

U. S. Department of the Interior

**Bonneville Power Administration**

**1955**

# Report

**U. S.  
COLUMBIA  
RIVER  
POWER  
SYSTEM**

U. S. Department of the Interior

Bonneville Power Administration

1955

# Report

U. S.  
C O L U M B I A  
R I V E R  
P O W E R  
S Y S T E M

PORTLAND 8, OREGON

Consisting of  
the Bonneville Power Administration  
and power components of  
the following projects:  
Bonneville Dam, Columbia Basin  
( Grand Coulee Dam ), Hungry Horse,  
Albeni Falls, Detroit ( Detroit - Big Cliff Dam ),  
McNary, Lookout Point - Dexter,  
Chief Joseph, & The Dalles.

# Letter of Transmittal

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February 15, 1956

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

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Dear Mr. Secretary:

The 18th annual report of the Bonneville Power Administration, covering operations of the U. S. Columbia River Power System from July 1, 1954 through June 30, 1955 is respectfully submitted as required by Section 9 (c) of the Bonneville Project Act.

Embracing the Administration's management, operating and financial responsibilities, the report gives an official accounting for the power components of Federal multipurpose dams under jurisdiction of the Corps of Engineers and the Bureau of Reclamation for which Bonneville Power Administration is designated as the marketing agency.

Gross revenues reached a new peak of \$52,066,482, a 14.9 percent increase over fiscal year 1955, due largely to addition of 10 generator units with an installed capacity of 443,400 kilowatts. Net revenues were \$8,591,305, a decrease of only 0.5 percent compared to a 9.7 percent drop in the previous year.

Gross Federal investment in both capital assets and expenses allocated to commercial power at operating projects as of June 30, 1955 was \$1,368,795,219. Gross cash receipts of \$390,040,963 to June 30, 1955 reduced the unpaid balance to \$978,754,256, which includes \$47,879,481 of unexpended appropriations. Repayment of the power capital investment reached 17.11 percent of the total and was approximately \$68,000,000 ahead of schedule.

Bonneville Power Administration at the close of the fiscal year was operating 6,702 circuit miles of transmission line and 174 substations with 7,327,416 kilovolt-amperes of transformer capacity.

The U. S. Columbia River Power System generated 62 percent of the total energy generated by major utilities of the region and supplied 5.9 billion kilowatt-hours of energy for use by members of the Northwest power pool in addition to requirements of industries and non-pool utilities served through the BPA transmission system.

Significant policy and program developments currently include:

1. Plans to make the Federal grid available for wheeling non-Federal generation to load centers, wherever most economical and feasible to do so, are progressing rapidly. Joint studies are well under way to explore "wheeling possibilities" with the City of Tacoma Cowlitz projects, Grant County PUD Priest Rapids project, Portland General Electric Company Pelton project and Pacific Northwest Power Company Mountain Sheep and Pleasant Valley dams.

2. Bonneville Power Administration's Regional Advisory Council has been reconstituted to bring about a more comprehensive representation of all major economic and related Pacific Northwest interests. Initial meetings of the council were held at Seattle, Spokane and Portland in November 1955.

3. A survey of the Administration's rate structures and procedures was completed in November 1955 by Ford, Bacon & Davis and is now under study. The survey is expected to be the basis for simplifying and streamlining rate schedules and procedures in line with current utility practices.

4. Substantial savings made in costs of dams and transmission equipment, together with sales of large quantities of dump power previously without a market, made it possible to extend the Administration's basic wholesale power rate of \$17.50 per kilowatt-year unchanged for at least another year, or through December 20, 1957.

There is continued and growing evidence that the power requirements of the Pacific Northwest will be met by the new projects being advanced through the "partnership program" and multipurpose dams being planned by the Federal Government.

The excellent working relationships and cooperation existing between Bonneville Power Administration and related Federal, State and local power interests give added assurance of the region being able to meet its full utility responsibility during coming years.

Sincerely,

A handwritten signature in cursive script, appearing to read "Wm. A. Pearl".

Wm. A. Pearl  
Administrator

# Financial Results of Operations

A condensed summary of results of commercial power operations of the Columbia River power system is presented in table I for fiscal years 1954 and 1955, in cumulative total to June 30, 1955 and as forecast for 1956 and 1957. The data are summarized from commercial cost accounts kept in accordance with the Federal Power Commission's system of accounts for electric utilities.

*New High  
for Gross  
Revenues*

In 1955 gross revenues reached a new peak of \$52,066,482, an increase of \$6,748,789 or 14.9 percent over 1954. The addition during 1955 of ten generator units, four at McNary, three at Lookout Point, two at Albeni Falls and one at Dexter, increased installed capacity by 443,400 kilowatts, the principal factor making possible the rise in revenues. However, the revenue increase was minimized by the below normal temperatures which prevailed throughout the Columbia River Basin during the early months of 1955 resulting in the latest spring runoff of flood waters of record. The low temperatures lasted from the latter part of March until early May and made it necessary for the Administration to curtail deliveries of interruptible power to its industrial customers.

TABLE I  
**Columbia River power system**  
**Condensed summary of revenues and expenses 1/**  
**Operating projects only 2/**

	Actual		Total to June 30, 1955	Forecast 5/	
	Fiscal year 1954	Fiscal year 1955		Fiscal year 1956	Fiscal year 1957
Operating revenues:					
Sales of electrical energy .....	\$44,127,409	\$51,258,723	\$392,973,269	\$59,900,000	\$67,600,000
Other electric revenue .....	1,190,284	807,759	8,840,000	900,000	900,000
Total operating revenues	<u>\$45,317,693</u>	<u>\$52,066,482</u>	<u>\$401,813,269</u>	<u>\$60,800,000</u>	<u>\$68,500,000</u>
Expenses:					
Operation, maintenance, etc. ....	\$12,804,967	\$13,101,399	\$108,653,764	\$15,216,000	\$16,372,000
Provision for depreciation .....	11,638,135	14,516,958	80,462,504	17,785,000	19,914,000
Interest expense .....	12,248,197	15,937,409	101,080,450	21,736,000	24,336,000
Miscellaneous deductions, net.....	( 11,316 )	( 80,589 )	1,536,817	—	—
Total expenses	<u>36,679,983</u>	<u>43,475,177</u>	<u>291,733,535</u>	<u>54,737,000</u>	<u>60,622,000</u>
Surplus net revenues .....	<u>\$ 8,637,710</u> <sup>3/</sup>	<u>\$ 8,591,305</u> <sup>3/</sup>	<u>\$110,079,734</u> <sup>4/</sup>	<u>\$ 6,063,000</u>	<u>\$ 7,878,000</u>

( ) Indicates red figures.

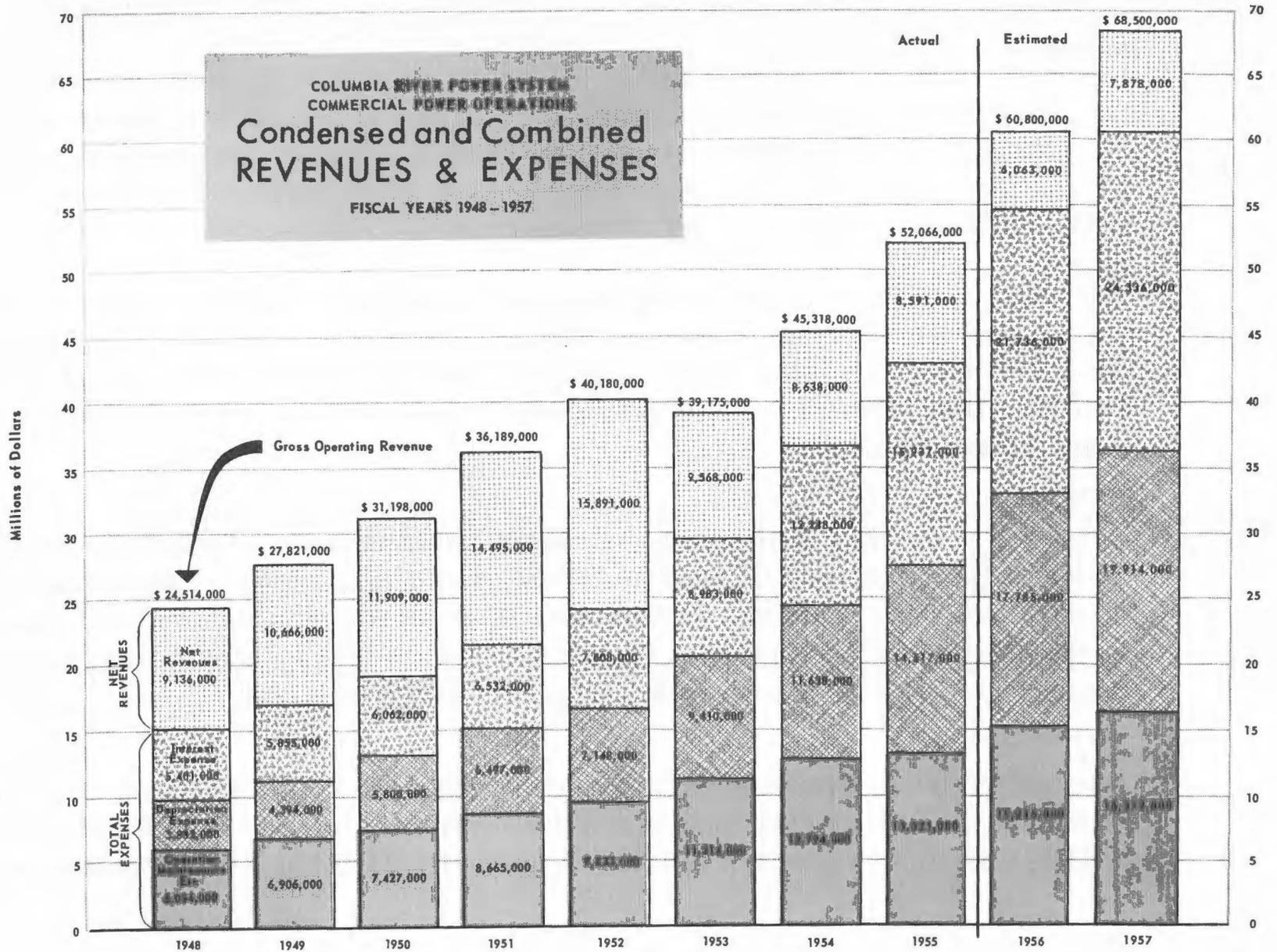
1/ Commercial power operations only.

2/ Projects in operation at June 30, 1955 in addition to the Bonneville Power Administration's transmission system were Bonneville Dam Project, Columbia Basin ( Grand Coulee ) Project, Hungry Horse Project, Albeni Falls Project, Detroit-Big Cliff Project, Lookout Point-Dexter Project and McNary Project. Generator installations were complete at all of these projects as of June 30, 1955, except that only eight of the scheduled total of 14 generator units at McNary were in operation. Projects under construction with no generator units in service in 1955 were The Dalles and Chief Joseph. These non-operating projects are not included in the data presented in Table I.

3/ Before adjustments applicable to prior years: \$286,521 debit in 1955 and \$272,753 debit in 1954.

4/ All prior years' adjustments are reflected in the individual expense categories in the total column; hence, the net revenues of \$110,079,734 as of June 30, 1955 are after giving effect to such adjustments.

5/ The forecast of revenues is based upon an assumption of average water conditions and the forecast of expenses is based upon generator installation Schedule X revised as of August 1, 1955.



NOTES: The estimates of gross operating revenue for fiscal years 1956 and 1957 are based on an assumption that median water conditions will prevail. These estimates are based also on the Administration's present wholesale rates.

Gross revenues in 1953 were reduced from 1952 as a result of adverse water conditions during the winter months of fiscal year 1953, despite the fact that the system received some benefits

in 1953 from initial generation at the Hungry Horse Project and the operation of the storage capacity of the Albeni Falls Project.

The Lookout Point - Dexter project started commercial power operations in fiscal year 1955 and the Chief Joseph and Chandler projects will start operations in fiscal year 1956.

*Net Revenues*

*Decrease*

Net revenues were \$8,591,305 in 1955, after payment of all expenses of operation, maintenance, depreciation and interest, a decrease of \$46,405 (0.5 percent) despite the increase of \$6,748,789 in gross revenues. The addition of higher cost generating capacity to the system together with curtailment of sales due to below normal streamflows in the spring months accounted for the drop in net revenues.

*Sales up*

*in all Groups*

Table II summarizes by customer categories the sources of revenues by fiscal years to and including 1955. Fiscal year 1955 is illustrated also by the accompanying chart. Increased sales were made in all categories. Sales to the aluminum industry increased \$965,232; other industries \$1,404,673; publicly owned utilities \$2,718,138; and privately owned utilities \$2,043,271.

