs.
Total	30,201	264,441		

1/ Includes energy generated in testing new generating units.
2/ Date of commercial operations.
3/ Includes energy transferred for Bureau of Reclamation.
4/ Excludes energy for condenser power at Detroit and Lookout Point.

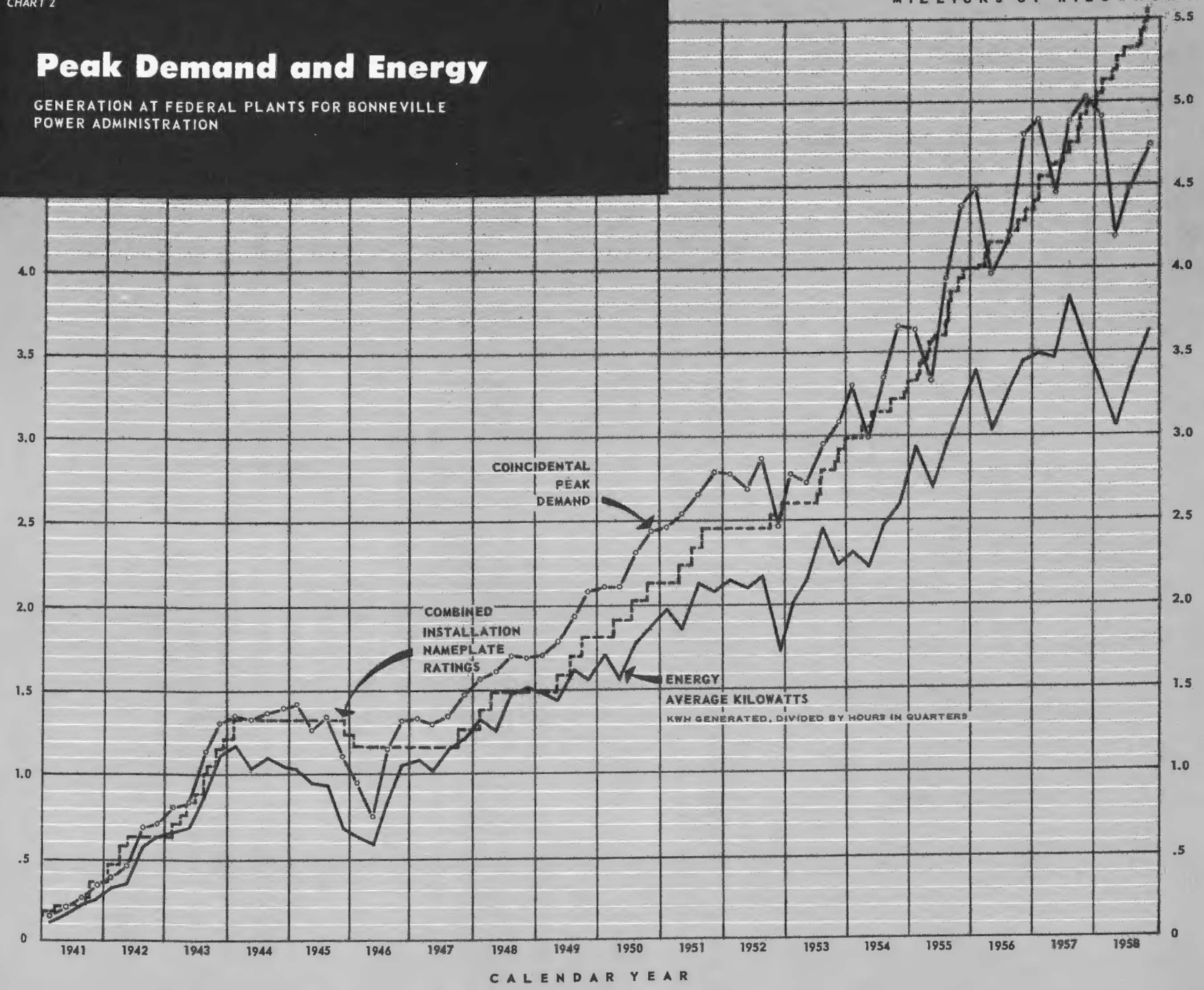
west. As a result, electric energy receipts and deliveries on Bonneville's transmission system cover many complex transactions in addition to receipts from Federal powerplants and deliveries by sales.

The integrated transmission grid makes possible the fullest utilization of power facilities in the area through diversity in peaking and water capabilities and diversity

CHART 2

Peak Demand and Energy

GENERATION AT FEDERAL PLANTS FOR BONNEVILLE POWER ADMINISTRATION



of system-load conditions. Substantial quantities of energy are received and delivered as transfers from other utilities.

Power generated at non-Federal projects such as Rock Island, Pelton, Box Canyon, and energy from the Inter-Company pool, was transmitted under firm contracts during fiscal year 1958 over the Administration's system and delivered either to the particular system owning the plant or to a customer of the system. The Administration has entered into contracts with ten utilities for wheeling of power from the Priest Rapids project over the Administration's system, and with three utilities for wheeling of power from the Rocky Reach project when these projects commence operation.

During periods when it was necessary for the Administration to curtail its interruptible power deliveries to industries, power secured by the industries from generation at non-Federal plants was transmitted over the Administration's system to supply the particular industrial loads.

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 and Chief Joseph, energy used by the Administration, and energy losses in transmission and transformation.

Table VIII, electric energy account, summarizes energy receipts and deliveries for fiscal year 1958.

Sale of 28 Billion Kilowatt-Hours

Energy sales to customers of the Bonneville Power Administration totaled

TABLE VIII

Electric energy account for fiscal year 1958

Energy received (millions of kilowatt-hours):	
Energy generated at Federal plants for BPA 1/	30,201
Power interchanged in	3,780
Total received	33,981
Energy delivered (millions of kilowatt-hours):	
Sales	28,365
Power interchanged out	3,740
Used by Administration	29
Total delivered	32,134
Energy losses in transmission and transformation	1,847
Losses as percent of total energy received – percent	5.4
Maximum demand on generating plants (kilowatts), November 21, 1957, 5-6 p.m., Pacific Standard Time	5,024,000
Load factor, total generated for BPA, percent	68.6

1/ For detail by plants, see table VII.

28.4 billion kilowatt-hours during the fiscal year 1958, an increase of 0.5 percent over 1957.

Energy sales to industrial customers decreased while sales to Federal agencies and to other utilities increased over the 1957 fiscal year. The tabulation below shows the changes in sales by class of customers.

BPA energy sales - fiscal year 1958

	Millions of kilowatt-hours	% change from 1957
Aluminum plants	8,717	- 14
Other industries	1,544	- 5
Federal agencies	2,509	+ 29
Total ultimate consumers	12,770	- 7
Publicly owned utilities	8,898	+ 12
Privately owned utilities	6,697	+ 2
Total to other utilities	15,595	+ 7
Total BPA	28,365	+ 0.5

Sale to industrial customers in fiscal year 1958 decreased 12 percent from 1957 including a one-percent increase in firm energy sales and a 45-percent decrease in sales of interruptible energy. Utilities with hydro generation had unusually good water conditions last winter, resulting in decreased need for dump energy from Bonneville Power Administration. There was a decrease of eight percent in dump sales during fiscal year 1958 as compared with a 30-percent increase in 1957 over 1956.

During the September-December 1957 months power resources were inadequate, and required a reduction in deliveries of interruptible energy to industrial customers in order to meet the Administration's firm power commitments and requirements of higher priority customers. During these four months the interruptible energy sales were 48 percent of the energy the customers would have purchased had total requirements been available. In the last

TABLE IX

Electric energy sales by class of customer

Fiscal years 1939 – 1958

(Millions of kilowatt-hours)

Fiscal years ending June 30	Industry: Aluminum	Industry: Other industries 1/	Publicly owned utilities	Privately owned utilities	Total
1939 – 1941	523	5	35	537	1,100
1942	1,845	79	143	358	2,425
1943	3,589	507	435	739	5,270
1944	5,454	1,022	728	1,467	8,671
1945	4,667	965	824	2,057	8,513
1946	2,492	800	636	1,903	5,831
1947	4,212	627	1,045	2,378	8,262
1948	4,902	647	1,561	3,181	10,291
1949	5,666	881	2,081	3,342	11,970
1950	5,863	1,024	2,840	3,312	13,039
1951	6,545	1,538	3,414	3,579	15,076
1952	6,472	1,943	4,803	3,794	17,012
1953	6,547	1,947	5,110	2,791	16,395
1954	7,862 2/	2,253	5,127	3,531	18,773 2/
1955	8,352 2/	2,624	6,274	4,580	21,830 2/
1956	10,141	3,422	6,909	5,505	25,977
1957	10,096 2/	3,581 2/	7,970	6,565	28,212 2/
1958	8,717 2/	4,053 2/	8,898	6,697	28,365 2/
Total to July 1, 1958	103,945 2/	27,918 2/	58,833	56,316	247,012 2/

1/ Includes Federal agencies.

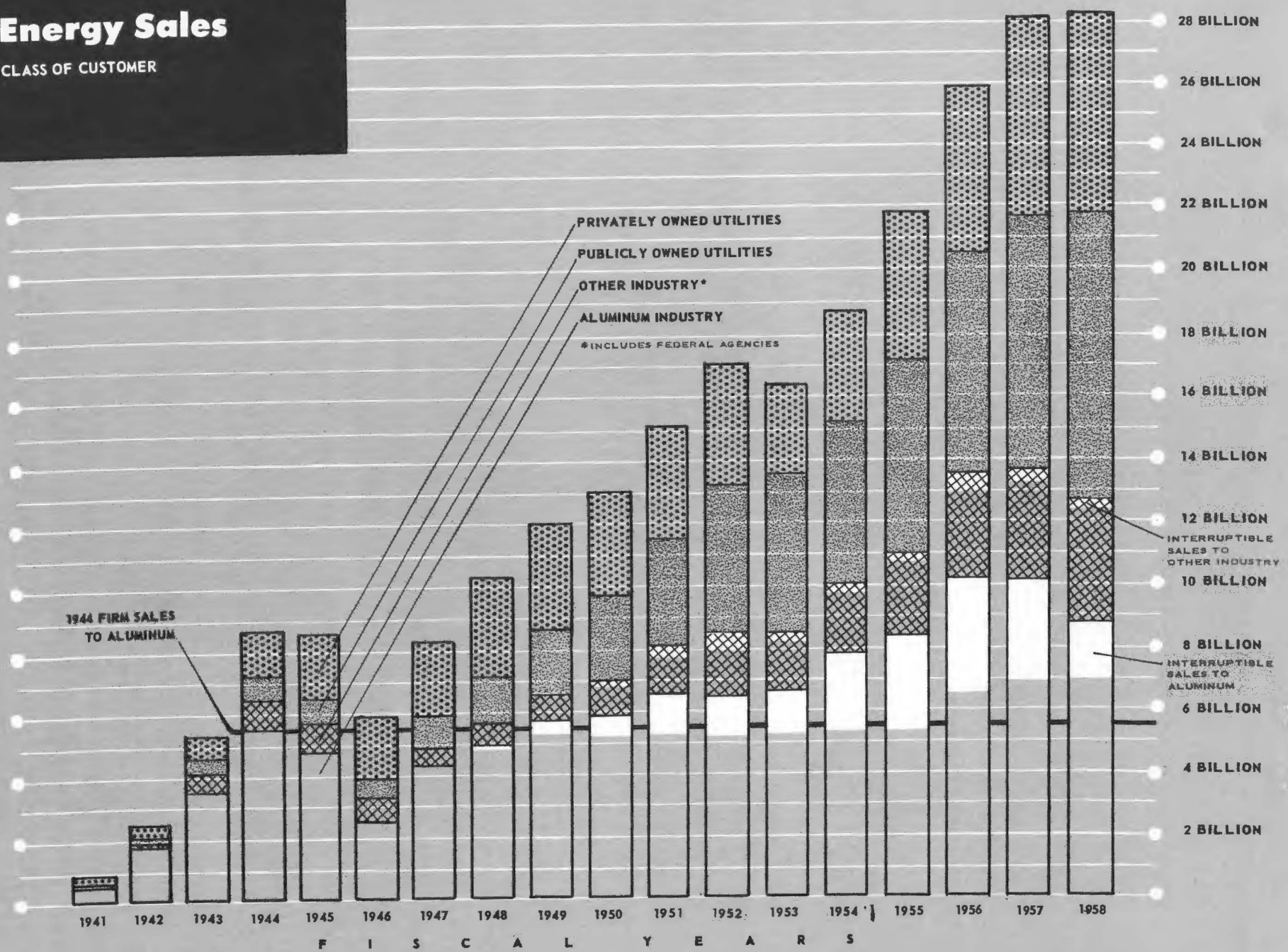
2/ Includes provisional and replaceable energy sales to industries:

	Aluminum	*Other industries*
FY 1954	*28,355 mwh*	–
1955	*22,956 mwh*	–
1957	*323,509 mwh*	*27,817 mwh*
1958	*481,522 mwh*	*32,194 mwh*

CHART 3

Energy Sales

CLASS OF CUSTOMER



six months of fiscal year 1958, interruptible energy was available, but because of unfavorable market conditions industrial customers purchased only 563,000,000 kilowatt-hours of interruptible energy as compared with 1.5 billion kilowatt-hours during January-June 1957.

The 1.9 billion kilowatt-hours of interruptible energy sales includes 514,000,000 kilowatt-hours and $1,039,712 provisional sales to 10 industrial customers. These provisional sales were made possible by generation from storage releases beyond normal operating drawdown of Hungry Horse and Grand Coulee reservoirs.

Composite Average Rate of 2.36 Mills

The Administration has sold 247.0 billion kilowatt-hours of electric energy at a composite rate of 2.36 mills per kilowatt-hour during the 20 years of operation ended June 30, 1958. Sales to publicly owned utilities for the 20 years were 58.8 billion kilowatt-hours at an average of 2.78 mills. Privately owned utilities received 56.3 billion kilowatt-hours at an average of 2.27 mills, and ultimate consumers such as industries and Federal establishments received 131.9 billion kilowatt-hours at 2.21 mills.

Power sales to aluminum plants were 103.9 billion kilowatt-hours at an average of 2.10 mills. These plants characteristically take power at very high load factors, approaching 100 percent, which results in the exceptionally low average cost on the Administration's C and A rate schedules. Sales to industries other than aluminum, including sales to Federal agencies, were 27.9 billion kilowatt-hours at an average of 2.59 mills.

Energy sales by class of customers are shown in table IX.

TABLE X

Electric energy sales by rate schedules

Fiscal year 1958

Rate schedule	Energy thousands of kilowatt-hours	Revenue 1/	Mills per kilowatt-hour
C – 4: Industries	11,588,157 2/	$24,625,138 2/	2.13
Utilities	9,618,145	20,307,245	2.11
Subtotal	21,206,302	44,932,383	2.12
F – 4: Industries	8,505	39,274	4.62
Utilities	52,766	227,643	4.31
Subtotal	61,271	266,917	4.36
A – 4: Industries	912,793	1,565,737	1.72
Utilities	12,017	42,990	3.58
Subtotal	924,810	1,608,727	1.74
E – 4: Utilities 3/	4,475,534	14,031,478	3.14
Experimental, H – 3 and exchange:			
Industries and Utilities	1,696,662	4,241,654	2.50
Total	28,364,579 2/	$65,081,159 2/	2.29

1/ These revenues from sale of electric energy differ from official accounting records in that billing adjustments applicable to only fiscal year 1958 are included.

2/ Includes 513,716,000 kwh and $1,039,712 provisional sales.

3/ Including Federal agency pumping loads.

Rate Schedules During the last fiscal year almost three-quarters of the energy sales were made under the C-4 wholesale rate schedule at an average rate of 2.12 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-4 rate schedule to utilities purchasing all or substantially all of their power requirements from the Administration. At-site power is sold on a kilowatt-year basis under the A-4 rate. Sales under the F-4 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. A summary of energy sales for the fiscal year 1958 classified by rate schedules is shown in table X.

A special review of the Administration's rate structure by the Ford, Bacon & Davis Co. was completed during the 1956 fiscal year. Study of special phases of this report by the staff was continued during this last year.

Special study by the staff was continued during fiscal year 1958 on the Administration's entire present wholesale rate structure and on development of a rate by which low-availability secondary energy in excess of that sold under present rates can be marketed.

Customers Served

The Administration was serving 114 customers at the end of fiscal year 1958. There were 75 publicly owned distributors of power, 19 industrial customers, 11 Federal agencies, and 9 privately owned utilities.

One aluminum plant took initial service, and service was discontinued to one irrigation district during the year.

Energy deliveries to customers of the Bonneville Power Administration
Fiscal year ended June 30, 1958

Customers	Energy deliveries for year 1/ kilowatt-hours
PUBLICLY OWNED UTILITIES	
MUNICIPALITIES	
Bandon, Oregon	18,444,000
Bonners Ferry, Idaho	3,010,800
Canby, Oregon	12,928,000
Cascade Locks, Oregon	12,017,000
Centralia, Washington	8,536,092
Cheney, Washington	17,964,800
Drain, Oregon	12,374,400
Ellensburg, Washington	47,548,000
Eugene, Oregon	231,800,070
Forest Grove, Oregon	41,503,000
Grand Coulee, Washington	15,955,200
McMinnville, Oregon	55,514,000
Milton-Freewater, Oregon	26,044,800
Monmouth, Oregon	13,055,000
Port Angeles, Washington	208,916,869
Seattle, Washington	1,443,023,660
Springfield, Oregon	55,392,200
Tacoma, Washington	1,352,267,000
Total municipalities (18)	3,576,294,891
PUBLIC UTILITY DISTRICTS	
Benton Co. PUD #1	194,042,559
Central Lincoln PUD	172,418,386
Chelan Co. PUD #1	147,801,504
Clallam Co. PUD #1	48,811,756
Clark Co. PUD #1	538,348,460
Clatskanie PUD	23,632,942
Cowlitz Co. PUD #1	682,327,210
Douglas Co. PUD #1	152,406,133
Ferry Co. PUD #1	17,001,188
Franklin Co. PUD #I	98,676,800
Grant Co. PUD #2	321,208,338
Grays Harbor Co. PUD #1	337,052,000
Kittitas Co. PUD #1	8,355,995
Klickitat Co. PUD #1	61,100,800
Lewis Co. PUD #1	131,467,503
Mason Co. PUD #3	95,086,800
Northern Wasco Co. PUD	23,049,600
Okanogan Co. PUD #1	92,534,648
Pacific Co. PUD #2	77,875,104
Pend Oreille Co. PUD #1	46,008,338
Skamania Co. PUD #1	28,752,324
Snohomish Co. PUD #1	993,200,468
Tillamook PUD	82,471,000
Wahkiakum Co. PUD #1	13,933,029
Total public utility districts (24)	4,387,562,885
COOPERATIVES	
Benton Rural Elec. Assn.	45,362,088
Big Bend Elec. Coop.	54,094,440
Blachly-Lane Co. Coop. Elec. Assn.	23,202,000
Central Elec. Coop.	17,804,300
Clearwater Power Co.	39,189,700
Columbia Basin Elec. Coop.	11,353,954
Columbia Power Coop. Assn.	12,990,400
Columbia Rural Elec. Assn.	33,201,600
Consumers Power	86,935,314
Coos-Curry Elec. Coop.	83,932,563
Douglas Elec. Coop.	38,564,725
Eastern Oregon Elec. Coop. Assn.	4,335,770
Flathead Elec. Coop.	22,085,023
Hood River Elec. Coop.	19,737,600
Idaho Co. L & P Assn.	13,009,150

Customers	Energy deliveries for year 1/ kilowatt-hours
Inland Power & Light Co.	95,105,990
Kootenai Rural Elec. Assn.	14,372,600
Lane Co. Elec. Coop.	59,375,839
Lincoln Elec. Coop. – Montana	9,788,477
Lincoln Elec. Coop. – Washington	17,988,676
Midstate Elec. Coop.	8,466,882
Missoula Elec. Coop.	10,862,651
Nespelem Valley Elec. Coop.	7,849,450
Northern Lights	26,446,200
Okanogan Co. Elec. Coop.	4,764,900
Orcas Power & Light Co.	12,546,000
Ravalli Co. Elec. Coop.	8,925,200
Salem Electric	44,587,800
Tanner Mutual P & L Assn.	752,146
Umatilla Elec. Coop. Assn.	25,536,104
Vera Irrigation Dist. #15	30,357,600
Wasco Elec. Coop.	28,025,340
West Oregon Elec. Coop.	22,310,591
Total cooperatives (33)	933,861,073
Total publicly owned utilities	8,897,718,849
PRIVATELY OWNED UTILITIES	
British Columbia Elec. Co.	195,362,711
California Oregon Power Co.	41,913,313
California-Pacific Utilities Co.	8,957,953
Idaho Power Co.	128,231,000
Interconnected Pool 2/	757,785,854
Montana Power Co.	350,400,000
Pacific Power & Light Co.	1,775,080,761
Portland General Elec. Co.	1,814,293,000
Puget Sound Power & Light Co.	558,701,000
Washington Water Power Co.	1,066,790,000
Total privately owned utilities (9)	6,697,515,592

Customers	Energy deliveries for year 1/ kilowatt-hours
FEDERAL AGENCIES (11)	2,509,037,557
INDUSTRIES	
ALUMINUM	
Aluminum Co. of America:	
Vancouver Plant	1,170,538,880
Wenatchee Plant	1,008,502,680
Anaconda Aluminum Co.	912,793,367
Harvey Machine Co.	6,216,000
Kaiser Alum. & Chem. Corp.:	
Spokane Alum. Fab.	296,698,577
Spokane Alum. Red.	2,482,171,960
Tacoma Alum. Red.	591,538,199
Reynolds Metals Co.:	
Longview Plant	995,569,672
Troutdale Plant	1,252,678,992
OTHER	
Carborundum Co.	167,557,760
Crown Zellerbach Corp.	61,177,272
Electro Metallurgical Co.	113,712,835
Hanna Nickel Smelting Co.	542,808,000
Keokuk Electro-Metals Co.	53,121,757
Pacific Carbide and Alloys Co.	34,841,600
Pacific Northwest Alloys	81,903,894
Pennsalt Chemicals Corp.	185,376,000
Rayonier Corp.	25,107,000
Victor Chemical Works	277,992,400
Total industries (19)	10,260,306,845 3/
Total sales of electric energy (114)	28,364,578,843 3/

1/ Includes energy deliveries carried on exchange accounts.

2/ Includes PP & L Co., PGE Co., PSP & L Co., and WWP Co.

3/ Includes 513,716,068 kwh provisional energy sales to industrial customers.

Wheeling Program

Four years ago the Administration established a general policy for the transmission of power from large non-Federal generating plants to remote load centers through use of the Federal grid. Construction of high-voltage transmission facilities through a region already adequately covered by the Bonneville Power Administration transmission grid and transmission systems of other utilities could involve wasteful duplication of investments and impair feasibility of non-Federal projects in many instances.

Therefore, the Administration during the past fiscal year has entered into a number of firm contracts for long-term transmission of non-Federal power when economically feasible and where legal authority exists. The system of charges for such transmission was developed on a uniform basis to assure adequate compensation for use of the government's facilities. The contracts make possible economic delivery of non-Federal power to load centers as much as several hundred miles from the generating plants. The wheeling or transmission agreements at the same time make possible full integration and coordination of non-Federal projects with the Northwest Power Pool.

Some of the utilities have decided that it would be better for their purposes to enter into shorter term wheeling agreements under arrangements which would utilize only the excess capacity in the Federal transmission lines and substations. The Administration will make a uniform charge for this service based on the facilities used, but without obligation to provide any additional facilities. These contracts will contain provisions which permit the Administration to terminate the contracts upon three years' notice (necessary time for the transferee to construct its own facilities) and the transferee to terminate the contract upon one year's notice.

Wheeling contracts completed to date follow.