*Aluminum*

*Sales*

*Percentage*

The aluminum industry accounted for 32.48 percent of gross revenues in 1955, but that industry's share of the total has declined considerably since the close of World War II. In 1945 sales to the aluminum industry were 51.49 percent of gross revenues followed by a marked drop to less than 40 percent in 1946, some recovery in succeeding years, but a steady decline in the last several years from a ratio of 42.20 percent in 1949.

*Industrial*

*Sales*

*Percentage*

Other industries, including military establishments, accounted for 13.10 percent of gross revenues in 1955, as against 18.14 percent in 1945, a postwar decline to 7.98 percent in 1949, followed by an increasing ratio into 1955. In total, industrial sales in 1955 accounted

TABLE II  
Columbia River power system  
Revenue by class of customers  
Fiscal years ended June 30

C Class of customer	1950 and prior	1951	1952	1953	1954	1955	Total to June 30, 1955	1955 Percentage (dollar revenue)
Industry:								
Aluminum	\$ 87,549,564	\$13,523,276	\$13,376,207	\$13,545,562	\$15,944,356	\$16,909,588	\$160,848,553	32.48
Other <sup>1/</sup>	21,115,345	3,774,798	4,650,425	4,715,747	5,417,177	6,821,850	46,495,342	13.10
Publicly owned utilities	29,021,848	9,947,909	12,973,025	13,882,890	14,882,997	17,601,135	98,309,804	33.81
Privately owned utilities	46,218,881	8,525,609	8,526,775	6,239,276	7,882,879	9,926,150	87,319,570	19.06
Other operating revenue	4,979,073	417,436	653,714	791,734	1,190,284	807,759	8,840,000	1.55
Total operating revenue	\$188,884,711	\$36,189,028	\$40,180,146	\$39,175,209	\$45,317,693	\$52,066,482	\$401,813,269	100.00

<sup>1/</sup> Includes sales to Federal agencies.

for 45.58 percent of gross revenues, but this represents a considerable decline from earlier years, notably 69.63 percent in 1945 and 50.18 percent in 1949.

**Public-Private**

**Ratios Change**      The percentage of gross revenues obtained from sales to public agencies has increased substantially from less than 10 percent during the war years to 33.81 percent in 1955. On the other hand, the ratio for the private utility group has declined to 19.06 percent in

1955 from a little more than 20 percent in 1945, followed by increases to approximately 30 percent in the late 1940's.

*Other*

*Revenue*

Miscellaneous sources of revenue, 1.55 percent of the total in 1955, have always represented only a very small fraction of the total but have been somewhat greater in recent years than the ratio of less than 1 percent several years ago.

*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 but higher cost capacity has been added to the system.

*1955 Revenue*

*Dollar*

The accompanying chart shows the source and disposition of the revenue dollar in fiscal year 1955. Operation and maintenance expenses required 25.01 percent of gross revenues and this relationship has held at approximately 25 percent during the last several years. Depreciation expense was equal to 27.88 percent of gross revenues in 1955 as against only 17.79 percent in 1952. Similarly, interest expense in 1955 represented 30.61 percent of gross as against 18.93 percent in 1952.

*Net-to-Gross*

*Ratio Declines*

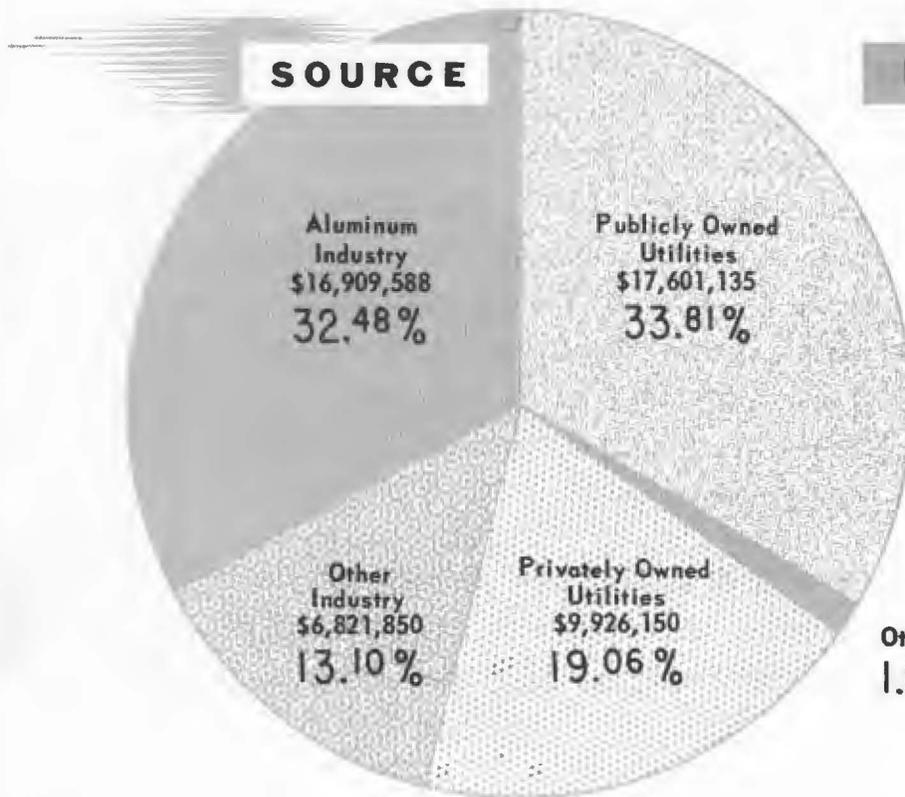
As a result of the increasing proportions of gross revenues required in recent years to meet depreciation and interest expenses, the ratio of net revenue to gross revenue has

CHART 1

SOURCE & DISPOSITION OF  
THE REVENUE DOLLAR

( Commercial Power Operations Only )

F.Y. 1955



TOTAL REVENUE \$52,066,482

Other Electric Revenues \$807,759  
1.55%

\* Before adjustments applicable to prior years.

declined steadily. In 1955 the net revenue was 16.50 percent of gross compared with approximately a 40 percent ratio in each of the years 1949 to 1952, inclusive. Moreover, it is estimated that for 1956 and 1957 the ratio of net to gross will decline to 9.97 percent and 11.50 percent, respectively.

*New Project  
Cost Levels  
Higher*

These ratios of expenses and net revenues to gross revenues have thus changed substantially from those for 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 and Dexter have been brought into service in rapid order. 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 clearly revealed by the upward trends of depreciation and interest expense since 1952. Specifically, during the three years following 1952, gross revenues increased 30 percent, kilowatt-hours sold increased 28 percent, and operation and maintenance expenses increased by 37 percent; but depreciation expense and interest expense increased by 103 percent and 109 percent, respectively.

Table I shows total expenses of \$43,475,177 in 1955 and \$36,679,983 in 1954, an increase of \$6,795,194 (18.53) 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	Total commercial power costs		Increase or ( Decrease )
	Fiscal year 1954	Fiscal year 1955	
Bonneville .....	\$ 2,600,719 1/	\$ 2,921,368 1/	\$ 320,649
Columbia Basin ( Grand Coulee ) .....	6,618,232 2/	6,491,529 2/	( 126,703 )
Hungry Horse .....	2,926,817	3,001,245	74,428
Albeni Falls .....	233,911	393,932	160,021
McNary .....	1,331,618	5,213,940	3,882,322
Detroit - Big Cliff .....	1,114,744	1,791,648	676,904
Lookout Point - Dexter .....	—	574,638	574,638
Generation subtotal .....	14,826,041	20,388,300	5,562,259
Transmission ( Bonneville Power Administration ) .....	21,853,942	23,086,877	1,232,935
Total .....	<u>\$36,679,983</u>	<u>\$43,475,177</u>	<u>\$6,795,194</u>

1/ Exclusive of an inter-project charge of \$187,570 on account of river regulation benefits received from Grand Coulee Dam.

2/ Before reflecting any credit against at-site costs for revenues of \$187,570 on account of river regulation benefits to Bonneville Dam.

**Plant Investment**

**Increases** As of June 30, 1952, the Columbia River power system had only two hydroelectric generating projects, Bonneville and Grand Coulee, in operation with a total installed capacity of 2,462,400 kilowatts, but the system total has increased by 1,126,400 kilowatts, or 45.7 percent to a total of 3,588,800 kilowatts as of June 30, 1955. This increase during the past three years represents the completion of the Hungry Horse with 285,000 kilowatts, Lookout

Point with 120,000 kilowatts, Dexter with 15,000 kilowatts, Detroit with 100,000 kilowatts, Big Cliff with 18,000 kilowatts, 560,000 kilowatts at McNary representing eight of a scheduled total of fourteen generator units, and 28,400 kilowatts at Albeni Falls, consisting of two of the three units at that project. Although the installed capacity thus increased by 45.7 percent, the investment in the dams, reservoirs, powerplants, transmission line, etc., has increased even more rapidly. As of June 30, 1955 the investment in fixed assets allocated to power was 112.8 percent greater than the corresponding figure three years earlier. These data are summarized as follows:

	June 30		Percent increase
	1952	1955	
	( Thousands of dollars )		
Multipurpose projects: 1/			
Allocated to power	266,562	728,489	173.3
Allocated to non - power	<u>265,433</u>	<u>431,409</u>	62.5
	531,995	1,159,898	118.0
Transmission ( 100% to power )	<u>249,039</u>	<u>368,914</u>	48.1
Total:			
Power	515,601	1,097,403	112.8
Non - power	<u>265,433</u>	<u>431,409</u>	62.5
Total	<u>781,034</u>	<u>1,528,812</u>	95.7

1/ Excludes projects ( The Dalles and Chief Joseph ) under construction with no generators in service as of June 30, 1955. Plant costs incurred to June 30, 1955 at these two excluded projects totaled \$223,354,315 for all purposes.

Table III shows for each individual project as of June 30, 1955 the amounts of the fixed plant investment in total and as allocated to power and to non-power functions making up

TABLE III  
**Columbia River power system**  
**Summary of amount and allocation of investment in fixed assets**  
**( Plant accounts )**  
**as of June 30, 1955**  
**Operating projects only**

Project	Total	Allocation <sup>2/</sup>	
		Nonpower	Power
Bonneville Power Administration	\$ 368,913,677		\$ 368,913,677
Bonneville Dam .....	86,895,909	\$ 27,302,499	59,593,410
Columbia Basin .....	487,468,408	282,287,375	205,181,033
Hungry Horse .....	107,368,442	20,851,472	86,516,970
Albeni Falls .....	30,396,644	291,628	30,105,016
McNary Dam .....	289,865,955	25,658,691	264,207,264
Detroit - Big Cliff .....	65,643,472	24,112,941	41,530,531
Lookout Point - Dexter .....	92,259,614	50,903,916	41,355,698
Total plant	<u>\$1,528,812,121</u>	<u>\$431,408,522 <sup>1/</sup></u>	<u>\$1,097,403,599</u>
Less combined reserve for depreciation .....			76,057,579
Total less reserve .....			\$1,021,346,020

*1/ Segregation of nonpower total by purpose:*

	Specific facilities	Allocation of joint facilities	Total
Irrigation	\$212,195,901	\$ 77,810,063	\$290,005,964
Navigation	28,441,859	26,608,179	55,050,038
Flood control	—	86,352,520	86,352,520
Total	<u>\$240,637,760</u>	<u>\$190,770,762</u>	<u>\$431,408,522</u>

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

the June 30, 1955 totals shown in the foregoing tabulation. In the three years from June 30, 1952 to June 30, 1955 the amount of the 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 that date and by additional transmission facilities. For the total system the plant account for the operating projects as of June 30, 1955 was \$1,528,812,121, allocated \$1,097,403,599 to power and \$431,408,522 to non-power purposes as detailed in footnote 1 of table III. These plant account data include interest during construction except on the non-power amounts at the Columbia Basin 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, 1955 the gross Federal investment of the Columbia River power system allocated to the commercial power activity for both generation and transmission was \$1,368,795,219, which amount is exclusive of such portion of the investment made to June 30, 1955 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 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 balances of the investment.

TABLE IV  
**Columbia River power system**  
**Summary of interest on Federal investment**  
**allocated to commercial power**  
**as of June 30, 1955**  
**operating projects only**

Interest during construction, to be returned during repayment period as part of the Federal investment:	Transmission system .....	\$ 5,437,289
	Bonneville Dam .....	2,332,734
	Columbia Basin .....	9,693,591
	Hungry Horse .....	4,708,542
	McNary Dam .....	17,985,302
	Albeni Falls .....	980,277
	Detroit - Big Cliff .....	3,035,468
	Lookout Point - Dexter .....	3,480,401
	Subtotal .....	<u>\$ 47,653,604</u>
Interest on costs at projects allocated to future river regulation, to be returned as part of repayment of future downstream projects:	Columbia Basin .....	13,972,760
	Hungry Horse .....	769,754
	Albeni Falls .....	297,077
	Subtotal .....	<u>\$ 15,039,591</u>
Interest charged to operations - repaid currently	Transmission system .....	36,814,158
	Bonneville Dam .....	19,029,826
	Columbia Basin .....	35,156,722
	Hungry Horse .....	4,200,039
	McNary Dam .....	3,486,648
	Albeni Falls .....	429,530
	Detroit - Big Cliff .....	1,638,083
	Lookout Point - Dexter .....	325,444
	Subtotal .....	<u>\$101,080,450</u>
	Gross interest accumulation .....	<u>\$163,773,645</u>

**Federal  
Investment  
Summarized**

The amount and repayment status of the gross Federal power investment as of June 30, 1955 is summarized in table V. The principal components of the gross total of \$1,368,795,219 are expenses in the amount of \$96,772,126 for operation, maintenance, etc., interest expense of \$101,080,450, invested capital of \$1,123,063,162 and unexpended (i.e., uninvested) appropriations of \$47,879,481.

**Unpaid Balance  
Reduced**

The gross cash receipts of \$390,040,963 returned to the Treasury in repayment of the Federal power investment reduced the unpaid balance as of June 30, 1955 to \$978,754,256. 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 \$197,852,576, leaving receipts of \$192,188,387 applied to repayment of the capital investment, representing repayment of 17.11 percent of the invested capital.

As of June 30, 1954, the amount and repayment of the commercial power invested capital of the individual projects were as follows:

Project	Power capital <sup>1/</sup> investment	Repaid as of June 30, 1955	Percent repaid	Net power <sup>1/</sup> investment
Bonneville Power Administration .....	\$ 383,200,518	\$ 94,849,512	24.75%	\$288,351,006
Bonneville Dam project .....	59,812,351	22,991,224	38.44	36,821,127
Columbia Basin project .....	221,573,779	58,802,897	26.54	162,770,882
Hungry Horse project .....	87,883,133	4,359,403	4.96	83,523,730
Albeni Falls project .....	29,935,243	549,617	1.84	29,385,626
McNary Dam project .....	257,870,656	8,797,362	3.41	249,073,294
Detroit - Big Cliff project .....	41,644,652	1,431,187	3.44	40,213,465
Lookout Point - Dexter project .....	41,142,830	407,185	.99	40,735,645
Total .....	\$1,123,063,162	\$192,188,387	17.11%	\$930,874,775

<sup>1/</sup> Exclusive of unexpended funds in U. S. Treasury

TABLE V  
**Columbia River power system**  
**Summary of Federal investment in operating projects**  
**allocated to commercial power and status of repayment**  
**as of June 30, 1955**

**Operating projects only 1/**

	<u>Gross investment</u>	<u>Repayments</u>	<u>Net investment</u>
Investment in current expenses:			
Operation, maintenance, etc. <sup>2/</sup>	\$ 96,772,126	\$ 96,772,126	— 0 —
Interest <sup>3/</sup>	<u>101,080,450</u>	<u>101,080,450</u>	<u>— 0 —</u>
Total current expenses	<u>\$ 197,852,576</u>	<u>\$197,852,576</u>	<u>— 0 —</u>
Capital investment:			
Invested capital <sup>4/</sup>	\$1,123,063,162	\$192,188,387	\$930,874,775
Unexpended ( uninvested ) appropriations	<u>47,879,481</u>	<u>—</u>	<u>47,879,481</u>
Gross capital investment	<u>\$1,170,942,643</u>	<u>\$192,188,387</u>	<u>\$978,754,256</u>
Total Federal investment	<u>\$1,368,795,219</u>	<u>\$390,040,963</u>	<u>\$978,754,256</u>

1/ Consists of Bonneville Dam, Columbia Basin Project, Hungry Horse Project, Albeni Falls Project, Detroit-Big Cliff Project, Lookout Point-Dexter Project, McNary Project, and Bonneville Power Administration. Excluded are Chief Joseph and The Dalles Projects, which were under construction but with no generator units in service as of June 30, 1955.

2/ Table I on an accumulative basis to June 30, 1955 shows expenses of operation, maintenance, etc. in the amount of \$108,653,764 and miscellaneous deductions of \$1,536,817 for an expense total of \$110,190,581 as against the total of \$96,772,126 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 \$390,040,963 as against total accrued operating revenues of \$401,813,269 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, 1955.

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 \$1,097,403,599, 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 current accrued liabilities such as the employees' accrued leave.

*Repayment  
Status Shown*

The foregoing data are derived from the cost accounts maintained in accordance with the Federal Power Commission's uniform system of accounts for electric utilities. On a statutory repayment basis the status of repayment is the same as shown in the above tabulation for all projects except the Columbia Basin project. In the case of the latter, (1) commercial power revenues must pay operation and maintenance costs of the Grand Coulee Dam and powerplant allocated to irrigation for cost accounting purposes, (2) interest expense is computed at a rate of 3 percent per annum rather than at a rate of 2 1/2 percent per annum used in the cost accounts and on a somewhat different investment base from that used in the cost accounts, and (3) other differences between the cost and payout accounts such as the exclusion of interest during construction from the accounts for payout purposes.

The repayment of \$192,188,387 on the invested power capital to June 30, 1955 exceeds the estimated scheduled capital repayment requirements by approximately \$68.1 million consisting of approximately \$53 million in excess of schedule for Bonneville Power Administration and \$9.3 for the Bonneville Dam project, and approximately \$5.8 million for the other generating projects, except that the Columbia Basin, Albeni Falls and Lookout Point-Dexter 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 foregoing tabulation shows substantial repayment on the capital investment of the Bonneville Power Administration, Bonneville Dam project and Columbia Basin project which have been in operation for several years but obviously only a nominal percentage of repayment for the other projects which have only recently come into service.



# Summary of Operations

## *Energy*

### *Production*

Energy generated at 9 Federal plants for the Administration totaled 23.3 billion kilowatt-hours during fiscal year 1955. This was an increase of 15 percent over fiscal year 1954. The three new plants connected to the system during this last fiscal year were Albeni Falls, Dexter, and Lookout Point. Four new generating units at McNary were brought into production during the year.

## *New System*

### *Peak*

A new system peak was reached for the hour 5-6 p.m. on December 27, 1954, before the 2 generators at Albeni Falls, the Dexter unit, and the sixth, seventh and eighth generators at McNary were in operation. Maximum coincident demand on Bonneville, Detroit-Big Cliff, Grand Coulee, Hungry Horse, Lookout Point, and McNary plants was 3,651,000 kilowatts, an increase of 11 percent over the previous fiscal year's maximum demand of 3,301,000 kilowatts occurring during January 1954.

## *Nameplate*

### *Rating*

### *Exceeded*

Since the fall of 1946 maximum system demands have continuously exceeded the nameplate rating of installed generators. Energy produced at Federal plants for the Administration is shown by years in table VI with peak demand and energy data in the accompanying chart. Prepared on a quarterly basis the chart on page 18 shows the general trends of the Bonneville Power Administration system-load growth and development.

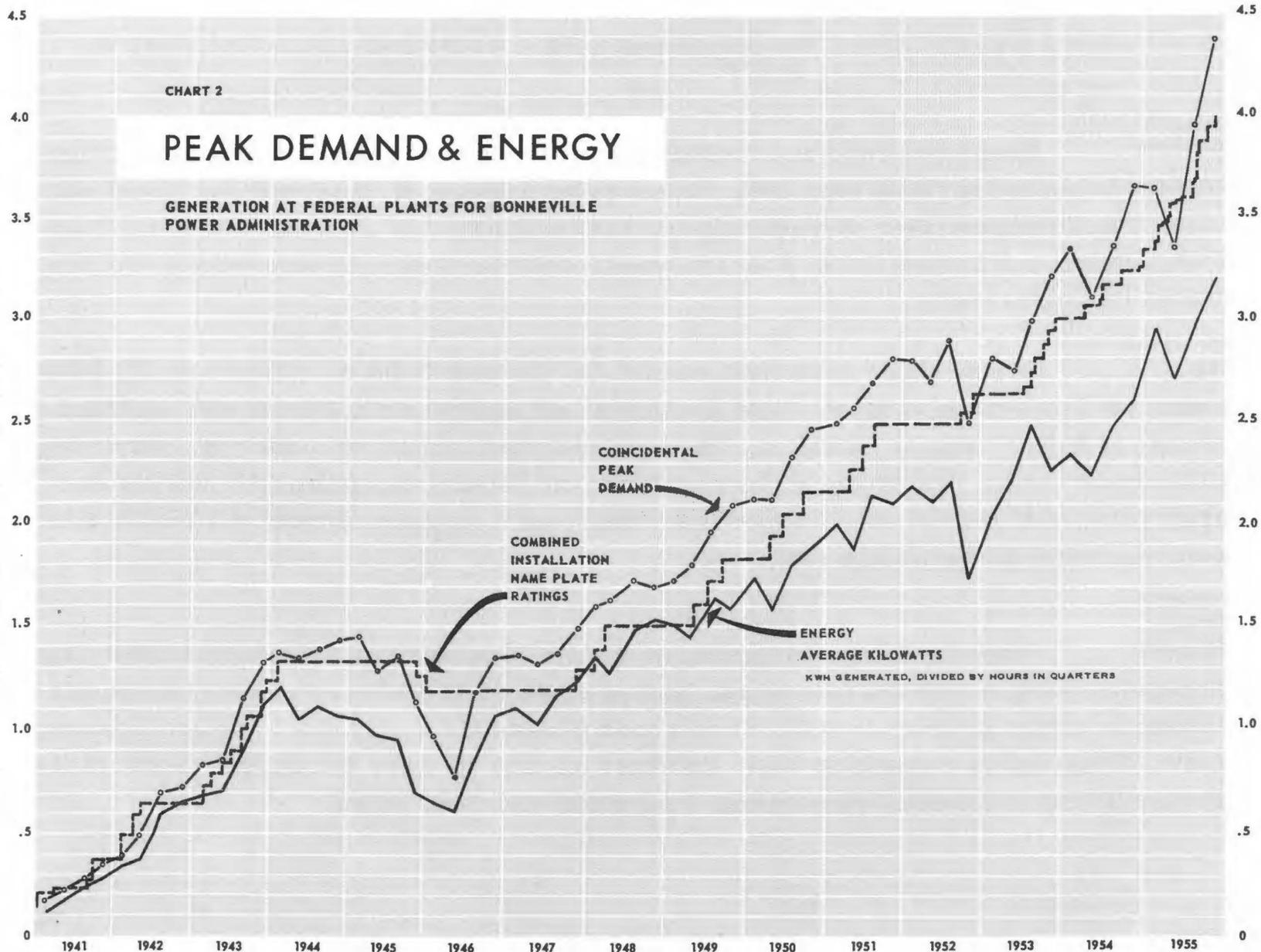


TABLE VI  
**Generation at Federal plants for Bonneville Power Administration**  
**Fiscal years 1939 - 55**  
 ( Generation in millions of kilowatt-hours )

Fiscal years ending June 30	Albeni Falls generation	Bonneville generation	Detroit - Big Cliff generation	Grand Coulee generation	Hungry Horse generation	Lookout Pt. - Dexter generation	McNary generation	Total generation for BPA
1939		35						35
1940		208						208
1941		894		8				902
1942		1,807		742				2,549
1943		2,801		2,817				5,618
1944		3,489		5,751				9,240
1945		3,391		5,661				9,052
1946		2,675		3,561				6,236
1947		3,696		5,058				8,754
1948		3,992		6,894 1/				10,886
1949		3,869		9,057 1/				12,926
1950		3,690		10,451 1/				14,141
1951		3,793		12,679 1/				16,472
1952		4,463		14,092 1/				18,555
1953		4,227	2	13,277 1/	127			17,633
1954		4,406	425 2/	13,886 1/	682		797	20,196
1955	21	4,336	467 2/	13,684 1/	956	193 2/	3,596	23,253
Total	21	51,772	894	117,618	1,765	193	4,393	176,656

1/ Includes energy transferred for Bureau of Reclamation.

2/ Excludes energy for condenser power at Detroit and Lookout Point.

*Receipts  
and Deliveries*

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

*Integrated Grid  
Utilizes  
Facilities*

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

*Storage  
& Energy  
Transactions*

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

Table VII, electric energy account, summarizes energy receipts and deliveries for fiscal year 1955.