WHEELING AGREEMENTS

Project	Customer	Amount to be wheeled (KW)	Date contract executed
	Firm capacity		
Priest Rapids	Puget Sound Power & Light Co.	113,445	March 17, 1958
Priest Rapids	City of Tacoma	63,080	January 28, 1958
Priest Rapids	City of Seattle	63,080	January 28, 1958
Priest Rapids	City of Eugene	13,405	January 23, 1958
Priest Rapids	City of McMinnville	7,108	January 28, 1958
Priest Rapids	City of Forest Grove	7,108	January 28, 1958
Priest Rapids	City of Milton-Freewater	7,108	February 24, 1958
Priest Rapids	PUD No. 1 of Cowlitz County	15,770	January 28, 1958
Priest Rapids	PUD No. 1 of Kittitas County	3,154	May 9, 1958
Priest Rapids	Portland General Electric Co.	197,093	August 12, 1958
Subtotal		490,351	
Rocky Reach	Puget Sound Power & Light Co.	386,000	December 23, 1957
Rocky Reach	PUD No. 1 of Chelan County (Alcoa)	110,000	May 9, 1958
Rocky Reach	Portland General Electric Co.	123,520	August 12, 1958
Subtotal		619,520	
Pelton	Portland General Electric Co.	120,000	March 25, 1958
Subtotal		120,000	
Box Canyon	City of Seattle	48,000	February 1, 1956
Box Canyon	PUD No. 1 of Whatcom County	8,000	March 16, 1953
Subtotal		56,000	
Grand total		1,285,871	
	Excess capacity		
Swift	Pacific Power & Light Co.	270,000	January 2, 1958
Rock Island	PUD No. 1 of Chelan County	140,000	August 6, 1953
COPCO-Reynolds	California Oregon Power Co.	95,200	February 20, 1958
Idaho-PP&L	Pacific Power & Light Co.	53,000	November 6, 1958
Grand total		558,200	

TABLE XI

U. S. COLUMBIA RIVER POWER SYSTEM

General specifications – projects existing, under construction and authorized

Installations and capabilities correspond to a coordinated system operation

June 30, 1958

Project	Location	Stream	Plant installations: Number of units	Plant installations: Total capacity kilowatts 1/	Nominal prime power kilowatts 2/	Pool elevation (feet)	Usable storage (acre feet) 4/	Average head (feet)	Date in service: Initial unit	Date in service: Last unit	Principal purpose 5/
EXISTING											
Bonneville	Wash.-Ore.	Columbia	10	518,400	466,000	74	Pondage	58	June 1938	Dec. 1943	P,N.
Grand Coulee	Washington	Columbia	18	1,944,000	1,552,000	1,288	5,072,000	315	Sept. 1941	Sept. 1951	P,I,FC,N,PS.
Hungry Horse	Montana	S. Fk. Flathead	4	285,000	186,000	3,560	2,982,000	376	Oct. 1952	July 1953	P,I,FC,N,PS.
Detroit	Oregon	N. Santiam	2	100,000	39,000	1,563.5	323,000	285	July 1953	Oct. 1953	P,I,FC,N,PS.
McNary	Wash.-Ore.	Columbia	14	980,000	527,000	340	Pondage	75	Nov. 1953	Feb. 1957	P,I,N.
Big Cliff	Oregon	N. Santiam	1	18,000	11,000	1,206	Pondage	91	June 1954	June 1954	P,Rereg.
Lookout Point	Oregon	M. Fk. Willamette	3	120,000	34,000	926	336,500	185	Dec. 1954	Apr. 1955	P,I,FC,N,PS.
Albeni Falls	Idaho	Pend Oreille	3	42,600	21,000	2,062.5	1,155,000	18	Mar. 1955	Aug. 1955	P,FC,N,PS.
Dexter	Oregon	M. Fk. Willamette	1	15,000	11,000	695	Pondage	53	May 1955	May 1955	P,Rereg.
Chief Joseph	Washington	Columbia	15	960,000	856,000	946	Pondage	177	Aug. 1955	June 1958	P,I.
Chandler	Washington	Yakima	2	12,000	11,000	618.5	0	118	Feb. 1956	Feb. 1956	P,I.
The Dalles	Wash.-Ore.	Columbia	6	339,000	312,000	160	Pondage	86	May 1957	May 1958	P,N.
				5,334,000	4,026,000		9,868,500				
UNDER CONSTRUCTION											
Chief Joseph	Washington	Columbia	1	64,000	0	946	Pondage	177	Nov. 1958	Nov. 1958	P,I.
The Dalles	Wash.-Ore.	Columbia	10	780,000	362,000	160	Pondage	86	Aug. 1958	Nov. 1960	P,N.
Roza	Washington	Yakima	1	11,250	6,000	1,220.6	Pondage	140	Aug. 1958	Aug. 1958	P,I.
Hills Creek	Oregon	M. Fk. Willamette	2	30,000	16,000	1,543	249,000	210	Nov. 1961	Nov. 1961	P,I,FC,N,PS.
Cougar	Oregon	S. Fk. McKenzie	2	25,000	17,000	1,690	154,000	350	Nov. 1961	Nov. 1961	P,I,FC,N,PS.
Ice Harbor	Washington	Snake	3	270,000	171,000	440	Pondage	97	Dec. 1961	Dec. 1961	P,I,N.
John Day	Wash.-Ore.	Columbia	12	1,304,400	797,000	265	Pondage	104	Oct. 1966	June 1968	P,I,FC,N.
				2,484,650	1,369,000		403,000				
AUTHORIZED											
Libby	Montana	Kootenai	6	516,000	257,000	2,459	5,010,000	265	–	–	P,FC,N,PS.
Lower Monumental	Washington	Snake	3	270,000	169,000	533	Pondage	92	–	–	P,I,N.
Little Goose	Washington	Snake	3	270,000	180,000	633	Pondage	99	–	–	P,N.
Lower Granite	Washington	Snake	3	300,000	184,000	735	Pondage	100	–	–	P,N.
Green Peter	Oregon	M. Santiam	2	81,000	22,000	984	333,000	250	–	–	P,I,FC,N,PS.
White Bridge	Oregon	M. Santiam	1	15,000	9,000	670	Pondage	90	–	–	P,Rereg.
				1,452,000	821,000		5,343,000				
					-31,000 3/						
Total – 23 projects				9,270,650	6,185,000		15,614,500				

1/ Nameplate rating.

2/ Average capability in a coordinated system during an 8-month storage release period (Sept. 1936 through April 1937).

3/ Pumping requirements of 31,000 kw represent the average power necessary to supply that part of irrigation water at Grand Coulee during the storage release period for 600,000 acres of the Columbia Basin Project.

4/ Storage usable for power production.

5/ P – Power; I – Irrigation; FC – Flood Control; N – Navigation; PS – Power Storage; Rereg. – Reregulating Reservoir.

Generation Added

Additions to the U. S. Columbia River Power System in fiscal year 1958 have a nameplate rating of 632,000 kilowatts. Five units with a total rating of 320,000

kilowatts were installed at Chief Joseph leaving one unit to be installed for the completed project. The first four main units with a total rating of 312,000 kilowatts were installed at The Dalles project on the Columbia River. The Corps of Engineers is construction agency for both of these projects.

Projects Summarized

Projects existing, under construction, and authorized for construction by the Corps of Engineers and Bureau of Reclamation are shown in table XI. The existing projects including units installed to date in projects under construction will provide 4,026,000 kilowatts of prime power when operated as a system. With completion of the projects under construction the prime capability will be 5,395,000 kilowatts and with completion of the authorized projects prime capability will be over 6,000,000 kilowatts.

Existing storage capacity usable for power in Federal reservoirs is 9,868,500 acre feet. An additional 403,000 acre feet will be provided by Cougar and Hills Creek on which construction is under way, and 5,343,000 acre feet would be provided by Libby and Green Peter projects which are authorized for construction.

All generation and storage capacity under Federal construction will be in service by June 1968 under the present schedule. Service dates for the other authorized projects are not scheduled as no funds have been appropriated for their construction.

Non-Federal Additions

Non-Federal generating capacity in the area served by the Administration was increased in fiscal year 1958 by installation of the 20,250 kilowatt unit No. 7 at the Snoqualmie Falls plant of Puget Sound Power & Light Co. in July 1957. In addition, the Pelton project of Portland General Electric Co. containing three generating units with a total nameplate rating

TABLE XII

Non-Federal utilities

Generator installation schedule

August 12, 1958

Utility and plant	Stream	Unit number	Nameplate rating thousands of kilowatts	Date in service
Pacific Power & Light Co.				
Merwin (Addition)	Lewis R.	3	45	September 1958
Swift No. 1	Lewis R.	1,2 & 3	204	December 1958
Portland General Electric Co.				
North Fork	Clackamas R.	1	19.2	November 1958
		2	19.2	December 1958
Bull Run	Bull Run R.	-	1/	November 1958
Faraday (Addition)	Clackamas R.	6	19.2	November 1958
Cowlitz County PUD				
Swift No. 2	Lewis R.	1 & 2	70	December 1958
City of Seattle				
Diablo (Reconstruction)	Skagit R.	1 & 2	2/	December 1958
Gorge (Reconstruction)	Skagit R.	-	3/	December 1959
City of Eugene				
Beaver Marsh	McKenzie R.	1 & 2	30	July 1959
Grant County PUD				
Priest Rapids	Columbia R.	1,2,3 & 4	315.4 4/	September 1959
		5	78.85 4/	October 1959
		6	78.85 4/	December 1959
		7	78.85 4/	March 1960
		8	78.85 4/	April 1960
		9	78.85	July 1960
		10	78.85	September 1960
Wanapum	Columbia R.	1 & 2	150	May 1964
		3 & 4	150	June 1964
		5 & 6	150	July 1964
		7 & 8	150	August 1964

TABLE XII (Cont.)

Non-Federal utilities

Generator installation schedule

August 12, 1958

Utility and plant	Stream	Unit number	Nameplate rating thousands of kilowatts	Date in service
Puget Sound Power & Light Co.				
Upper Baker	Baker R.	1 & 2	85	September 1959
Lower Baker (Addition)	Baker R.	3	57.6	September 1960
Washington Water Power Co.				
Noxon Rapids	Clark Fork	1	84	September 1959
		2	84	December 1959
		3	84	March 1960
		4	84	June 1960
Chelan County PUD				
Rocky Reach	Columbia R.	1	101.65	July 1961
		2	101.65	August 1961
		3	101.65	September 1961
		4	101.65	November 1961
		5	101.65	January 1962
		6	101.65	March 1962
		7	101.65	May 1962
City of Tacoma				
Mayfield	Cowlitz R.	1	40	September 1962
		2	40	December 1962
		3	40	March 1963
		4	40	June 1963
Mossyrock	Cowlitz R.	1	75	April 1965
		2	75	July 1965
		3	75	October 1965
		4	75	December 1965

1/ Additional water for 55 mw-mo. of added energy.

2/ Reconstruction of the turbines will increase peaking capability by 25,000 kilowatts.

3/ Reconstruction of diversion dam will increase gross head by 100 feet and peaking capability by 57,000 kilowatts.

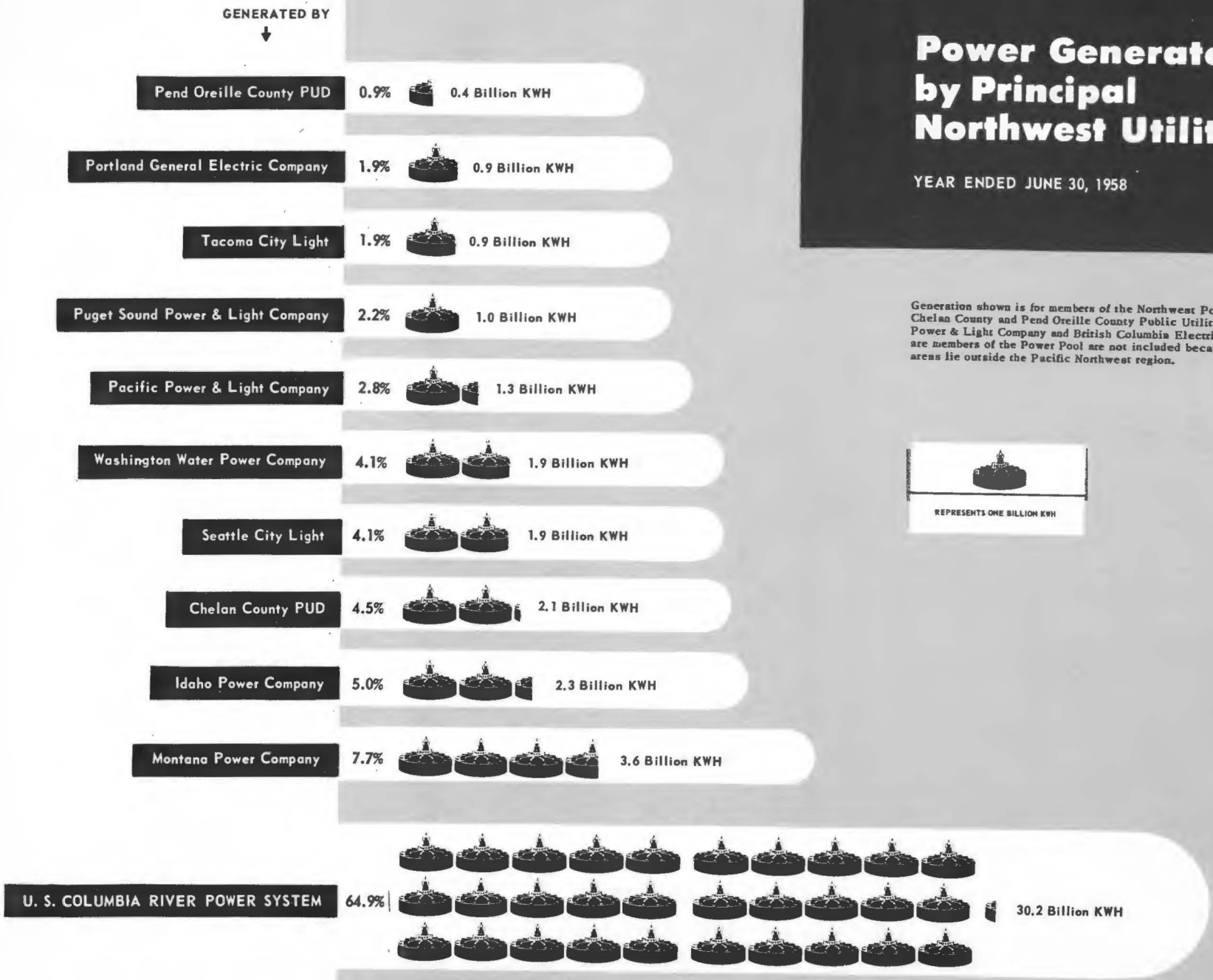
4/ Headwater elevation for first year of operation will reduce net head to about 56% of full head which will result in a reduction in capability to about 47,000 kilowatts per unit.