*Energy Sales  
up 16.2 Percent*

Energy sales to customers of the Bonneville Power Administration totaled 21.8



CHART 3

# ENERGY SALES

## CLASS OF CUSTOMER

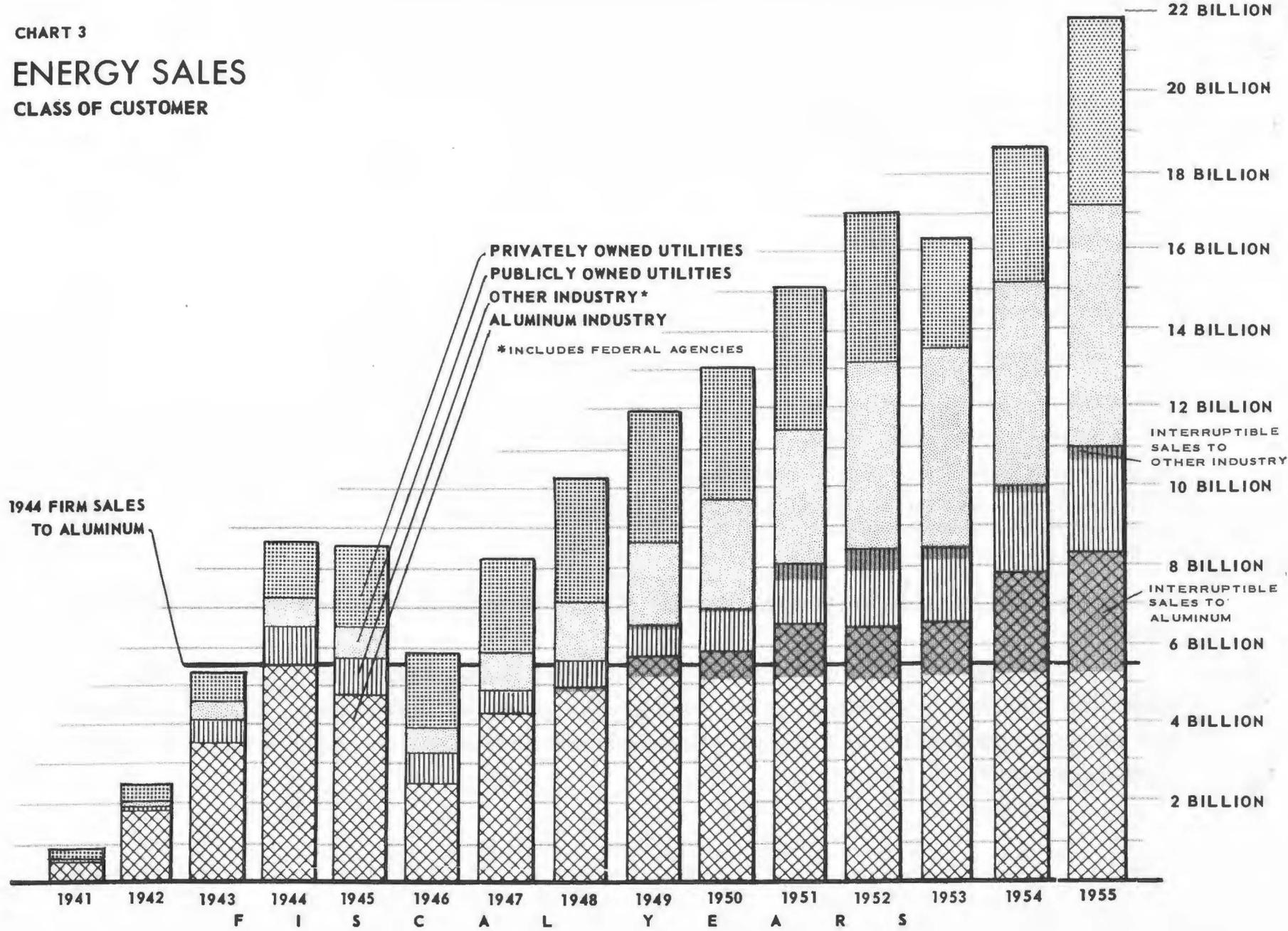


TABLE VIII  
**Electric energy sales by class of customer**  
**Fiscal years 1937 - 1955**  
 ( Millions of kilowatt-hours )

Fiscal years ending June 30	Industry		Publicly owned utilities	Privately owned utilities	Total
	Aluminum	Other industries 1/			
1941 and prior .....	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	2,254	5,127	3,531	18,774
1955 .....	8,352	2,624	6,274	4,573	21,823
Total to July 1, 1955	74,991	16,863	35,056	37,542	164,452

1/ Includes Federal agencies.

*3 billion KW  
Interruptible*

Due to favorable water conditions for most of the year, except for a short period in March, April, and May, when lack of precipitation combined with subnormal temperatures caused streamflow conditions to fall below median, it was possible for the Administration to deliver 3 billion kilowatt-hours of interruptible energy to industrial customers. This was an increase of 16.7 percent over fiscal year 1954.

*Composite  
Average Rate*

The Administration has sold 164.5 billion kilowatt-hours of energy at a composite average rate of 2.39 mills per kilowatt-hour during the 17 years of operation ending June 30, 1955. Sales to publicly owned utilities for this period were 35.1 billion kilowatt-hours at an average of 2.80 mills. Privately owned utilities received 37.5 billion kilowatt-hours at an average of 2.32 mills and industries 91.9 billion kilowatt-hours at an average of 2.26 mills.

*Aluminum  
Averages  
2.15 Mills*

Power sales to aluminum plants were 75.0 billion kilowatt-hours at an average of 2.15 mills. These plants characteristically take power at very high-load factors, approaching 100 percent, which results in the exceptionally low average cost of power on the Administration's C rate schedule. Sales to industries other than aluminum including sales to Federal agencies were 16.9 billion kilowatt-hours at an average of 2.74 mills.

Sales by class of customer are shown in table VIII.

*Rate  
Schedules*

More than 75 percent of the energy sales for the year were made under the C-4 wholesale rate schedule at an average of 2.14 mills per kilowatt-hour. This is the kilowatt-

year rate for firm power delivered anywhere from the transmission system and is also used with special measured demand provisions for sales of interruptible power. Sales are generally made under this rate to industries operating at high-load factor and to utilities having substantial generating facilities. Other sales were made principally under the E schedule to utilities purchasing all or substantially all of their power requirements from the Administration. Sales under the F schedule were made to the utilities and industries requiring power at low-load factor use, and under the H schedule for dump, exchange, or experimental purposes. A summary of energy sales for the fiscal year 1955 classified by rate schedules is shown in table IX.

*Rate Revision* On December 20, 1954, the Federal Power Commission approved amended wholesale power rate schedules and new general rate schedule provisions. The amended rates, while retaining the same type, form, and level of the superseded rates, contain several revisions for purposes of clarity and facility of application. Each of the approved wholesale power rate schedules contains a rate adjustment clause stipulating that the rate is subject to possible adjustment subject to Federal Power Commission approval on December 20, 1956, or 1957, or 1958 if such adjustment becomes necessary. In addition to the usual review of wholesale rates by the regular staff of the Bonneville Power Administration, a special independent review of the general wholesale rate structure was begun during this fiscal year by the Ford, Bacon and Davis Company.

*Customers  
Served*

The Administration was serving 119 customers at the end of fiscal year 1955.

TABLE IX

**Electric energy sales by rate schedules**  
**Fiscal year ending June 30, 1955**

<u>Rate schedule</u>	<u>Energy thousands of kilowatt-hours</u>	<u>Revenue</u>	<u>Mills per kilowatt- hour</u>
C-3, C-4:			
Industries	10,530,159	\$22,297,539	2.12
Utilities	6,019,075	13,056,137	2.17
Subtotal	16,549,234	35,353,676	2.14
F-2, F-3, F-4:			
Industries	33,737	169,181	5.01
Utilities	101,207	440,427	4.35
Subtotal	134,944	609,608	4.52
A-4:			
Industries	6,147	20,176	3.28
Utilities	10,882	34,021	3.13
Subtotal	17,029	54,197	3.18
E-4: Utilities 1/	3,794,320	11,787,875	3.11
Experimental, H-3 and exchange:			
Industries and Utilities	<u>1,327,543</u>	<u>3,318,856</u>	2.50
Total sales	21,823,070	\$51,124,212	2.34
Reconciliation with accounting records		134,511	
Other electric revenues		<u>807,759</u>	
Total operating revenues		<u>\$52,066,482</u>	

1/ Including Federal agency pumping service.

There were 80 publicly owned distributors of power, 18 industrial customers, 12 Federal agencies, and nine privately owned utilities. Service to two publicly owned distributors was initiated during the year: city of Port Angeles and Kennewick Irrigation District. The Pend Oreille County PUD discontinued service when the District's Box Canyon plant was put into service. The Anaconda Aluminum Company plant started receiving power from the Administration during this fiscal year. The two privately owned utilities which started receiving power from the Administration in this fiscal year are California-Pacific Utilities Company and Idaho Power Company.

*Generation  
Added*

Additions to the U. S. Columbia River power system in fiscal year 1955 have a nameplate rating of 443,400 kilowatts. All units, with 135,000 kilowatts capacity, were installed at Lookout Point project on the Middle Fork of the Willamette River, including the unit at Dexter reregulating dam. Four additional units with total capacity of 280,000 kilowatts were installed at McNary project, and the first two units with 28,400 kilowatts capacity were installed at Albeni Falls project. The Corps of Engineers is construction agency for all three of these projects.

*Projects  
Summarized*

Federal projects existing, under construction, and authorized for construction by the Corps of Engineers and Bureau of Reclamation are shown in table X. With all these projects operating as a system, a nominal prime capability of 2,860,000 kilowatts is expected in fiscal year 1956 from the existing projects plus capacity to be installed during the year. With completion of the projects in construction status prime capability will be 4,000,000 kilo-

**Energy deliveries to customers of the Bonneville Power Administration**  
**Fiscal year ended June 30, 1955**

Customers	Energy deliveries for year 1/ kilowatt-hours	Customers	Energy deliveries for year 1/ kilowatt-hours
<b>PUBLICLY OWNED UTILITIES</b>			
<b>MUNICIPALITIES</b>			
Bandon, Oregon	14,438,400	Grays Harbor Co. PUD #1	252,705,000
Bonnors Ferry, Idaho	202,800	Kittitas Co. PUD #1	6,513,500
Canby, Oregon	10,435,800	Klickitat Co. PUD #1	86,609,264
Cascade Locks, Oregon	10,881,600	Lewis Co. PUD #1	115,006,670
Centralia, Washington	27,985,239	Mason Co. PUD #3	125,719,200
Cheney, Washington	13,442,800	Northern Wasco Co. PUD	17,035,193
Drain, Oregon	9,278,400	Okanogan Co. PUD #1	74,634,592
Ellensburg, Washington	36,736,000	Pacific Co. PUD #2	74,259,153
Eugene, Oregon	84,250,000	Pend Oreille Co. PUD #1	71,486,909
Forest Grove, Oregon	37,017,600	Skamania Co. PUD #1	22,381,119
Grand Coulee, Washington	18,676,800	Snohomish Co. PUD #1	731,649,056
McMinnville, Oregon	45,371,000	Stevens Co. PUD #1	18,731,478
Milton, Oregon	16,747,200	Tillamook PUD	77,063,800
Monmouth, Oregon	10,809,600	Wahkiakum Co. PUD #1	13,300,312
Port Angeles, Washington	74,686,394		
Seattle, Washington	663,420,000	Total public utility districts ( 25 )	3,433,233,988
Springfield, Oregon	37,867,200		
Tacoma, Washington	1,030,742,825	<b>COOPERATIVES</b>	
Total municipalities ( 18 )	2,142,989,658	Benton - Lincoln Elec. Coop	64,337,400
		Benton Rural Elec. Assn.	39,927,026
<b>PUBLIC UTILITY DISTRICTS</b>		Big Bend Elec. Coop.	29,622,562
Benton County PUD #1	129,082,400	Blachly - Lane Co. Elec. Coop. Assn.	14,250,000
Central Lincoln PUD	121,562,400	Central Electric Coop.	12,745,678
Chelan Co. PUD #1	171,565,979	Chelan Co. Electric Coop.	905,400
Clallam Co. PUD #1	63,310,016	Clearwater Power Co.	35,824,525
Clark Co. PUD #1	403,754,480	Columbia Basin Elec. Coop.	9,154,200
Clatskanie PUD	17,570,153	Columbia Co. REA	19,311,130
Cowlitz Co. PUD #1	412,135,310	Columbia Power Coop.	9,283,253
Douglas Co. PUD #1	105,074,890	Coos - Curry Elec. Coop.	52,746,296
Ferry Co. PUD #1	13,926,105	Douglas Electric Coop.	36,122,350
Franklin Co. PUD #1	83,926,800	Eastern Oregon Elec. Coop.	2,767,766
Grant Co. PUD #2	224,230,209	Flathead Elec. Coop.	17,824,086
		Hood River Elec. Coop.	15,724,800
		Idaho Co. L & P Assn.	10,549,700
		Inland Power & Light Co.	67,820,400
		Kennewick Irrig. Dist.	2,078,400
		Kootenai Rural Elec. Assn.	10,615,062