CHART 4

Power Generated by Principal Northwest Utilities

YEAR ENDED JUNE 30, 1958

Generation shown is for members of the Northwest Power Pool plus Chelan County and Pend Oreille County Public Utility Districts. Utah Power & Light Company and British Columbia Electric Company who are members of the Power Pool are not included because their service areas lie outside the Pacific Northwest region.



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

TABLE XIII

Generation by the principal electric utility systems of the Pacific Northwest

Fiscal year 1958 1/

Utilities	Kilowatt-hours (billion)	Total generation (percent)	Utilities	Kilowatt-hours (billion)	Total generation (percent)
Publicly owned			Privately owned		
U. S. Columbia River Power System	30.2	64.9	Montana Power Co.	3.6	7.7
Chelan County PUD	2.1	4.5	Idaho Power Co.	2.3	5.0
Seattle City Light	1.9	4.1	Washington Water Power Co.	1.9	4.1
Tacoma City Light	0.9	1.9	Pacific Power & Light Co.	1.3	2.8
Pend Oreille County PUD	0.4	0.9	Puget Sound Power & Light Co.	1.0	2.2
			Portland General Electric Co.	0.9	1.9
Total publicly owned	35.5	76.3	Total privately owned	11.0	23.7
Total generation				46.5	100.0

1/ Generation shown is for members of the Northwest Power Pool plus Chelan County and Pend Oreille County Public Utility Districts. Utah Power & Light Company and British Columbia Electric Company who are members of the Power Pool are not included because their service areas lie outside the Pacific Northwest region.

of 108,000 kilowatts was completed in April 1958. Future additions under construction or licensed for construction by non-Federal utilities in this area are shown in table XII. The additions represent an increase of slightly more than 50,000 kilowatts of nameplate rating over projects in a comparable status one year previously.

Northwest Power Pool

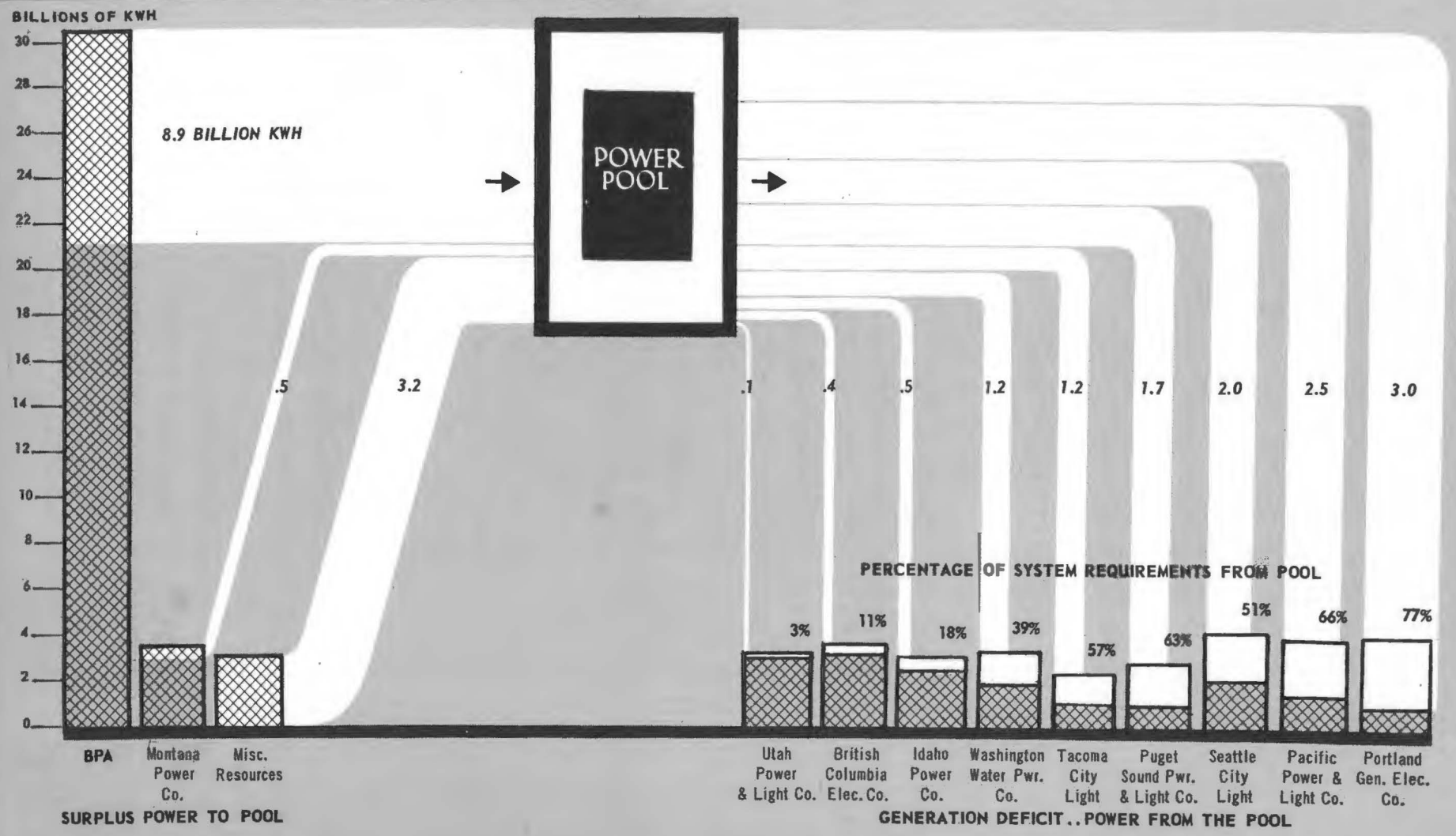
Generation by the principal electric utility systems of the Pacific Northwest during the fiscal year 1958 is shown in table XIII. All utilities listed are members of the North-

Chart 5

NET OPERATIONS ENDING JUNE 30, 1958

Northwest Power Pool

BPA SUPPLIED 76% OF NET ENERGY REQUIREMENTS



west power pool with the exceptions of the Chelan County and Pend Oreille County Public Utility Districts. These two utilities are included because they provided substantial amounts of generation to the pool. The Utah Power & Light Co. and the British Columbia Electric Co. are members of the pool but are not included as their major service areas are outside the region.

A total of 64.9 percent of the energy generated by the major utilities of the region was produced by the U. S. Columbia River Power System. In addition to power requirements of utilities and major industries served through the Administration's transmission system, 8.9 billion kilowatt-hours of energy was provided to other pool utilities for meeting their requirements.

Transmission System Additions

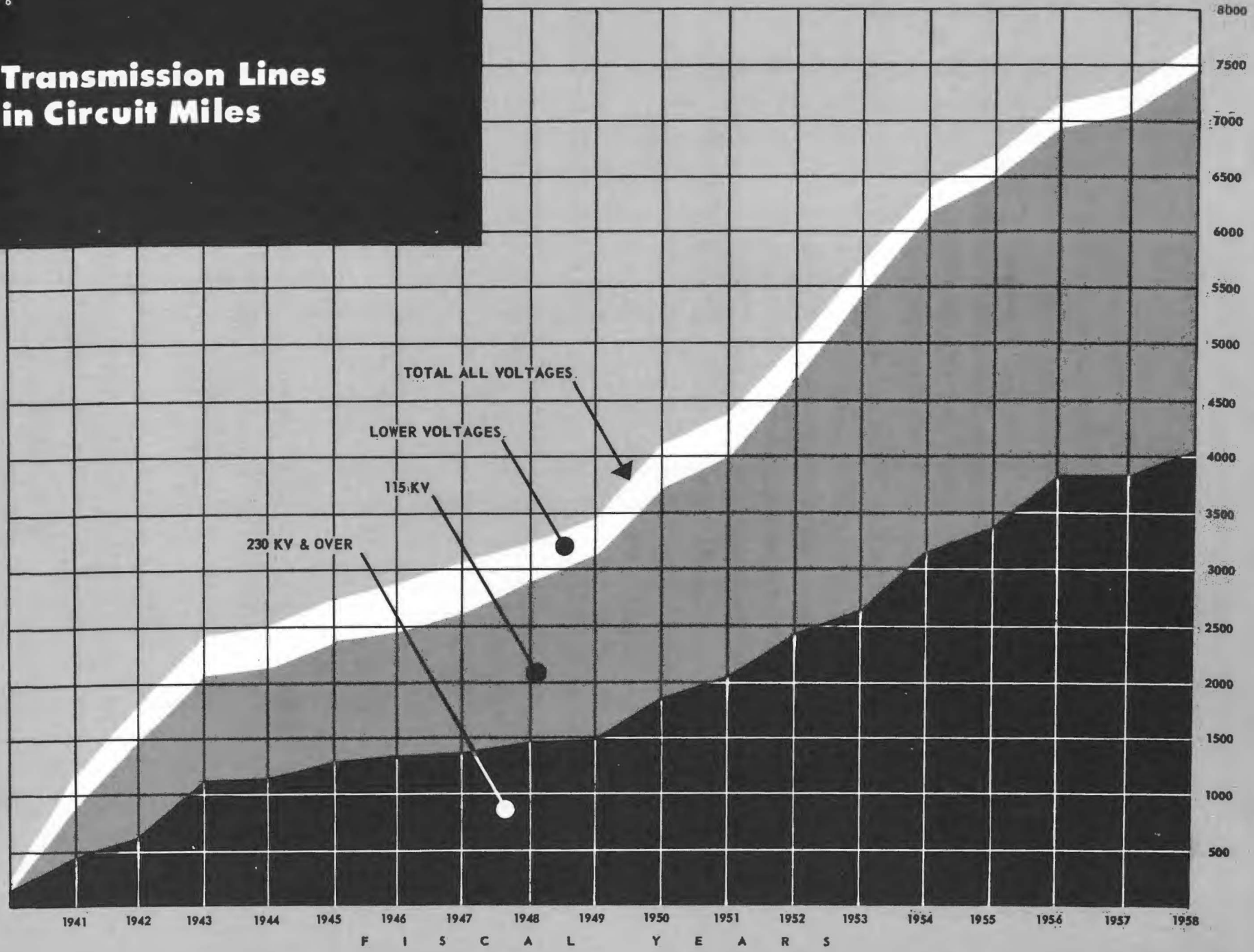
Bonneville Power Administration grid was increased during the fiscal year to 7,680 circuit miles of transmission line and 186 substations with a transformer capacity of 12,700,248 kilovolt-amperes.

Transmission line mileage was increased by 362 circuit miles. This increase included 165 miles of 345,000-volt, 56 miles of 230,000-volt, 134 miles of 115,000-volt, and 7 miles of lesser voltage.

Ten new substations ranging in size from 3,000 to 270,000 kilovolt-amperes were energized, five were retired and two were sold. System transformer capacity was increased by 1,924,333 kilovolt-amperes, or 18 percent. This included installation of 1,820,333 kilovolt-amperes of additional transformation at 25 substations and 104,000 kilovolt-amperes by addition of forced cooling equipment at two substations.

CHART 6

Transmission Lines in Circuit Miles



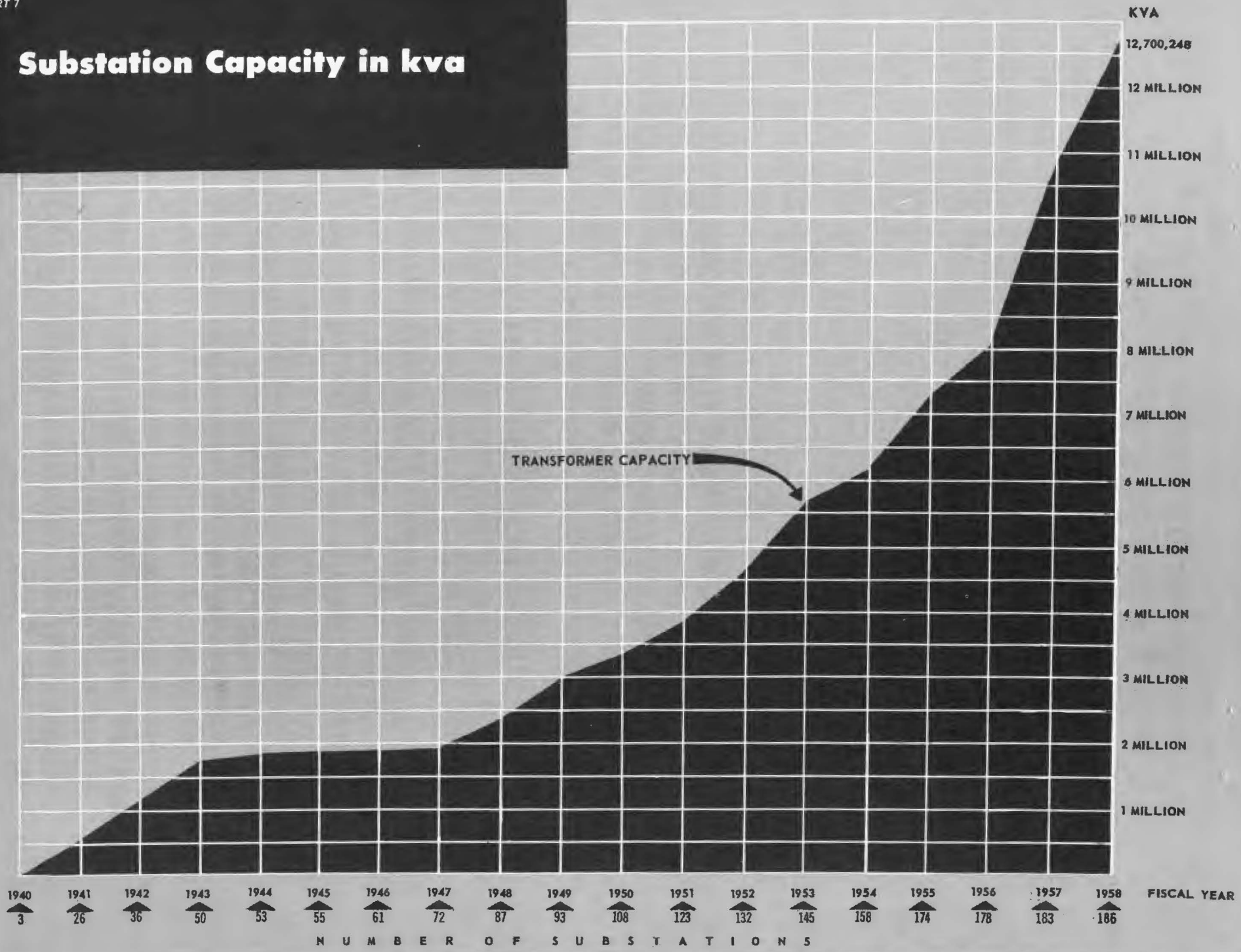
Construction Program

Major additions completed during the year included a 345,000-volt transmission line between Chief Joseph Dam and Covington including autotransformers at each terminal to augment the power supply in the Seattle and other Puget Sound areas. Other major additions completed included a 230,000-volt line between Big Eddy (The Dalles Dam) and Chemawa to reinforce the power supply into the Willamette Valley; a 230,000-volt Alvey-Reston-Fairview line to increase the southern Oregon coastal area power supply; two 115,000-volt lines from Big Eddy to Chenoweth and Harvey substations to serve the Harvey Machine Company's aluminum production load and to improve service to the customers in Wasco County, Oregon, and Klickitat County, Washington; a 230,000-volt line from Round Butte to Redmond to integrate the Portland General Electric Company's Pelton generation with the Bonneville Power Administration grid and to provide wheeling to the Company's Portland load center; a 115,000-volt line from Big Eddy to the DeMoss 15,000-kilovolt-ampere substation; and a 250,000-kilovolt-ampere, 230/115-kilovolt transformer bank at the Franklin substation to increase the power supply in the Lower Columbia Basin area.

A number of important grid additions were under construction at the beginning of the 1959 fiscal year. These include the 115,000-volt Shelton-Fairmount line and 83,000-kilovolt-ampere Fairmount substation to meet the increased power load growth of the northern Olympic Peninsula area; a second 115,000-volt line between Olympia and Aberdeen to serve the increased load demand in the Grays Harbor area; a second 230,000-volt line between Santiam and Alvey substations to augment the power supply in southwestern Oregon; a 115,000-volt Columbia Falls-Trego line and a 6,000-kilovolt Trego substation to serve the power load growth in northwestern Montana; and a 250,000-kilovolt-ampere substation at Potholes, Washington, on the Midway-Coulee line No. 1 to supplement the power supply in the Columbia Basin area.

CHART 7

Substation Capacity in kva



Construction starts scheduled for fiscal year 1959 include a 230,000-volt line from Albany to Toledo, Oregon, for initial operation at 115,000 volts, to bolster the power supply in the Toledo area; a 230,000-volt line between Columbia, connected directly to Grand Coulee-Columbia line No. 3, and Covington substation, to bring Grand Coulee generation directly into the Puget Sound area; a 345,000-volt line for initial operation at 230,000 volts from Chelan County Public Utility District's Rocky Reach hydroelectric project to Maple Valley to bring the output of the project to western Washington; and another 230,000-volt line from The Dalles Dam to Big Eddy to integrate the additional generation into the system.

Columbia

River Power

System

and Related

Activities

FINANCIAL

STATEMENTS

FOR THE

FISCAL YEAR

ENDED

JUNE 30, 1958

AUDITORS' REPORT

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON 25

B-114858

December 31, 1958

Dear Mr. Secretary:

The General Accounting Office has made audits of the activities of the Bonneville Power Administration and the Bureau of Reclamation, Department of the Interior, and the Corps of Engineers (Civil Functions), Department of the Army, pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67). In connection with these audits, we examined the accounts and records pertaining to the Columbia River Power System and Related Activities for the fiscal year ended June 30, 1958, and the accompanying financial statements were prepared from those accounts and records, some of which are maintained specifically for this purpose. Insofar as the accompanying financial statements are concerned, our examination was made in accordance with generally accepted auditing standards and included such tests of the accounting records and such other auditing procedures as were considered necessary in the circumstances.

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

The accompanying financial statements present, in accordance with the accounts and records maintained for this purpose, the combined assets and liabilities at June 30, 1958, and the financial results of commercial power operations for the year ended on that date of Bonneville Power Administration and the multiple-purpose projects (including those under construction) for which it is the power marketing agent. These financial statements are deficient in the following important respects.

1. Insofar as they relate to commercial power activities, the accompanying financial statements were prepared from accounts and records that have been maintained generally in accordance with the uniform system of accounts prescribed by the Federal Power Commission under the Federal Power Act. To achieve conformance with the uniform system of accounts and to permit a more consistent financial presentation of assets, liabilities, and results of operations, special memorandum accounts have been maintained for the purpose of this report by the Bureau of Reclamation. The memorandum accounts differ from the official accounting policies and practices of the Bureau. Officials of your Department have informed us that they do not consider the accompanying financial statements representative of the Bureau of Reclamation operating results under existing instructions and policies because they are not prepared from official records and reflect a number of specific differences from normal Bureau practices.

2. The accounting policies on which the accompanying financial statements are based are not consistent in several important respects, such as accounting for depreciation on plant in service, interest on the Federal investment, and costs incurred by other agencies. These matters are discussed in notes 2 and 3 of schedule 6.

3. Firm allocations of the construction costs of the Hungry Horse and Yakima Projects (Bureau of Reclamation) and the Albeni Falls, Detroit-Big Cliff, McNary Dam, Lookout Point-Dexter, and The Dalles Dam Projects (Corps of Engineers) have not been made to power and nonpower purposes. As explained in note 3 of schedule 6, tentative allocations of these costs have been used in preparing the accompanying financial statements. When firm allocations of costs are made, the accounts and financial statements relating to these projects may require adjustment.

These deficiencies have existed for several years without being satisfactorily corrected or resolved. Our audit reports have regularly included recommendations urging that these matters be resolved. The periodic addition of new generation and transmission facilities to the System will probably compound the problems resulting from the existing deficiencies in the financial statements. Accordingly, we have concluded that we cannot report that these financial statements present fairly the financial position of the Columbia River Power System and Related Activities at June 30, 1958, and the financial results of power operations for the fiscal year then ended.

Sincerely yours,

Joseph Campbell

Comptroller General
of the United States

The Honorable
The Secretary of the Interior

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

FINANCIAL STATEMENTS

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UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT OF COMBINED COMMERCIAL POWER OPERATIONS

FOR THE FISCAL YEARS ENDED JUNE 30, 1958 AND 1957

	1958	1957
OPERATING REVENUES:		
Sales of electric energy by Bonneville Power Administration:		
Publicly owned utilities.	$23,574,281	$22,044,831
Privately owned utilities	14,171,346	14,450,108
Federal agencies	6,054,126	4,867,552
Aluminum industry	17,491,535	20,025,700
Other industry	3,412,720	3,583,784
Sales, at wholesale	64,704,008	64,971,975
Other operating revenues (note 6):		
Payments for downstream river regulation	15,900	21,100
Project energy--use at site	151,376	119,447
Rental of electric property.	1,857,826	1,287,445
	2,025,102	1,427,992
Total operating revenues	66,729,110	66,399,967
OPERATING EXPENSES (notes 2 and 3):		
Purchased power	475,342	492,585
Operation:		
Specific power facilities	10,166,191	9,515,934
Joint facilities	1,089,893	875,938
Maintenance:		
Specific power facilities	5,198,148	4,049,679
Joint facilities	1,206,256	894,136
Depreciation:		
Specific power facilities	19,474,278	16,846,185
Joint facilities	4,233,380	3,408,969
Net loss on sales and abandonment of property	23,288	429,052
Total operating expenses	41,866,776	36,512,478
Net operating revenues	24,862,334	29,887,489
INTEREST AND OTHER DEDUCTIONS (note 2):		
Interest on Federal investment	32,712,927	30,501,670
Less amount charged to construction . .	5,017,358*	6,485,968*
Miscellaneous income deductions (net)	116,266	93,945*
Net interest and other deductions	27,811,835	23,921,757
Net commercial power revenues (-loss)	$-2,949,501	$ 5,965,732

*Deduction

The accompanying notes (schedule 6) are an integral part of this statement.

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

SCHEDULE 2

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT OF COMBINED ASSETS AND LIABILITIES

JUNE 30, 1958 AND 1957

ASSETS	1958	1957
FIXED ASSETS, at original cost, including interest during construction (notes 2 and 3):		
Commercial power	$1,563,323,682	$1,510,417,433
Irrigation	363,335,184	326,950,537
Flood control	85,575,756	86,408,161
Navigation	77,301,242	76,180,914
Other	1,114,413	1,078,032
Multiple-purpose projects under construction	59,904,192	17,069,010
Total	2,150,554,469	2,018,104,087
Less accumulated depreciation:		
Commercial power	132,590,915	110,887,644
Irrigation	734,703	624,050
Flood control	2,457,084	2,637,962
Navigation	4,674,101	3,782,642
Total	140,456,803	117,932,298
Original cost, net	2,010,097,666	1,900,171,789
CURRENT ASSETS:		
Unexpended funds in U. S. Treasury appropriated by Congress for construction and for operation and maintenance (note 7)	23,440,874	31,873,675
Special deposits	1,440,721	1,650,005
Accounts receivable:		
Customers	9,320,363	12,139,898
Other	1,479,642	1,066,583
Materials and supplies	7,379,992	6,910,435
Total	43,061,592	53,640,596
OTHER ASSETS AND DEFERRED CHARGES	11,287,824	11,367,007
	$2,064,447,082	$1,965,179,392

LIABILITIES	1958	1957
INVESTMENT OF U. S. GOVERNMENT AND ACCUMULATED NET REVENUES:		
Total investment of U. S. Government (note 5)	$2,579,704,338	$2,400,947,138
Less:		
Funds returned to U. S. Treasury:		
Repayment of Federal investment in the power program	580,481,605	512,476,083
Repayment of Federal investment in the nonpower programs	13,290,464	9,178,159
Total expense of flood control operations	9,841,108	10,172,987
Total expense of navigation operations	27,241,942	24,026,625
Other nonreimbursable expenses	556,068	554,406
	631,411,187	556,408,260
Net investment of U. S. Government	1,948,293,151	1,844,538,878
Accumulated net revenues:		
Net revenues from commercial power operations since inception, including a net loss of $2,949,501 for the year ended June 30, 1958 (schedule 1)	101,761,838	104,711,339
Less net loss from irrigation operations since inception	3,902,994	3,356,771
	97,858,844	101,354,568
Total	2,046,151,995	1,945,893,446
CURRENT AND ACCRUED LIABILITIES:		
Accounts payable	13,151,858	15,954,223
Employees' accrued leave	2,271,918	2,015,068
Total	15,423,776	17,969,291
DEFERRED CREDITS	745,360	887,743
MATURED INSTALLMENTS OF FIXED OBLIGATIONS FOR USE OF IRRIGATION FACILITIES	1,483,181	68,230
CONTRIBUTIONS IN AID OF CONSTRUCTION	642,770	360,682
	$2,064,447,082	$1,965,179,392

The accompanying notes (schedule 6) are an integral part of this statement.