Customers	Energy deliveries for year 1/ kilowatt-hours
COOPERATIVES	
Lane Co. Elec. Coop.	41,285,053
Lincoln Elec. Coop. - Montana	7,630,914
Lincoln Elec. Coop. - Washington	15,289,028
Midstate Electric Coop.	3,688,188
Missoula Elec. Coop.	6,929,248
Molson - Chesaw Elec. Coop.	902,510
Nespelem Valley Elec. Coop.	6,826,500
Northern Lights	13,194,849
Okanogan Co. Elec. Coop.	3,831,100
Orcas Power & Light Co.	8,005,000
Pend Oreille Elec. Coop.	7,578,349
Ravalli Co. Elec. Coop.	6,948,050
Salem Electric	35,419,400
Sandy Electric Coop.	3,498,318
Tanner Mutual P & L Assn.	491,910
Umatilla Elec. Coop. Assn.	21,893,401
Vera Irrigation Dist. #15	19,126,800
Wasco Electric Coop.	24,915,607
West Oregon Elec. Coop.	18,662,982
Total cooperatives ( 38 )	697,727,241
Total publicly owned utilities	6,273,950,887
PRIVATELY OWNED UTILITIES	
British Columbia Elec. Co.	17,000
California Oregon Power Co.	63,511,807
California-Pacific Utilities Co.	36,135,256
Idaho Power Co.	7,795,200
Interconnected Pool 2/	806,289,100
Montana Power Co.	371,669,000
Pacific Power & Light Co.	1,378,287,425
Portland General Electric Co.	1,507,522,000
Puget Sound Power & Light Co.	158,812,000
Washington Water Power Co.	181,235,000
WWP - Kootenay Lake	61,992,000
Total privately owned utilities ( 9 )	4,573,265,788

Customers	Energy deliveries for year 1/ kilowatt-hours
FEDERAL AGENCIES ( 12 )	1,363,485,399
INDUSTRIES	
ALUMINUM	
Aluminum Co. of America	
Vancouver Plant	1,577,150,680
Wenatchee Plant	537,371,468
Anaconda Aluminum Co.	6,147,200
Kaiser Alum. & Chem. Corp	
Spokane Alum. Fab.	280,558,094
Spokane Alum. Red.	3,025,416,329
Tacoma Alum. Red.	587,825,147
Reynolds Metals Co.	
Longview	936,470,563
Troutdale	1,400,737,188
INDUSTRIES	
OTHER	
Carborundum Co.	123,620,000
Crown Zellerbach	95,656,714
Electro - Metallurgical Co.	119,068,719
Hanna Nickel Smelting Co.	129,229,500
Keokuk Electro - Metals Co.	84,218,274
Pacific Carbide and Alloys Co.	35,112,880
Pacific Northwest Alloys	166,443,137
Pennsylvania Salt Mfg. Co.	145,927,000
Rayonier Corp.	30,964,642
Victor Chemical Works	330,450,400
Total industries ( 18 )	9,612,367,935
Total sales of electric energy ( 120 ) 3/	21,823,070,009

1/ Includes energy deliveries carried on exchange accounts.

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

3/ 119 customers as of June 30, 1955; service to one customer discontinued during year.

TABLE X  
**U. S. Columbia River power system**  
 General specifications – projects existing, under construction and  
 authorized installations and capabilities correspond to a coordinated system operation

	Location	Stream	Plant installations		Nominal prime power kilowatts 2/	Pool elevation ( feet )	Usable storage ( acre - feet )	Average head ( feet )	Initial date in service	Principal purpose 4/
			Number of units	Total capacity kilowatts 1/						
EXISTING PROJECTS										
Bonneville	Wash. - Ore.	Columbia	10	518,400	458,000	72	—	59	June 1938	P, N.
Grand Coulee	Washington	Columbia	18	1,944,000	1,631,000	1,288	5,072,000	326	Sept. 1941	P, I, FC, N.
Hungry Horse	Montana	S. Fk. Flathead	4	285,000	187,000	3,560	2,982,000	364	Oct. 1952	P, I, FC, N.
Detroit	Oregon	N. Santiam	2	100,000	29,000	1,569	323,000	299	July 1953	P, I, FC, N.
McNary	Wash. - Ore.	Columbia	14	980,000	548,000	340	—	78	Nov. 1953	P, I, N.
Big Cliff	Oregon	N. Santiam	1	18,000	10,000	1,206	—	91	June 1954	P.
Lookout Point	Oregon	M. Fk. Willamette	3	120,000	36,000	929	336,000	228	Dec. 1954	P, I, FC, N.
Dexter	Oregon	M. Fk. Willamette	1	15,000	12,000	695	—	53	June 1955	P.
Albeni Falls	Idaho	Pend Oreille	3	42,600	29,000	2,062	1,155,000	24	Mar. 1955	P, FC, N.
				4,023,000	2,940,000		9,868,000			
PROJECTS IN CONSTRUCTION STATUS										
Chief Joseph	Washington	Columbia	16	1,024,000	815,000	946	—	169	Sept. 1955	P, I.
Chandler	Washington	Yakima	2	12,000	11,000	620	—	118	Nov. 1955	P, I.
The Dalles	Wash. - Ore.	Columbia	16	1,119,000	651,000	160	—	87	April 1957	P, N.
Roza	Washington	Yakima	1	11,250	6,000	1,221	—	140	May 1958	P, I.
Cougar	Oregon	S. Fk. McKenzie	2	25,000	14,000	1,683	188,000	418	Nov. 1960	P, I, FC, N.
Ice Harbor	Washington	Snake	3	270,000	137,000	440	—	97	Dec. 1961	P, I, N.
Hills Creek	Oregon	M. Fk. Willamette	2	30,000	14,000	1,543	291,000	220	Nov. 1961	P, I, FC, N.
				2,491,250	1,648,000		479,000			
AUTHORIZED PROJECTS										
Libby	Montana	Kootenai	6	600,000	264,000	2,459	5,010,000	267	—	P, FC, N.
Lower Monumental	Washington	Snake	3	180,000	130,000	533	—	92	—	P, I, N.
Little Goose	Washington	Snake	3	195,000	139,000	633	—	99	—	P, N.
Lower Granite	Washington	Snake	3	165,000	114,000	715	—	80	—	P, N.
Priest Rapids 6/	Washington	Columbia	18	954,000	735,000	550	5/	146	—	P, FC, N.
John Day	Wash. - Ore.	Columbia	13	1,105,000	725,000	262	—	101	—	P, I, FC, N.
Green Peter	Oregon	M. Santiam	2	81,000	22,000	984	322,000	315	—	P, I, FC, N.
White Bridge	Oregon	M. Santiam	1	15,000	9,000	670	—	93	—	P.
				3,295,000	2,138,000		5,332,000			
Total – 24 projects				9,809,250	6,698,000		—28,000 3/	15,679,000		

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 28,000 average kilowatts for 450,000 acres of the Columbia Basin project.

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

5/ Authorization provides for flood control storage of 2,100,000 acre-feet.

6/ Federal authorization was removed until July 27, 1956 to permit non-Federal development.

watts, and with completion of the authorized projects prime capability will be 6,698,000 kilowatts.

*Storage  
Capacity*

Existing usable storage capacity is 9,868,000 acre-feet. An additional 479,000 acre-feet will be provided by Cougar and Hills Creek on which construction will shortly begin, and 5,332,000 acre-feet would be provided by Libby and Green Peter projects which are authorized for construction.

All contemplated generation and storage capacity for the projects in construction status will be in service by November 1961 under the present schedule. Service dates for the other authorized projects are not scheduled as no funds are appropriated for their construction.

*Non-Federal  
Additions*

Additions to generating facilities of non-Federal utilities in the area served by the Administration for fiscal year 1955 have a nameplate rating of 45,000 kilowatts. A second unit of 25,000 kilowatts capacity was added at the city of Tacoma's Steam Plant No. 2; the first unit of 15,000 kilowatts capacity was installed at Box Canyon project by Pend Oreille County PUD; and a third unit of 5,000 kilowatts capacity was installed at the city of Centralia's Yelm plant. Future additions presently scheduled by non-Federal utilities in this area are shown in table XI.

*Northwest  
Power Pool*

Generation during fiscal year 1955 by the principal electric utility systems of the Pacific Northwest is shown in table XII. All of these utilities are members of the North-

TABLE XI  
**Non - Federal utilities**  
 Generator installation schedule  
 August 1, 1955

Utility	Plant	Stream	Unit number	Nameplate rating thousands of kilowatts	Date in service
Pend Oreille County PUD	Box Canyon	Pend Oreille	4	15	October 1955
Portland General Electric Co.	Timothy Meadows Res. 60,000 acre-feet	Clackamas	—	—	August 1956
City of Seattle	Ross Gorge	Skagit	4	90	December 1956
		Skagit	—	—	—
	Reconstruction of diversion dam		2/		December 1958
City of Tacoma	Mayfield	Cowlitz	1	40	January 1958
			2	40	April 1958
			3	40	July 1958
			4	40	October 1958
Washington Water Power Co.	Noxon Rapids	Clark Fork	1	84	September 1959
			2	84	December 1959
			3	84	March 1960
			4	84	June 1960

1/ Construction to be completed in November 1955 with initial filling in 1956 to add 10,500 kilowatts of prime power at downstream plants.

2/ Will increase gross head by 88 feet and peaking capability by 47,000 kilowatts.

CHART 4

# POWER GENERATED BY NORTHWEST UTILITIES

GENERATED BY



YEAR ENDED JUNE 30, 1985

Portland General Electric Company

1.9% 0.7 BILLION KWH



Tacoma City Light

2.4% 0.9 BILLION KWH



Pacific Power & Light Company

3.4% 1.3 BILLION KWH



Puget Sound Power & Light Company

4.8% 1.8 BILLION KWH



Idaho Power Company

5.8% 2.2 BILLION KWH



REPRESENTS ONE BILLION KWH

Washington Water Power Company

6.3% 2.4 BILLION KWH



Seattle City Light

6.6% 2.5 BILLION KWH



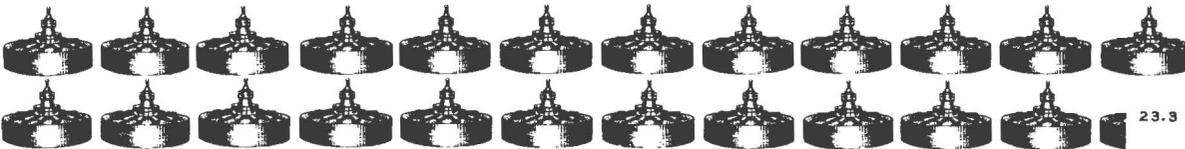
Montana Power Company

7.2% 2.7 BILLION KWH



U.S. COLUMBIA RIVER POWER SYSTEM

61.6%



23.3 BILLION KWH

THESE UTILITIES ARE MEMBERS OF THE NORTHWEST POWER POOL

UTAH POWER & LIGHT COMPANY AND BRITISH COLUMBIA ELECTRIC COMPANY ARE ALSO POOL MEMBERS BUT ARE NOT INCLUDED IN THIS CHART BECAUSE THEIR MAJOR SERVICE AREAS LIE OUTSIDE THE PACIFIC NORTHWEST REGION