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

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT OF INVESTMENT AND REPAYMENT OF INVESTMENT

IN COMMERCIAL POWER PROGRAM (note 4)

FOR THE PERIOD FROM INCEPTION TO JUNE 30, 1958

	Total	Bonneville Power Adminis-tration	Bonneville Dam Project	Columbia Basin Project	Hungry Horse Project	Albeni Falls Project	McNary Dam Project	Detroit-Big Cliff Project	Lookout Point-Dexter Project	Chief Joseph Project	Yakima Project, Roza and Kennewick Divisions	The Dalles Dam Project	Ice Harbor Project	Cougar Dam Project	Hills Creek Dam Project	John Day Project
NET INVESTMENT IN COMMERCIAL POWER																
INVESTMENT ALLOCATED TO COMMERCIAL POWER:																
Total investment of U. S. Government, principally, congressional appropriations for construction of fixed assets and operation and maintenance activities (see schedule 5)	$2,579,704,338	$627,606,803	$141,076,064	$639,172,651	$120,535,037	$35,390,901	$335,094,383	$76,047,031	$102,170,786	$163,218,842	$35,571,971	$242,845,440	$39,731,957	$6,871,807	$11,346,450	$3,024,215
Less amounts allocated to nonpower purposes or unallocated:																
Irrigation	386,370,427	-	-	344,259,812	-	-	-	4,349,053	5,478,357	2,529,626	29,753,579	-	-	-	-	-
Flood control	93,111,134	-	-	-	19,601,060	191,906	-	23,280,313	50,037,855	-	-	-	-	-	-	-
Navigation	100,321,600	-	45,871,705	1,049,171	-	149,054	29,809,153	149,670	921,878	-	-	22,370,969	-	-	-	-
Other purposes	1,516,999	-	-	-	-	-	-	417,416	-	-	1,099,583	-	-	-	-	-
Construction in progress and other unallocated assets	60,974,429	-	-	-	-	-	-	-	-	-	-	-	39,731,957	6,871,807	11,346,450	3,024,215
	642,294,589	-	45,871,705	345,308,983	19,601,060	340,960	29,809,153	28,196,452	56,438,090	2,529,626	30,853,162	22,370,969	39,731,957	6,871,807	11,346,450	3,024,215
Total investment in commercial power, principally, congressional appropriations for construction of fixed assets and operation and maintenance activities	1,937,409,749	627,606,803	95,204,359	293,863,668	100,933,977	35,049,941	305,285,230	47,850,579	45,732,696	160,689,216	4,718,809	220,474,471	-	-	-	-
LESS FUNDS FROM COMMERCIAL POWER OPERATIONS RETURNED TO U. S. TREASURY:																
Through June 30, 1957	512,698,456	243,523,918	58,632,463	138,099,499	16,751,750	3,783,320	34,486,834	7,248,009	4,602,768	5,051,452	392,000	126,443	-	-	-	-
During the year ended June 30, 1958:																
By Bonneville Power Administration	67,592,184	22,117,184	2,800,000	12,800,000	3,752,000	2,000,000	11,600,000	2,000,000	1,900,000	5,900,000	223,000	2,500,000	-	-	-	-
By generating projects	190,965	-	2,779	121,603	28,155	2,743	12,171	8,568	6,726	5,607	-	2,613	-	-	-	-
Accumulated funds returned	580,481,605	265,641,102	61,435,242	151,021,102	20,531,905	5,786,063	46,099,005	9,256,577	6,509,494	10,957,059	615,000	2,629,056	-	-	-	-
Net investment in commercial power	$1,356,928,144	$361,965,701	$33,769,117	$142,842,566	$80,402,072	$29,263,878	$259,186,225	$38,594,002	$39,223,202	$149,732,157	$4,103,809	$217,845,415	$-	$-	$-	$-
COMPARISON OF REPAYMENT AND SCHEDULED REPAYMENT OF COMMERCIAL POWER INVESTMENT																
REPAYMENT OF CAPITAL INVESTMENT IN COMMERCIAL POWER:																
Accumulated funds returned (as above)	$580,481,605	$265,641,102	$61,435,242	$151,021,102	$20,531,905	$5,786,063	$46,099,005	$9,256,577	$6,509,494	$10,957,059	$615,000	$2,629,056	$-	$-	$-	$-
Less amounts equivalent to:																
Operation and maintenance expense	141,099,993	90,402,402	12,914,932	25,084,896	1,846,710	785,988	5,058,416	1,297,696	803,855	1,897,505	139,751	867,842	-	-	-	-
Interest charged to operations	189,413,613	57,724,937	21,705,804	60,552,416	11,168,394	2,938,703	20,670,018	4,615,792	3,286,500	5,476,567	205,253	1,069,229	-	-	-	-
	330,513,606	148,127,339	34,620,736	85,637,312	13,015,104	3,724,691	25,728,434	5,913,488	4,090,355	7,374,072	345,004	1,937,071	-	-	-	-
Remainder applied to amortization of capital investment	249,967,999	117,513,763	26,814,506	65,383,790	7,516,801	2,061,372	20,370,571	3,343,089	2,419,139	3,582,987	269,996	691,985	-	-	-	-
SCHEDULED REPAYMENT OF CAPITAL INVESTMENT AT JUNE 30, 1958, ESTABLISHED BY LAW OR ADMINISTRATIVE POLICY PURSUANT TO LAW	173,622,786	68,096,000	14,814,000	65,383,790	5,560,000	1,443,000	10,758,000	2,441,000	1,694,000	2,668,000	269,996	495,000	-	-	-	-
Excess of funds returned over scheduled repayment	$76,345,213	$49,417,763	$12,000,506	$-	$1,956,801	$618,372	$9,612,571	$902,089	$725,139	$914,987	$-	$196,985	$-	$-	$-	$-

The accompanying notes (schedule 6) are an integral part of this statement.

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT COMBINING EXPENSES OF COMMERCIAL POWER OPERATIONS

FOR THE FISCAL YEAR ENDED JUNE 30, 1958

	Combined to schedule 1	Bonneville Power Administration	Bonneville Dam Project	Columbia Basin Project	Hungry Horse Project	Albeni Falls Project	McNary Dam Project	Detroit-Big Cliff Project	Lookout Point-Dexter Project	Chief Joseph Project	Yakima Project, Kennewick Division	The Dalles Dam Project
OPERATING EXPENSES (notes 2 and 3):												
Purchased power	$ 475,342	$ 475,342	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operation:												
Specific power facilities	10,166,191	7,018,422	402,237	1,077,382	193,708	111,008	473,210	116,427	111,679	378,141	48,192	235,785
Joint facilities	1,089,893	-	95,534	220,057	29,347	17,770	352,191	98,729	66,866	1,514	4,372	203,513
Maintenance:												
Specific power facilities	5,198,148	2,844,445	321,848	692,598	126,555	90,411	332,845	144,662	70,769	364,393	10,838	198,784
Joint facilities	1,206,256	-	212,573	249,114	33,627	32,988	349,930	25,662	22,817	127,771	3,295	148,479
Depreciation:												
Specific power facilities	19,474,278	11,606,270	619,742	1,601,178	486,598	393,920	1,706,491	405,221	429,019	1,683,220	44,919	497,700
Joint facilities	4,233,380	-	144,482	536,564	489,901	211,111	1,787,942	192,268	183,080	469,670	15,678	202,684
Net loss on sales and abandonment of property	23,288	23,346*	-	-	-	156	30,488	256	15,734	-	-	-
Total operating expenses	41,866,776	21,921,133	1,796,416	4,376,893	1,359,736	857,364	5,033,097	983,225	899,964	3,024,709	127,294	1,486,945
INTEREST AND OTHER DEDUCTIONS (note 2):												
Interest on Federal investment	32,712,927	7,869,010	862,094	3,686,641	2,041,849	751,759	6,732,582	981,997	995,291	3,699,090	98,808	4,993,806
Less amount charged to construction	5,017,358*	370,774*	1,782*	-	-	2	31*	191*	19*	692,688*	10,615*	3,941,260*
Miscellaneous income deductions (net)	116,266	4,031*	-	125,540	199*	1,798*	-	-	-	3,246*	-	-
Net interest and other deductions	27,811,835	7,494,205	860,312	3,812,181	2,041,650	749,963	6,732,551	981,806	995,272	3,003,156	88,193	1,052,546
Total expenses and deductions	$69,678,611	$29,415,338	$2,656,728	$8,189,074	$3,401,386	$1,607,327	$11,765,648	$1,965,031	$1,895,236	$6,027,865	$215,487	$2,539,491

*Deduction

The accompanying notes (schedule 6) are an integral part of this statement.

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

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT COMBINING ASSETS AND LIABILITIES

JUNE 30, 1958

ASSETS	Combined to schedule 2	Bonneville Power Administration	Bonneville Dam Project	Columbia Basin Project	Hungry Horse Project	Albeni Falls Project	McNary Dam Project	Detroit-Big Cliff Project	Lookout Point-Dexter Project	Chief Joseph Project	Yakima Project, Roza and Kennewick Divisions	The Dalles Dam Project	Ice Harbor Project	Cougar Dam Project	Hills Creek Dam Project	John Day Project
FIXED ASSETS, at original cost, including interest during construction (notes 2 and 3):																
Commercial power:																
Specific facilities (powerhouses, generating equipment, and transmission plant)	$1,052,608,979	$443,133,054	$ 38,641,695	$111,590,344	$ 23,277,317	$20,384,389	$133,915,314	$22,383,526	$23,537,513	$111,440,010	$ 2,751,347	$121,554,470	$ -	$ -	$ -	$ -
Joint facilities (dams, reservoirs, etc.) allocated to power	510,714,703	-	20,857,427	93,549,628	63,625,809	10,763,606	144,945,023	19,248,117	18,033,590	41,613,145	1,611,852	96,466,506	-	-	-	-
	1,563,323,682	443,133,054	59,499,122	205,139,972	86,903,126	31,147,995	278,860,337	41,631,643	41,571,103	153,053,155	4,363,199	218,020,976	-	-	-	-
Irrigation:																
Specific facilities	277,616,602	-	-	253,524,506	-	-	-	-	-	2,461,640	21,630,456	-	-	-	-	-
Joint facilities	85,718,582	-	-	68,928,044	-	-	-	3,787,013	4,998,512	-	8,005,013	-	-	-	-	-
	363,335,184	-	-	322,452,550	-	-	-	3,787,013	4,998,512	2,461,640	29,635,469	-	-	-	-	-
Flood control:																
Joint facilities	85,575,756	-	-	-	19,451,731	163,602	-	20,313,350	45,647,073	-	-	-	-	-	-	-
Navigation:																
Specific facilities	43,240,080	-	6,381,049	-	-	-	22,732,082	-	-	-	-	14,126,949	-	-	-	-
Joint facilities	34,061,162	-	20,857,427	1,000,000	-	127,123	3,716,539	130,437	841,199	-	-	7,388,437	-	-	-	-
	77,301,242	-	27,238,476	1,000,000	-	127,123	26,448,621	130,437	841,199	-	-	21,515,386	-	-	-	-
Other:																
Specific facilities	1,114,413	-	-	-	-	-	-	-	-	-	1,114,413	-	-	-	-	-
Multiple-purpose projects under construction	59,904,192	-	-	-	-	-	-	-	-	-	-	-	39,296,110	6,563,493	11,167,408	2,877,181
Total	2,150,554,469	443,133,054	86,737,598	528,592,522	106,354,857	31,438,720	305,308,958	65,862,443	93,057,887	155,514,795	35,113,081	239,536,362	39,296,110	6,563,493	11,167,408	2,877,181
Less accumulated depreciation:																
Specific facilities:																
Commercial power	113,262,589	74,298,048	8,293,708	14,711,206	2,571,621	1,176,242	5,286,794	1,832,140	1,395,216	3,082,815	107,037	507,762	-	-	-	-
Irrigation (pumping power facilities)	403,948	-	-	403,948	-	-	-	-	-	-	-	-	-	-	-	-
Navigation	2,443,403	-	632,209	-	-	-	1,556,218	-	-	-	-	254,976	-	-	-	-
Joint facilities:																
Commercial power	19,328,326	-	1,924,820	5,915,862	2,524,414	916,216	5,588,480	738,070	610,176	870,440	34,327	205,521	-	-	-	-
Irrigation	330,755	-	-	-	-	-	-	153,227	177,528	-	-	-	-	-	-	-
Flood control	2,457,084	-	-	-	-	13,926	-	821,903	1,621,255	-	-	-	-	-	-	-
Navigation	2,230,698	-	1,924,820	-	-	10,821	143,294	5,277	29,877	-	-	116,609	-	-	-	-
Total	140,456,803	74,298,048	12,775,557	21,031,016	5,096,035	2,117,205	12,574,786	3,550,617	3,834,052	3,953,255	141,364	1,084,868	-	-	-	-
Original cost, net	2,010,097,666	368,835,006	73,962,041	507,561,506	101,258,822	29,321,515	292,734,172	62,311,826	89,223,835	151,561,540	34,971,717	238,451,494	39,296,110	6,563,493	11,167,408	2,877,181
CURRENT ASSETS:																
Unexpended funds in U. S. Treasury appropriated by Congress for construction and for operation and maintenance (note 7)	23,440,874	13,621,651	724,927	3,163,640	123,174	167,019	705,869	138,210	135,303	510,420	452,137	1,486,574	1,015,002	444,868	453,116	298,964
Special deposits	1,440,721	664,891	-	639,674	825	-	-	-	-	50,365	84,966	-	-	-	-	-
Accounts receivable:																
Customers	9,320,363	9,318,154	-	-	-	-	-	-	-	-	2,209	-	-	-	-	-
Other	1,479,642	1,101,501	31,569	264,894	1,176	163	18,306	15,087	398	17,091	668	27,393	471	285	105	535
Materials and supplies	7,379,992	6,201,193	106,139	738,574	46,189	25,573	167,387	11,354	5,360	31,443	18,384	28,396	-	-	-	-
Total	43,061,592	30,907,390	862,635	4,806,782	171,364	192,755	891,562	164,651	141,061	609,319	558,364	1,542,363	1,015,473	445,153	453,221	299,499
OTHER ASSETS AND DEFERRED CHARGES	11,287,824	2,673,560	474,890	7,526,349	110	-	203,165	4,900	12,297	22,651	64,414	128,941	176,547	-	-	-
	$2,064,447,082	$402,415,956	$ 75,299,566	$519,894,637	$101,430,296	$29,514,270	$293,828,899	$62,481,377	$89,377,193	$152,193,510	$35,594,495	$240,122,798	$40,488,130	$7,008,646	$11,620,629	$3,176,680

The accompanying notes (schedule 6) are an integral part of this statement.

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

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

STATEMENT COMBINING ASSETS AND LIABILITIES (continued)

JUNE 30, 1958

LIABILITIES	Combined to schedule 2	Bonneville Power Adminis-tration	Bonneville Dam Project	Columbia Basin Project	Hungry Horse Project	Albeni Falls Project	McNary Dam Project	Detroit-Big Cliff Project	Lookout Point-Dexter Project	Chief Joseph Project	Yakima Project, Roza and Kennewick Divisions	The Dalles Dam Project	Ice Harbor Project	Cougar Dam Project	Hills Creek Dam Project	John Day Project
INVESTMENT OF U. S. GOVERNMENT AND ACCUMULATED NET REVENUES:																
Congressional appropriations	$2,255,727,472	$544,520,378	$103,134,697	$562,797,409	$104,208,012	$31,379,586	$289,956,600	$64,436,768	$88,132,052	$146,475,018	$34,433,152	$226,915,627	$38,755,173	$6,574,500	$11,076,500	$2,932,000
Cost of materials and services furnished by other Federal agencies, net	24,610,349	16,507,700	134,720	6,135,430	450,089	20*	269,045	3,495*	1,294	152,180	768,815	54,283	-	121,500	18,808	-
Interest on Federal investment:																
Charged to operations	212,849,835	57,724,937	34,203,985	60,552,416	11,168,394	2,977,757	23,559,548	7,562,368	7,661,310	5,476,567	205,253	1,757,300	-	-	-	-
Charged to construction	84,683,647	7,020,753	3,602,662	9,687,396	4,708,542	1,033,578	21,309,190	4,051,390	6,376,130	11,115,077	164,751	14,118,230	976,784	175,807	251,142	92,215
Revenues transferred to continuing fund	1,833,035	1,833,035	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total investment of U. S. Government (note 5)	2,579,704,338	627,606,803	141,076,064	639,172,651	120,535,037	35,390,901	335,094,383	76,047,031	102,170,786	163,218,842	35,571,971	242,845,440	39,731,957	6,871,807	11,346,450	3,024,215
Less:																
Funds returned to U. S. Treasury:																
Repayment of Federal investment in the power program (including amounts for operating expenses and interest)	580,481,605	265,641,102	61,435,242	151,021,102	20,531,905	5,786,063	46,099,005	9,256,577	6,509,494	10,957,059	615,000	2,629,056	-	-	-	-
Repayment of Federal investment in nonpower programs	13,290,464	-	9,547	11,222,464	-	6	4,846	20,852	20,832	-	2,011,373	544	-	-	-	-
Total expense of flood control operations	9,841,108	-	-	-	140,276	39,739	-	3,737,851	5,923,242	-	-	-	-	-	-	-
Total expense of navigation operations	27,241,942	-	20,792,498	49,171	-	30,819	5,035,077	24,170	108,932	-	-	1,201,275	-	-	-	-
Other nonreimbursable expense	556,068	-	-	138,493	-	-	-	417,416	-	-	159	-	-	-	-	-
	631,411,187	265,641,102	82,237,287	162,431,230	20,672,181	5,856,627	51,138,928	13,456,866	12,562,500	10,957,059	2,626,532	3,830,875	-	-	-	-
Net investment of U. S. Government	1,948,293,151	361,965,701	58,838,777	476,741,421	99,862,856	29,534,274	283,955,455	62,590,165	89,608,286	152,261,783	32,945,439	239,014,565	39,731,957	6,871,807	11,346,450	3,024,215
Accumulated net revenues:																
Net revenues from commercial power operations since inception, including a net loss of $2,949,501 for the year ended June 30, 1958 (schedule 1)	101,761,838	31,358,046	16,342,472	42,401,601	1,528,253	31,706*	9,467,360	563,605	388,370	377,326*	130,462	9,299*	-	-	-	-
Less net loss from irrigation operations since inception	3,902,994	-	-	3,073,617	-	-	-	705,136	647,698	-	523,457*	-	-	-	-	-
	97,858,844	31,358,046	16,342,472	39,327,984	1,528,253	31,706*	9,467,360	141,531*	259,328*	377,326*	653,919	9,299*	-	-	-	-
Total	2,046,151,995	393,323,747	75,181,249	516,069,405	101,391,109	29,502,568	293,422,815	62,448,634	89,348,958	151,884,457	33,599,358	239,005,266	39,731,957	6,871,807	11,346,450	3,024,215
CURRENT AND ACCRUED LIABILITIES:																
Accounts payable	13,151,858	6,080,800	112,585	3,434,379	39,187	11,702	405,947	32,743	26,936	308,921	343,970	1,117,532	673,673	136,839	274,179	152,465
Employees' accrued leave	2,271,918	2,271,918	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	15,423,776	8,352,718	112,585	3,434,379	39,187	11,702	405,947	32,743	26,936	308,921	343,970	1,117,532	673,673	136,839	274,179	152,465
DEFERRED CREDITS	745,360	739,491	5,732	-	-	-	137	-	-	-	-	-	-	-	-	-
MATURED INSTALLMENTS OF FIXED OBLIGATIONS FOR USE OF IRRIGATION FACILITIES	1,483,181	-	-	73,183	-	-	-	-	-	-	1,409,998	-	-	-	-	-
CONTRIBUTIONS IN AID OF CONSTRUCTION	642,770	-	-	317,670	-	-	-	-	1,299	132	241,169	-	82,500	-	-	-
	$2,064,447,082	$402,415,956	$75,299,566	$519,894,637	$101,430,296	$29,514,270	$293,828,899	$62,481,377	$89,377,193	$152,193,510	$35,594,495	$240,122,798	$40,488,130	$7,008,646	$11,620,629	$3,176,680

*Deduction

The accompanying notes (schedule 6) are an integral part of this statement.

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

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

NOTES TO THE FINANCIAL STATEMENTS

ON SCHEDULES 1 TO 5, INCLUSIVE

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

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

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

Agency and project	Operation of first unit (fiscal year)	Kilowatts: Installed capacity June 30, 1958	Kilowatts: Initial installed capacity
Corps of Engineers:			
Bonneville Dam	1938	518,400	518,400
McNary Dam	1954	980,000	980,000
Detroit-Big Cliff	1954	118,000	118,000
Albeni Falls	1955	42,600	42,600
Lookout Point-Dexter	1955	135,000	135,000
Chief Joseph	1956	960,000	1,024,000
The Dalles	1957	339,000	1,119,000
Ice Harbor	-	-	270,000
Cougar Dam	-	-	25,000
Hills Creek Dam	-	-	30,000
John Day	-	-	1,304,400
Total Corps		3,093,000	5,566,400
Bureau of Reclamation:			
Columbia Basin	1942	1,944,000	1,944,000
Hungry Horse	1953	285,000	285,000
Yakima (Kennewick Division)	1956	12,000	12,000
Yakima (Roza Division)	-	-	11,250
Total Bureau		2,241,000	2,252,250
Combined total		5,334,000	7,818,650

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

The Yakima Project has been included in these statements only to the extent of the Kennewick and Roza Divisions. The assets and liabilities of four other divisions have been omitted. Certain costs of the Storage Division, one of those omitted, are allocable directly to the irrigation operations of the Kennewick and Roza Divisions by tentative Bureau of Reclamation determination. The Roza Division had under construction a small hydroelectric plant of 11,250 kw which is scheduled to commence operation as part of the Columbia River System during fiscal year 1959.

2. Accounting policies

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

Depreciation. The straight-line method has been used to compute property depreciation for the Bonneville Power Administration, for all projects of the Corps of Engineers (except Bonneville Dam Project), and for the Hungry Horse and Yakima (Kennewick Division) Projects of the Bureau of Reclamation. The compound-interest method, employing an interest factor of 2.5 percent, has been used in computing depreciation on most of the property of the Bonneville Dam Project and the Columbia Basin Project of the Bureau of Reclamation.

Depreciation has been uniformly provided on depreciable property of commercial power and all other purposes at projects of the Corps of Engineers. Depreciation has been provided on property allocated to power at the Columbia Basin Project of the Bureau of Reclamation, including specific power facilities allocated to irrigation pumping; but no depreciation is provided on other property allocated to irrigation or property allocated to navigation. Property allocated to commercial power has been depreciated at the Hungry Horse Project, but no depreciation has been provided on property allocated to flood control. Depreciation is provided on property allocated to commercial power at the Yakima Project (Kennewick Division) but is not provided on property of other purposes. All property of the Bonneville Power Administration is allocated to commercial power and is depreciated where appropriate.

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

Interest. The Administration and the Corps of Engineers have included interest at the rate of 2.5 percent on the net Federal investment allocated to commercial power and all other purposes. For the Columbia Basin, Hungry Horse, and Yakima (Kennewick and Roza Divisions) Projects of the Bureau of Reclamation, interest has been included at a rate of 2.5 percent only on the net Federal investment allocated to commercial power. No interest has been recorded on the investment in specific irrigation facilities of the Foster Creek Division, Chief Joseph Project.

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

Costs incurred by other agencies. Bonneville Power Administration has recorded in its accounts actual or estimated costs for rentals, materials, and other services furnished without charge by the General Services Administration and other Federal agencies and death and disability claims on account of the Administration employees paid by the Bureau of Employees' Compensation, Department of Labor. Under the act of July 31, 1956 (70 Stat. 736, 747), Bonneville Power Administration, the Corps of Engineers, and the Bureau of Reclamation are required to pay for their share of the cost of the Civil Service Retirement System from their respective appropriations, beginning with the first full pay period of fiscal year 1958. Prior to the enactment of this legislation, amounts applicable to the Administration's share of the cost of the Civil Service Retirement System were recorded in its accounts but without payment from its appropriations. For the fiscal year 1958, the Administration recorded in its accounts $1,049,463 of costs for rentals, materials, and other services furnished without charge; of this amount, $311,005 was included in operating expenses and $738,458 was included in construction costs. 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.

Investigations costs. Expenditures for preliminary surveys and investigations have been included as a part of construction costs where appropriate by the Administration and the Bureau of Reclamation, but not by the Corps of Engineers.

3. Allocation of joint costs and expenses

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

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

Columbia Basin Project. The costs of property, plant, and equipment determined to be jointly useful for power generation and for other purposes, consisting principally of the dam, reservoir, and general service facilities, have been allocated 56 percent to commercial power (including downstream river regulation) and 44 percent to irrigation after assigning $1,000,000 to navigation. Specific power facilities (principally powerhouses and generating equipment), exclusive of the cost of the 3 generating units and related electrical facilities installed in addition to the original 15 units, have been allocated to commercial power and to irrigation pumping power in proportion to the relative value of power delivered for each purpose. The cost of the 3 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). The expenses of operating and maintaining the joint facilities have been allocated in the same proportions as the related property costs for purposes of presenting financial statements on the commercial power operation.

Hungry Horse Project. An allocation of the construction costs of Hungry Horse Project has not been made by the Secretary of the Interior. A tentative allocation of the costs of property, plant, and equipment determined to be jointly useful for power generation and flood control purposes has been made by the Bureau of Reclamation. For purposes of this report, such property costs have been allocated 74.32 percent to commercial power (including downstream river regulation) and 25.68 percent to flood control in accordance with the tentative allocation. The expenses of operating and maintaining facilities serving both power and flood control purposes have been allocated in accordance with studies by the Bureau of Reclamation. The application of these studies has resulted in an allocation of 66.84 percent of joint operation and maintenance expense to commercial power and 33.16 percent to flood control.