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

CHART 5

# NORTHWEST POWER POOL

NET OPERATIONS ENDING JUNE 30, 1955  
 BPA SUPPLIED 87% OF NET ENERGY REQUIREMENTS  
 BILLIONS OF KWH

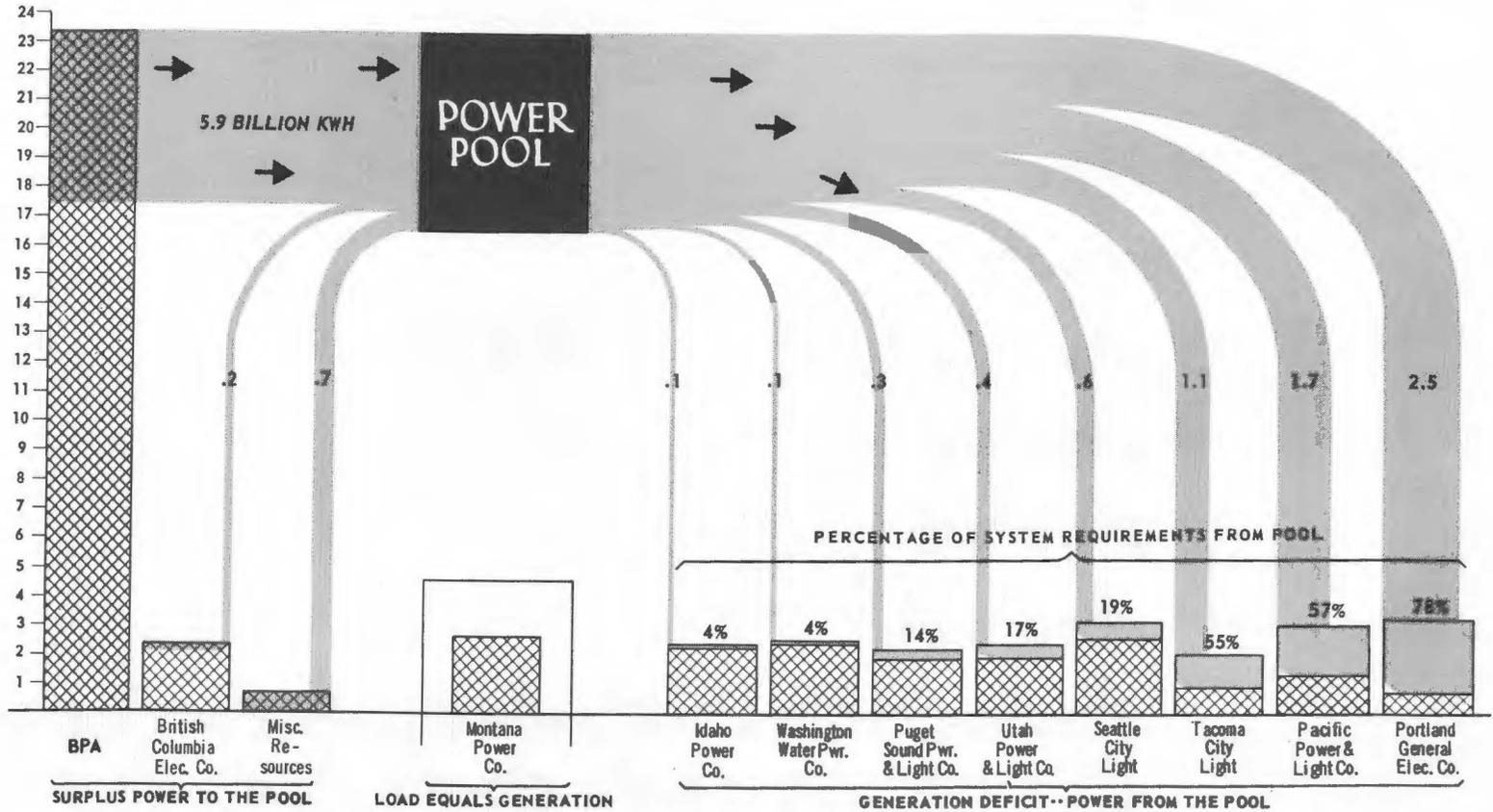
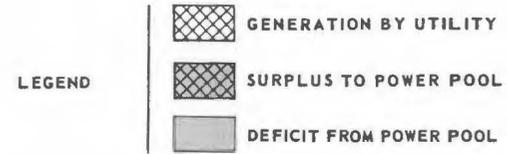


TABLE XII  
**Generation by the principal electric utility systems of the Pacific Northwest**  
**Fiscal year 1955**

Utilities	Kilowatt - hours Billion	Percent of total generation Percent	Utilities	Kilowatt - hours Billion	Percent of total generation Percent
Publicly owned:			Privately owned:		
Bonneville Power Administration ....	23.3	61.6	Puget Sound Power & Light Co. ....	1.8	4.8
Seattle City Light .....	2.5	6.6	Washington Water Power Co. ....	2.4	6.3
Tacoma City Light .....	0.9	2.4	Pacific Power & Light Co. ....	1.3	3.4
			Portland General Electric Co. ....	0.7	1.9
Total publicly owned .....	26.7	70.6	Montana Power Co. ....	2.7	7.2
			Idaho Power Co. ....	2.2	5.8
			Total privately owned .....	11.1	29.4
Total generation 1/	37.8	100.0			

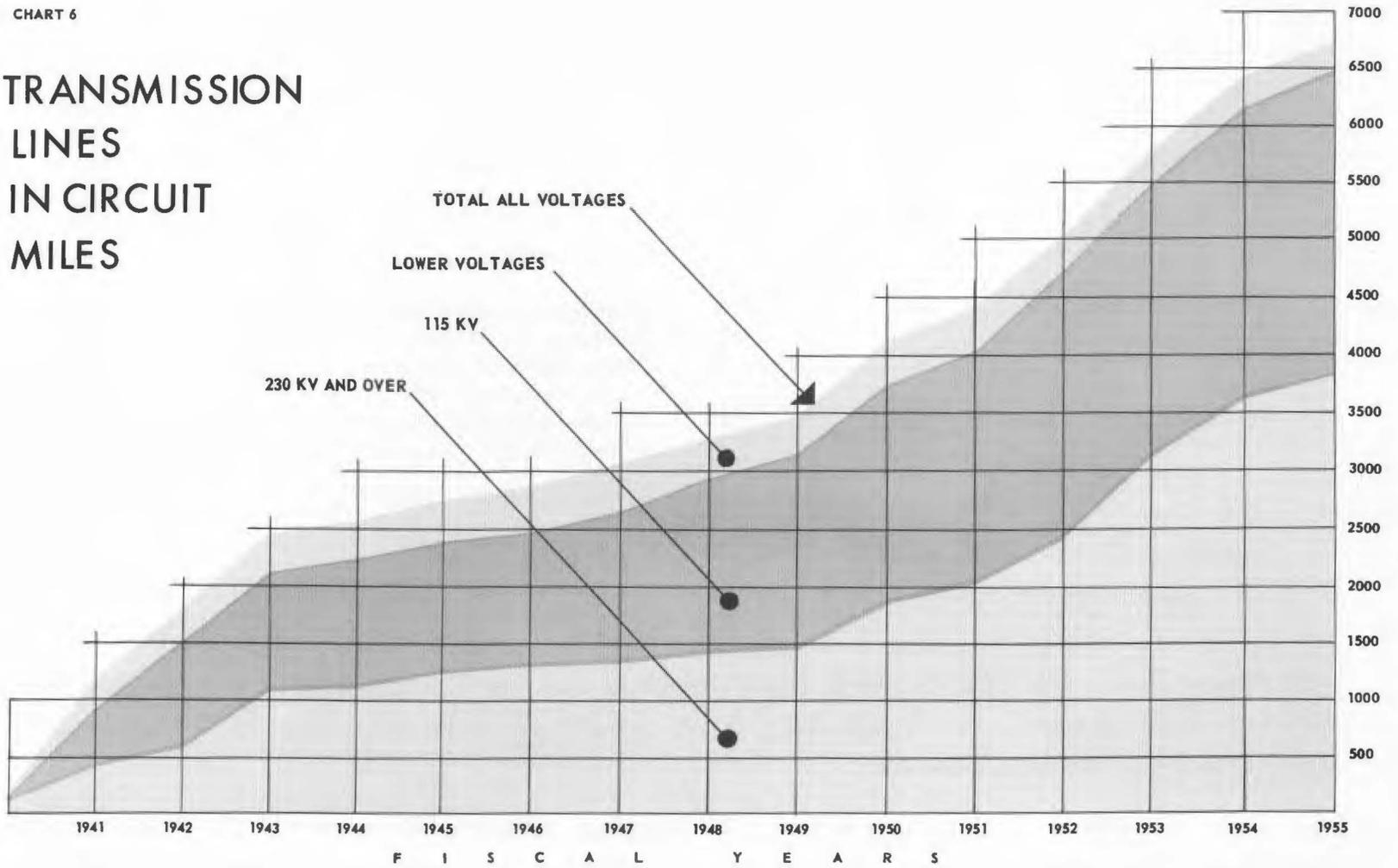
*1/ The above utilities are members of the Northwest Power Pool. Utah Power & Light Co. and British Columbia Electric Co. are also members of the pool, but are not included above because their major service areas lie outside the Pacific Northwest region.*

west Power Pool. The Utah Power & Light Company and the British Columbia Electric Company are also members of the pool but are not included as their major service areas are outside the Pacific Northwest region.

The U. S. Columbia River power system supplied 62 percent of the total energy generated by the major utilities of the region. In addition to power requirements of industries

CHART 6

# TRANSMISSION LINES IN CIRCUIT MILES



and nonpool utilities served through the EPA transmission system, 5.9 billion kilowatt-hours of energy were provided for use by other pool utilities to meet their requirements.

*Transmission  
System*

*Additions* During the fiscal year the Bonneville Power Administration grid was increased to 6,702 circuit miles of transmission lines and to 7,327,416 kilovolt-amperes of transformer capacity. This total includes 231 circuit miles of 287,000-volt lines, 3,613 circuit miles of 230,000-volt lines, 2,627 circuit miles of 115,000-volt lines, and 231 miles of lower voltage line.

*Substations  
Increase*

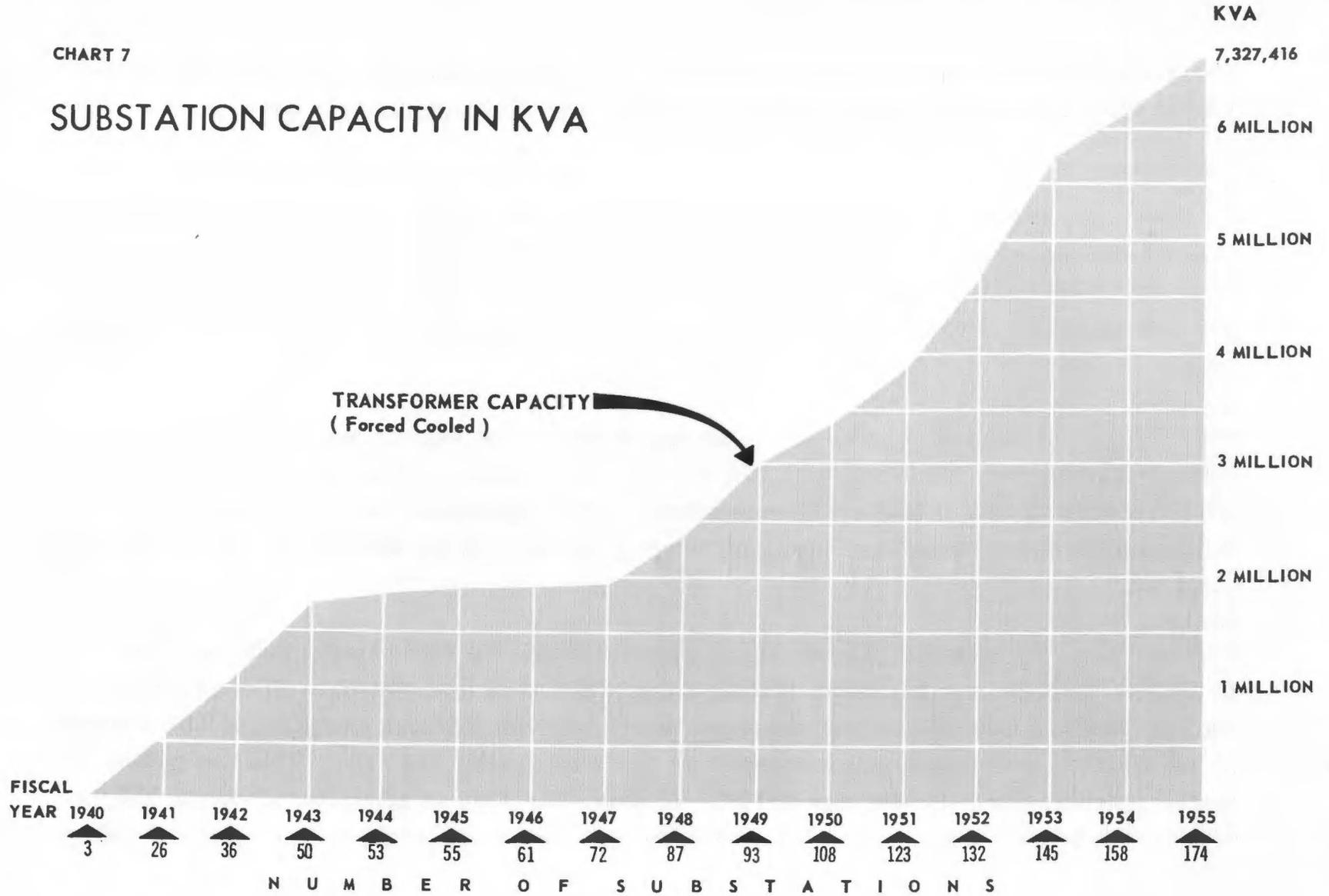
A total of 16 new substations was added to the system and the substation transformer capacity was increased by 1,174,000 kilovolt-amperes. With these additions the Administration's system includes 174 substations. Static capacitors with a capacity of 118,780 reactive kilovolt-amperes were installed, bringing the total on the system to 1,110,645 kilovolt-amperes.