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

	Percent			
	Albeni Falls	Detroit-Big Cliff	Lookout Point-Dexter	The Dalles
Commercial power	97.37	44.27	25.94	92.72
Flood control	1.48	46.72	65.66	-
Navigation	1.15	.30	1.21	7.28
Irrigation	-	7.77	7.19	-
Municipal water supply	-	.94	-	-
Total	100.00	100.00	100.00	100.00

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

Firm agreement has been reached between the Corps of Engineers and the Department of the Interior on the allocation of the entire construction costs of the joint facilities at the Chief Joseph Project to commercial power. Due to related irrigation development by the Bureau of Reclamation at the Chief Joseph Project, some amount may be assigned to irrigation at a later date but the amount is not expected to be significant and should not materially affect the financial statements.

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

	Percent			
	Albeni Falls	Detroit-Big Cliff	Lookout Point-Dexter	The Dalles
Commercial power	98.00	56.91	38.25	95.00
Flood control	1.13	35.10	54.89	-
Navigation	.87	.25	.98	5.00
Irrigation	-	6.89	5.88	-
Municipal water supply	-	.85	-	-
Total	100.00	100.00	100.00	100.00

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

McNary Dam Project. The River and Harbor Act of 1945 (59 Stat. 22) authorized this project and provided that the Department of the Interior would market the electric energy in accordance with the terms of the Bonneville Project Act. Under the provisions of the Bonneville Project Act, the Federal Power Commission is authorized to allocate the construction costs of joint facilities to power and nonpower purposes. In an interim report the Commission allocated 97.5 percent of the joint facilities construction costs to commercial power and 2.5 percent to navigation. For the purposes of this report, the costs of joint facilities have been allocated in accordance with these percentages. Operation and maintenance expenses applicable to joint facilities have been allocated to commercial power and to navigation operations on the same basis.

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

A tentative allocation of the total costs to date of the Kennewick Division has been made by the Bureau of Reclamation. The costs of property, plant, and equipment determined to be jointly useful for power generation and for irrigation have been allocated between these purposes in accordance with the following percentages:

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

The expenses of operating and maintaining facilities serving more than one purpose have been allocated 78.3 percent to power, 20.1 percent to irrigation, and 1.6 percent to fish and wildlife.

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

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

Irrigation facilities of the Roza Division are operated by the water users and the power facilities are not scheduled to commence operation until fiscal year 1959.

4. Repayment and scheduled repayment of commercial power investment

The Bonneville Power Administration has the responsibility of fixing commercial power rates at a level which will, over a number of years consistent with the requirements of law, insure repayment of the investment in commercial power and the investment in related irrigation activities assigned for repayment from commercial power revenues. Repayment requirements for the Columbia River Power System are found in the varying provisions of the several acts authorizing construction and in the administrative interpretations thereof. Accordingly, System power rates reflect a composite of the requirements of these acts applied to the individual projects and the Administration. An allocation of System power receipts among the generating projects and the Administration, designed to satisfy their respective requirements, is made annually pursuant to agreements reached by the Administration with the Corps of Engineers and the Bureau of Reclamation.

The Statement of Investment and Repayment of Investment in Commercial Power Program (schedule 3) is intended to compare, at this interim date, the repayment of Federal investment in commercial power achieved by current power rate levels with the scheduled repayment established by law or administrative policy pursuant to law. Power receipts returned to the Treasury have been first applied to the repayment of operation and maintenance and interest expenses, with the remainder being applied to amortization of the capital investment in commercial power. On projects in which part of the irrigation investment is assigned for repayment from commercial power revenues, the assistance is assumed to begin after repayment of the commercial power investment. Commercial power rate and repayment requirements are affected by irrigation assistance to the extent that the assistance makes necessary the recovery of commercial power investment in a shorter period of years.

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

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

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

During the year ended June 30, 1958, the Administration deposited sums of $2,800,000, $22,145,880, and $11,600,000 as miscellaneous receipts in the United States Treasury on behalf of the Bonneville Dam Project, the Bonneville Power Administration, and the McNary Dam Project, respectively. Additional sums returned to the Treasury were recorded by the Bonneville Power Administration and applied to repayment of investment. They were (1) an amount of $163,832 credited to the continuing fund, and (2) an amount of $13,300 representing payment made directly to the Federal Power Commission by the Puget Sound Power and Light Company and Public Utility District No. 1 of Chelan County, Washington, as joint licensees for the Rock Island plant, for downstream

river regulation benefits obtained from the Columbia Basin and Hungry Horse Projects. The Administration also recorded a reduction of $205,828 in the special fund receipt account.

Albeni Falls, Detroit-Big Cliff, Lookout Point-Dexter, Chief Joseph, and The Dalles Dam Projects. Rate and repayment requirements for these projects are governed by section 5 of the Flood Control Act of 1944. The provisions of this section are similar to the corresponding provisions of the Bonneville Project Act and state that rate schedules shall be drawn having regard to the recovery of the cost of producing and transmitting electric energy excess to project needs, including the amortization of the capital investment over a reasonable period of years. The act of July 27, 1954 (68 Stat. 568), authorized the Secretary of the Interior to construct irrigation facilities comprising the Foster Creek Division of the Chief Joseph Project under reclamation law and provided that surplus power revenues should be used to assist in repayment of the irrigation investment.

Rate and repayment requirements for these projects have been determined by Bonneville Power Administration in the same manner as for Bonneville Dam Project, the Administration, and McNary Dam Project. It has been assumed in the preparation of schedule 3 that the use of power revenues for repayment of the irrigation investment in the Foster Creek Division of the Chief Joseph Project will not be required until after repayment of the project commercial power investment.

During the year ended June 30, 1958, the Administration deposited sums of $2,000,000, $2,000,000, $1,900,000, $5,900,000, and $2,500,000 as miscellaneous receipts in the United States Treasury on behalf of the Albeni Falls, Detroit-Big Cliff, Lookout Point-Dexter, Chief Joseph, and The Dalles Dam Projects, respectively. A sum of $2,600 has been recorded in the Albeni Falls Project accounts at June 30, 1958, representing payment made directly to the Federal Power Commission for downstream river regulation benefits obtained from project operations. This payment was made by the Puget Sound Power and Light Company and Public Utility District No. 1 of Chelan County, Washington, as joint licensees for the Rock Island plant.

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

The interest rate and other financial data used by the Bonneville Power Administration in determining the investment to be repaid are consistent with that used in the preparation of the financial statements. Rate and repayment requirements for this project have been determined in the same manner as for Bonneville Dam Project and other projects of the Corps of Engineers.

During the year ended June 30, 1958, the Bonneville Power Administration deposited the sum of $3,752,000 to the reclamation fund in the United States Treasury for account of Hungry Horse Project. After enactment of the legislation making the Hungry Horse Project subject to the provisions of Federal Reclamation laws, amounts previously deposited by the Bonneville Power Administration in a suspense account, in the United States Treasury pending clarification of the status of the Hungry Horse Project, were transferred to the reclamation fund.

Columbia Basin Project. Reclamation law, as supplemented, and Executive Order 8526 require that payments be made into the reclamation fund of the United States Treasury, for the account of Columbia Basin Project, of such revenues received by Bonneville Power Administration from the sale of electric energy as may be properly allocable to the project. By agreement between Bonneville Power Administration and the Bureau of Reclamation, entered into to effect these requirements, the Administration is making payments which will, over a period of 80 years, be equal to:

1. Operation, maintenance, and replacement of facilities allocated to commercial power.
2. Interest at 3 percent on unamortized investment in facilities allocated to commercial power.
3. Investment in commercial power facilities.
4. Assistance to irrigators in repaying the investment in irrigation, estimated to require about $457,000,000.

The investment in commercial power to be repaid used by the Bureau of Reclamation in setting Columbia Basin Project rate and repayment requirements differs in several important respects from the investment as presented by the Bureau of Reclamation for use in the financial statements of the Columbia River Power System and Related Activities. For determining rate and repayment requirements, interest has not been capitalized during construction, interest has not been computed on investment in facilities held for future downstream river regulation through fiscal year 1958, and interest during operations has been computed at a rate of 3 percent on the unamortized capital investment. Because of these interest differences, the investment as shown in the financial statements at June 30, 1958 was about $28,000,000 greater than the investment determined by the Bureau of Reclamation to be repayable.

The rate and repayment study by the Bureau of Reclamation indicates that commercial power investment will be repaid in the 33d year (1975) after the first unit was placed in service and that net power revenues after that date will render the assistance necessary to repay the irrigation investment over the remaining 47 years of the project payout period. Inasmuch as the annual payments by Bonneville Power Administration are incorporated in the rate and repayment study itself, repayment of the Columbia Basin Project is considered to be just on schedule.

During fiscal year 1958, Bonneville Power Administration deposited $12,800,000 to the reclamation fund in the United States Treasury for the account of Columbia Basin Project.

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

Repayment of investment in commercial power is expected to require 39 years (1995), and net revenues after that date are to render the assistance necessary to repay the irrigation investment (about $4,400,000) over the remaining 27 years of the project payout period. Inasmuch as the annual payments by Bonneville Power Administration are incorporated in the rate and repayment study itself, repayment is considered to be just on schedule.

During fiscal year 1958, Bonneville Power Administration deposited $223,000 to the reclamation fund in the United States Treasury for the account of Yakima Project (Kennewick Division).

5. Investment of the United States Government

All funds expended on behalf of the Columbia River Power System and Related Activities for the acquisition of electric fixed assets, and for the operation and maintenance of electric facilities, are obtained through congressional appropriation, except that Bonneville Power Administration may use a continuing fund to defray emergency expenses and to assure continuous operation. The continuing fund was authorized by the Bonneville Project Act, as amended (16 U.S.C. 832j), to be derived from receipts from sale of electric energy. To June 30, 1958, receipts transferred to the continuing fund totaled $1,833,035, of which $1,333,035 has been expended and $500,000 remained unexpended. With the exception of the continuing fund, receipts from the sale of electric energy are not

available for expenditure and are deposited in the United States Treasury.

Interest, included as a part of the Federal investment, does not represent congressional appropriation of funds to the power system. It is a recorded estimate of the Treasury borrowing costs applicable to the System, arrived at by applying a 2.5 percent interest factor to the net Federal investment in commercial power and certain other purposes. The net cost of materials and services transferred from other Federal agencies, and included in the Federal investment, does not represent appropriations to the System but only the recording of actual or estimated costs of such materials and services. (See note 2.)

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

6. Other operating revenues

Payments for downstream river regulation. The Federal Power Act (16 U.S.C. 803f) provides that a licensed project receiving benefits from the upstream improvements of another licensed project or of the Federal Government shall make payments on account of such benefits. It is the responsibility of the Federal Power Commission to determine the amount that non-Federal power installations on the Columbia River and its tributaries will have to pay for downstream benefits received or to be received from storage by Federal projects of the Columbia River Power System. The Commission made a headwater benefit determination on December 31, 1957 (Docket No. E-6384), and on January 20, 1958 received the sum of $15,900 as payment for headwater benefit charges applicable to calendar year 1954. This payment was made by the Puget Sound Power and Light Company and Public Utility District No. 1 of Chelan County, Washington, as joint licensees for the Rock Island plant. Of the total amount, $2,600 was attributable to benefits supplied by the Albeni Falls Project and is accrued in the accounts of that project. The balance of $13,300 was attributable to benefits supplied by the Hungry Horse and Columbia Basin Projects and has been accrued in the accounts of the Bonneville Power Administration as marketing agent.

Project energy--use at site. All energy excess to project needs is delivered to, and marketed by, the Bonneville Power Administration. The minor amount of energy remaining is consumed at site in connection with project operations. Revenues stemming from uses of energy at project site for employees' quarters, construction contractors, interdepartmental, and similar purposes are recorded in project accounts. The amounts of such revenues recorded by the projects were:

Project	
Bonneville Dam	$ 4,276
Columbia Basin	52,288
Hungry Horse	5,987
McNary Dam	67,380
Lookout Point-Dexter	397
Yakima (Kennewick Division)	150
The Dalles Dam	20,898
Total	$151,376

Rental of electric property. The Bonneville Power Administration charges rent for transmission facilities used to transfer power for other utilities and industrial customers. Revenues of $1,857,826 were accrued in the Administration accounts in connection with such activities.

7. Balances of funds made available under accelerated procurement program

In accordance with the act of April 24, 1958 (72 Stat. 98), funds were made available to the various projects of the Corps of Engineers and Bureau of Reclamation and to the Bonneville Power Administration in the Columbia River Power System for accelerated procurement of supplies, materials, and equipment. Pursuant to instructions issued to the respective agencies by the Treasury Department, the unobligated balance of the allotments made under the program were deappropriated subsequent to June 30, 1958, as of that date, and reestablished as appropriations in the accounts for fiscal year 1959. The financial statements include as unexpended funds in the United States Treasury and as unobligated balances of congressional appropriations $788,619 of the funds made available under this program. Of this amount, $548,000, $198,247, and $42,372 have been included in the accounts of projects of the Corps of Engineers and the Bureau of Reclamation and the accounts of the Bonneville Power Administration, respectively.

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