*New Lines  
Energized*

To integrate the additional generation into the transmission grid and to bring it to the load centers, several major transmission lines were completed. A 90-mile section of the new McNary Dam-Vancouver, Washington, 345,000-volt line was energized at 230,000 volts in April 1955 by a temporary connection to the Midway-Big Eddy line. This line will be extended into Vancouver by the fall of 1955. In November 1954 an additional 125-mile, 230,000-volt circuit between Maupin and Albany, Oregon, was placed in operation. The operating voltage

CHART 7

# SUBSTATION CAPACITY IN KVA



on the 231-mile Grand Coulee-Olympia line was increased from 230,000 volts to 287,000 volts in December 1954. This was accomplished by use of autotransformers on both ends of the circuit. In order to bring the generation from the Lookout Point Dam into the Bonneville Power Administration system, a second 115,000-volt circuit was completed and placed in parallel operation with the first line between the dam and the J. P. Alvey substation.

Twelve new substations, ranging in capacity from 3,000 to 250,000 kilovolt-amperes, were energized during the fiscal year. Switching stations were completed for the Lookout Point, Albeni Falls, and Dexter Dams. Transformer capacity was increased at seven stations by the addition of transformers or forced cooling equipment to existing transformers.

*Microwave  
Expanded*

New microwave facilities between Portland and the J. P. Alvey substation and expanded facilities between Portland and Snohomish substations were completed. Facilities between Portland and Spokane were placed in operation for voice communication, with work continuing on these facilities for other communication services.

*Portland  
Dispatching  
Center*

The new power dispatching center in the new Interior building in Portland, Oregon, was completed; and on January 22, 1955, power dispatching was changed over from the J. D. Ross center to the Portland location.

*New  
Construction*

Major construction activity during the fiscal year was concentrated on the 345,000-volt transmission lines using 1.602-inch ACSR "Chukar" conductor for bringing power

from Chief Joseph Dam to the Puget Sound area, and from McNary Dam to the Portland-Vancouver load center. To transmit additional power from McNary Dam to the Willamette Valley load centers a second circuit 230,000-volt transmission line from McNary Dam to Santiam, Oregon, substation is under construction.

Additional communication facilities are under construction at various substations to meet the added operational requirements of the system.

# Auditors' Report

Columbia

River Power

System

and Related

Activities

FINANCIAL

STATEMENTS

FOR THE

FISCAL YEAR

ENDED

JUNE 30, 1955

BY THE COMPTROLLER GENERAL OF THE UNITED STATES



COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON 25

B-114858

December 1, 1955

Dear Mr. Secretary:

The Division of Audits, General Accounting Office, has made an audit 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. In connection with these audits, an examination was made of the accompanying financial statements of the COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES for the fiscal year ended June 30, 1955.

The Columbia River Power System consists of the Bonneville Power Administration, which is the transmitting and marketing agency, 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. 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 consist of the operation of irrigation, flood control, and navigation facilities.

The accompanying financial statements present on a combined basis the assets and liabilities of Bonneville Power Administration and the multiple-purpose projects (including those under construction) for which it is the power-marketing agent. Insofar as they relate to commercial power activities, these financial statements are based on accounts that have been maintained to the extent practicable in accordance with the uniform system of accounts prescribed by the Federal Power Commission under the Federal Power Act.

The examination of the accompanying financial statements 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. In the opinion of the Division of Audits, General Accounting Office, these financial statements present fairly the assets and liabilities of the Columbia River Power System and Related Activities at June 30, 1955, and the financial results of operations for the year ended that date in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year, except for the following matters as to which it is not practicable to determine the full effect on the financial statements as of June 30, 1955.

1. A uniform policy has not been followed in all cases in the accounting treatment of property costs and operating expenses as described in notes 2, 3, and 4 of schedule 14.

2. Construction costs of Hungry Horse Project have not been allocated to power and nonpower purposes by the Secretary of the Interior. A tentative allocation of these costs, made by the Bureau of Reclamation as explained in note 3 of schedule 14, has been used in preparing the accompanying financial statements. When a firm allocation of costs is made by the Secretary of the Interior, the accounts and financial statements relating to this project may require adjustment.

3. Final allocations of the construction costs of the Albeni Falls, Detroit-Big Cliff, McNary, and Lookout Point-Dexter Projects have not been made to power and nonpower purposes. As explained in note 3 of schedule 14, tentative allocations of these costs have been used in preparing the accompanying financial statements. When a firm allocation of costs is made by the Federal Power Commission (McNary Project) and the Corps of Engineers (Albeni Falls, Detroit-Big Cliff, and Lookout Point-Dexter Projects), the accounts and financial statements relating to these projects may require adjustment.

4. Interest and depreciation (\$17,387,795) on the part of the cost of joint-facilities at Columbia Basin, Hungry Horse, and Albeni Falls Projects allocated to future downstream river regulation have been deferred to future periods on the basis that the amounts will be recovered from the operations of plants now under construction or contemplated. While deferment of the charges is consistent with the allocations of costs of the projects, the propriety of excluding the items from current power costs is dependent upon the construction of the contemplated downstream plants.

5. Potential reimbursements, if any, for benefits in fiscal year 1955 accruing to downstream non-Federal power plants from storage at Columbia Basin, Hungry Horse, and Albeni Falls Projects have also not been included in the accompanying financial statements for the reasons set forth in note 9 of schedule 14.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "W. A. Rorer", is written over a light blue circular stamp.

Comptroller General  
of the United States

The Honorable  
The Secretary of the Interior

Enclosures

UNITED STATES OF AMERICA  
COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

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SCHEDULE 1

UNITED STATES OF AMERICA  
COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES (note 1)

STATEMENT OF COMEINED COMMERCIAL POWER OPERATIONS  
FOR THE FISCAL YEARS ENDED JUNE 30, 1955 AND 1954

	<u>1955</u>	<u>1954</u>
<u>OPERATING REVENUES:</u>		
Sales of electric energy . . . . .	\$51,258,723	\$44,127,409
Other electric revenues . . . . .	807,759	1,190,284
Total operating revenues . . . . .	<u>52,066,482</u>	<u>45,317,693</u>
<u>OPERATING EXPENSES (notes 2 and 3):</u>		
Purchased power . . . . .	488,537	697,339
Operation:		
Specific power facilities . . . . .	7,116,106	6,701,152
Joint facilities . . . . .	745,019	784,802
Maintenance:		
Specific power facilities . . . . .	3,089,612	2,846,841
Joint facilities . . . . .	1,060,740	394,857
Depreciation (note 4):		
Specific power facilities . . . . .	12,660,862	10,459,189
Joint facilities . . . . .	2,223,045	1,583,132
Less amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 8) . . . . .	366,949*	404,186*
Net loss on sales and abandonment of property (note 11) . . . . .	<u>601,385</u>	<u>1,379,976</u>
Total operating expenses . . . . .	<u>27,618,357</u>	<u>24,443,102</u>
Net operating revenues . . . . .	<u>24,448,125</u>	<u>20,874,591</u>
<u>INTEREST AND OTHER DEDUCTIONS:</u>		
Interest on Federal investment . . . . .	22,693,217	20,524,288
Less:		
Amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 8) . . . . .	1,673,330*	1,776,255*
Amount charged to construction . . . . .	5,082,478*	6,499,836*
Miscellaneous income deductions (net) . . . . .	80,589*	11,316*
Net interest and other deductions . . . . .	<u>15,856,820</u>	<u>12,236,881</u>
Net commercial power revenues before prior year adjustments . . . . .	8,591,305	8,637,710
<u>ADJUSTMENTS APPLICABLE TO PRIOR YEARS (net) . . . . .</u>	<u>286,521*</u>	<u>272,753*</u>
Net commercial power revenues transferred to accumulated net revenues . . . . .	<u>\$ 8,304,784</u>	<u>\$ 8,364,957</u>

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

## UNITED STATES OF AMERICA

## COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES (note 1)

## STATEMENT COMBINING REVENUES AND EXPENSES OF COMMERCIAL POWER OPERATIONS

FOR THE FISCAL YEAR ENDED JUNE 30, 1955

	Combined (to schedule 1)	Eliminations	Bonneville Power Administration (schedule 6)	Bonneville Dam Project (schedule 7)	Columbia Basin Project (schedule 8)	Hungry Horse Project (schedule 9)	Albeni Falls Project (schedule 10)	McNary Dam Project (schedule 11)	Detroit- Big Cliff Project (schedule 12)	Lookout Point- Dexter Project (schedule 13)
<b>OPERATING REVENUES:</b>										
Sales of electric energy . . . . .	\$51,258,723	\$ -	\$51,258,723	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amounts allocated to generating projects by Bonneville Power Administration (note 6) . . . . .	-	-	27,186,951*	3,108,938	12,347,430	3,609,000	541,357	5,213,940	1,791,648	574,638
Payment for river regulation . . . . .	-	187,570	-	-	187,570	-	-	-	-	-
Other electric revenues . . . . .	807,759	-	719,332	-	76,806	11,621	-	-	-	-
Total operating revenues . . . . .	52,066,482	187,570	24,791,104	3,108,938	12,611,806	3,620,621	541,357	5,213,940	1,791,648	574,638
<b>OPERATING EXPENSES (notes 2 and 3):</b>										
Purchased power . . . . .	488,537	-	488,537	-	-	-	-	-	-	-
Operation:										
Specific power facilities . . . . .	7,116,106	-	5,392,128	337,512	894,531	137,334	27,674	190,306	93,710	42,911
Joint facilities . . . . .	745,019	-	-	21,414	164,839	90,825	36,425	392,315	28,590	10,611
Payment for river regulation . . . . .	-	187,570	-	187,570	-	-	-	-	-	-
Maintenance:										
Specific power facilities . . . . .	3,089,612	-	2,024,078	233,576	569,225	66,566	3,151	133,985	46,322	12,709
Joint facilities . . . . .	1,060,740	-	-	680,464	172,325	16,949	11,227	162,998	15,292	1,485
Depreciation (note 4):										
Specific power facilities . . . . .	12,660,862	-	8,869,727	579,606	1,401,124	528,358	40,567	739,334	400,157	101,989
Joint facilities . . . . .	2,223,045	-	-	135,239	548,642	402,744	139,632	723,834	193,465	79,489
Less amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 8) . . . . .	366,949*	-	-	-	216,873*	89,336*	60,740*	-	-	-
Net loss on sales and abandonment of property (note 11)	601,385	-	601,385	-	-	-	-	-	-	-
Total operating expenses . . . . .	27,618,357	187,570	17,375,855	2,175,381	3,533,813	1,153,440	197,936	2,342,772	777,536	249,194
Net operating revenues . . . . .	24,448,125	-	7,415,249	933,557	9,077,993	2,467,181	343,421	2,871,168	1,014,112	325,444
<b>INTEREST AND OTHER DEDUCTIONS:</b>										
Interest on Federal investment . . . . .	22,693,217	-	6,456,032	963,929	4,218,715	2,184,726	715,030	6,112,006	1,020,859	1,021,920
Less:										
Amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 8) . . . . .	1,673,330*	-	-	-	1,219,397*	336,610*	117,323*	-	-	-
Amount charged to construction . . . . .	5,082,478*	-	739,732*	41	-	-	401,651*	3,240,838*	3,822*	696,476*
Miscellaneous income deductions (net) . . . . .	80,589*	-	5,278*	30,413*	41,602*	311*	60*	-	2,925*	-
Net interest and other deductions . . . . .	15,856,820	-	5,711,022	933,557	2,957,716	1,847,805	195,996	2,871,168	1,014,112	325,444
Net commercial power revenues before prior year adjustments . . . . .	8,591,305	-	1,704,227	-	6,120,277	619,376	147,425	-	-	-
ADJUSTMENTS APPLICABLE TO PRIOR YEARS (net) . . . . .	286,521*	-	-	-	139,096*	-	147,425*	-	-	-
Net commercial power revenues transferred to accumulated net revenues . . . . .	\$ 8,304,784	\$ -	\$ 1,704,227	\$ -	\$ 5,981,181	\$ 619,376	\$ -	\$ -	\$ -	\$ -

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

UNITED STATES OF AMERICA  
COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES (note 1)

## STATEMENT OF COMBINED ASSETS AND LIABILITIES

JUNE 30, 1955 AND 1954

ASSETS	1955	1954	LIABILITIES	1955	1954
<u>FIXED ASSETS</u> , at original cost, including interest during construction (notes 2 and 3):			<u>INVESTMENT OF U. S. GOVERNMENT AND ACCUMULATED NET REVENUES:</u>		
Commercial power . . . . .	\$1,097,403,599	\$ 990,678,061	Total investment of U. S. Government (schedule 5) . . . . .	\$2,062,457,853	\$1,866,402,214
Irrigation . . . . .	290,005,964	273,422,597	Less:		
Flood control . . . . .	86,352,520	48,206,722	Funds returned to U. S. Treasury:		
Navigation . . . . .	55,050,038	53,385,327	Repayment of Federal investment in the power program (schedule 5) . . . . .	390,040,963	340,565,589
Multiple-purpose projects under construction . . . . .	223,354,315	211,691,763	Repayment of Federal investment in the nonpower programs . . . . .	5,055,534	3,416,013
Total . . . . .	1,752,166,436	1,577,384,470	Total expense of flood control operations . . . . .	3,790,438	1,647,087
Less accumulated depreciation (note 4):			Total expense of navigation operations . . . . .	19,022,753	16,379,661
Commercial power . . . . .	76,057,579	63,777,062	Other nonreimbursable expenses . . . . .	384,203	122,998
Irrigation . . . . .	343,919	3,056,647	Total . . . . .	418,293,891	362,131,348
Flood control . . . . .	927,648	409,907	Net investment of U. S. Government . . . . .	1,644,163,962	1,504,270,866
Navigation . . . . .	2,553,036	2,061,091	Accumulated net revenues:		
Total . . . . .	79,882,182	69,304,707	Net revenues from commercial power operations since inception, including \$8,304,784 and \$8,364,957 for the years ended June 30, 1955 and 1954, respectively (schedule 1). Less net loss from irrigation operations since inception, including loss of \$217,651 and \$200,915 for the years ended June 30, 1955 and 1954, respectively (schedule 8) (note 3) . . . . .	110,079,734	101,774,950
Original cost, net . . . . .	1,672,284,254	1,508,079,763	Total . . . . .	2,588,076	2,370,425
<u>INTEREST AND DEPRECIATION CHARGES ON JOINT FACILITIES ALLOCATED TO FUTURE DOWNSTREAM RIVER REGULATION</u> --recoverable from operation of future downstream hydroelectric plants (note 8) . . . . .	17,387,795	15,438,741	Total . . . . .	107,491,658	99,404,525
<u>CURRENT ASSETS:</u>			Total . . . . .	1,751,655,620	1,603,675,391
Unexpended funds in U. S. Treasury appropriated by the Congress for construction and for operation and maintenance (note 5) . . . . .	60,706,488	76,977,332	<u>CURRENT AND ACCRUED LIABILITIES:</u>		
Special deposits . . . . .	935,293	1,505,258	Accounts payable . . . . .	24,918,468	25,183,566
Amounts receivable:			Employees' accrued leave . . . . .	1,897,043	2,109,635
Customers . . . . .	9,189,986	7,093,775	Total . . . . .	26,815,511	27,293,201
Other . . . . .	973,284	990,331	<u>DEFERRED CREDITS</u> . . . . .	526,607	928,804
Materials and supplies . . . . .	8,815,489	10,310,655	<u>CONTRIBUTIONS IN AID OF CONSTRUCTION</u>	328,332	315,563
Total . . . . .	80,620,540	96,877,351	Total . . . . .	774,971,765	754,719,730
<u>OTHER ASSETS AND DEFERRED CHARGES</u>	9,033,481	11,817,104	Total . . . . .	\$1,779,326,070	\$1,632,212,959
Total . . . . .	\$1,779,326,070	\$1,632,212,959			

The accompanying notes (schedule 14) are an integral part of this statement.

UNITED STATES OF AMERICA  
COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES (note 1)

STATEMENT COMBINING ASSETS AND LIABILITIES

JUNE 30, 1955

ASSETS	Combined (to schedule 3)	Eliminations	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	The Dalles Dam Project
<b>FIXED ASSETS, at original cost, including interest dur- ing construction (notes 2 and 3):</b>												
Commercial power (including future downstream river regulation):												
Specific facilities (powerhouses, generating equip- ment, and transmission plant) . . . . .	\$ 734,940,924	\$ -	\$368,913,677	\$ 38,642,009	\$111,466,128	\$ 26,736,301	\$19,308,145	\$123,969,228	\$22,376,038	\$23,529,398	\$ -	\$ -
Joint facilities (dam, reservoirs, etc.) allocated to power . . . . .	362,462,675	-	-	20,951,401	93,714,905	59,780,669	10,796,871	140,238,036	19,154,493	17,826,300	-	-
	1,097,403,599	-	368,913,677	59,593,410	205,181,033	86,516,970	30,105,016	264,207,264	41,530,531	41,355,698	-	-
Irrigation:												
Specific facilities . . . . .	212,195,901	-	-	-	212,195,901	-	-	-	-	-	-	-
Joint facilities . . . . .	77,810,063	-	-	-	69,091,474	-	-	-	3,768,594	4,949,995	-	-
	290,005,964	-	-	-	281,287,375	-	-	-	3,768,594	4,949,995	-	-
Flood control:												
Joint facilities . . . . .	86,352,520	-	-	-	-	20,851,472	164,110	-	20,214,545	45,122,393	-	-
	86,352,520	-	-	-	-	20,851,472	164,110	-	20,214,545	45,122,393	-	-
Navigation:												
Specific facilities . . . . .	28,441,859	-	-	6,351,099	-	-	-	22,090,760	-	-	-	-
Joint facilities . . . . .	26,608,179	-	-	20,951,400	1,000,000	-	127,518	3,567,931	129,802	831,528	-	-
	55,050,038	-	-	27,302,499	1,000,000	-	127,518	25,658,691	129,802	831,528	-	-
Multiple-purpose projects under construction . . . . .	223,354,315	-	-	-	-	-	-	-	-	-	119,673,012	103,681,303
Total . . . . .	1,752,166,436	-	368,913,677	86,895,909	487,468,408	107,368,442	30,396,644	289,865,955	65,643,472	92,259,614	119,673,012	103,681,303
Less accumulated depreciation (note 4):												
Specific facilities:												
Commercial power . . . . .	67,472,622	-	48,087,213	6,480,598	10,048,598	1,188,775	40,568	919,175	605,706	101,989	-	-
Irrigation (pumping power facilities) . . . . .	254,570	-	-	-	254,570	-	-	-	-	-	-	-
Navigation . . . . .	996,590	-	-	502,106	-	-	-	494,484	-	-	-	-
Joint facilities:												
Commercial power . . . . .	8,584,957	-	-	1,523,965	4,380,790	1,042,998	370,604	844,969	342,142	79,489	-	-
Irrigation . . . . .	89,349	-	-	-	-	-	-	-	67,315	22,034	-	-
Flood control . . . . .	927,648	-	-	-	-	359,734	5,633	-	361,076	201,205	-	-
Navigation . . . . .	1,556,446	-	-	1,523,965	-	-	4,377	22,077	2,319	3,708	-	-
Total . . . . .	79,882,182	-	48,087,213	10,030,634	14,683,958	2,591,507	421,182	2,280,705	1,378,958	408,425	-	-
Original cost, net . . . . .	1,672,284,254	-	320,826,464	76,865,275	472,784,450	104,776,935	29,975,462	287,585,250	64,264,914	91,851,189	119,673,012	103,681,303
<b>INTEREST AND DEPRECIATION CHARGES ON JOINT FACILITIES ALLOCATED TO FUTURE DOWNSTREAM RIVER REGULATION--recoverable from operation of future downstream hydroelectric plants (note 8) . . . . .</b>												
	17,387,795	-	-	-	15,927,661	1,001,947	458,187	-	-	-	-	-
<b>CURRENT ASSETS:</b>												
Unexpended funds in U. S. Treasury appropriated by Congress for construction and for operation and maintenance (note 5) . . . . .												
Special deposits . . . . .	60,706,488	-	38,548,174	97,376	3,455,402	198,016	697,142	7,706,881	172,447	883,170	2,933,992	6,013,888
Accounts receivable:	935,293	-	469,921	-	432,019	33,353	-	-	-	-	-	-
Customers . . . . .	9,189,986	-	9,189,986	-	-	-	-	-	-	-	-	-
Other . . . . .	973,284	-	265,933	409	105,131	5,374	-	542,301	30	41,993	-	12,113
Materials and supplies . . . . .	8,815,489	-	6,715,409	55,524	817,264	153,701	-	862,252	18,774	30,711	-	161,854
Total . . . . .	80,620,540	-	55,189,423	153,309	4,809,816	390,444	697,142	9,111,434	191,251	955,874	2,933,992	6,187,855
<b>OTHER ASSETS AND DEFERRED CHARGES . . . . .</b>												
	9,033,481	-	1,076,178	737	6,848,688	13,190	-	-	783,559	15,744	-	295,385
<b>PAYMENTS TO U. S. TREASURY FOR THE ACCOUNT OF THE CORPS OF ENGINEERS IN EXCESS OF COSTS CHARGED TO POWER OPERATIONS (note 6) . . . . .</b>												
	-	22,779,514	22,779,514	-	-	-	-	-	-	-	-	-
	\$1,779,326,070	\$22,779,514	\$399,871,579	\$ 77,019,321	\$500,370,615	\$106,182,516	\$31,130,791	\$296,696,684	\$65,239,724	\$92,822,807	\$122,607,004	\$110,164,543

The accompanying notes (schedule 14) are an integral part of this statement.

UNITED STATES OF AMERICA

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES (note 1)

STATEMENT COMBINING ASSETS AND LIABILITIES (continued)

JUNE 30, 1955

LIABILITIES	Combined (to schedule 3)	Eliminations	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	The Dalles Dam Project
<b>INVESTMENT OF U. S. GOVERNMENT AND ACCUMULATED NET REVENUES:</b>												
Congressional appropriations (including allotments, and unexpended appropriations) . . . . .	\$1,846,274,489	\$ -	\$466,057,152	\$ 98,371,597	\$511,557,821	\$102,817,164	\$29,742,980	\$272,940,067	\$62,607,368	\$86,009,920	\$113,745,760	\$102,424,660
Cost of materials and services furnished by other Federal agencies (net) . . . . .	18,565,568	-	14,013,171	175,400	3,884,260	479,452	-	-	6,351*	19,871	-	235*
Interest on Federal investment . . . . .	196,161,089	-	42,251,447	33,245,290	58,823,073	12,073,916	1,729,664	24,019,597	7,064,796	7,770,087	6,471,805	2,711,414
Revenues transferred to the continuing fund . . . . .	1,456,707	-	1,456,707	-	-	-	-	-	-	-	-	-
Total investment of U. S. Government. . . . .	2,062,457,853	-	523,778,477	131,792,287	574,265,154	115,370,532	31,472,644	296,959,664	69,665,813	93,799,878	120,217,565	105,135,839
<b>Less:</b>												
Funds returned to U. S. Treasury:												
Repayment of Federal investment in the power program (including amounts for operating expenses and interest) . . . . .	390,040,963	-	196,879,297	52,232,444	112,759,901	9,325,140	1,075,060	13,578,776	3,390,000	800,345	-	-
Repayment of Federal investment in the non-power program . . . . .	5,055,534	-	-	6,530	4,832,487	215,192	-	329	-	996	-	-
Total expense of flood control operations . . . . .	3,790,438	-	-	-	-	1,611,390	-	-	1,435,145	726,924	-	-
Total expense of navigation operations . . . . .	19,022,753	-	-	17,358,574	32,015	-	13,180	1,618,984	-	-	-	-
Other nonreimbursable expenses . . . . .	384,203	-	-	-	131,039	-	-	-	162,387	90,777	-	-
Total . . . . .	418,293,891	-	196,879,297	69,597,548	117,755,442	11,151,722	1,105,219	15,198,089	4,987,532	1,619,042	-	-
Net investment of U. S. Government. . . . .	1,644,163,962	-	326,899,180	62,194,739	456,509,712	104,218,810	30,367,425	281,761,575	64,678,281	92,180,836	120,217,565	105,135,839
<b>Accumulated net revenues:</b>												
Net revenues from commercial power operations since inception, including \$8,304,784 and \$8,364,957 for the years ended June 30, 1955 and 1954, respectively . . . . .	110,079,734	-	64,098,764	-	44,197,629	1,783,341	-	-	-	-	-	-
Less net loss from irrigation operations since inception, including loss of \$217,651 and \$200,915 for the years ended June 30, 1955 and 1954, respectively . . . . .	2,588,076	-	-	-	2,588,076	-	-	-	-	-	-	-
Total . . . . .	107,491,658	-	64,098,764	-	41,609,553	1,783,341	-	-	-	-	-	-
Total . . . . .	1,751,655,620	-	390,997,944	62,194,739	498,119,265	106,002,151	30,367,425	281,761,575	64,678,281	92,180,836	120,217,565	105,135,839
<b>CURRENT AND ACCRUED LIABILITIES:</b>												
Accounts payable . . . . .	24,918,468	-	6,460,569	57,628	1,924,317	180,365	463,634	7,920,667	77,835	415,310	2,389,439	5,028,704
Employees' accrued leave . . . . .	1,897,043	-	1,897,043	-	-	-	-	-	-	-	-	-
Total . . . . .	26,815,511	-	8,357,612	57,628	1,924,317	180,365	463,634	7,920,667	77,835	415,310	2,389,439	5,028,704
DEFERRED CREDITS . . . . .	526,607	-	516,023	10,584	-	-	-	-	-	-	-	-
CONTRIBUTIONS IN AID OF CONSTRUCTION . . . . .	328,332	-	-	-	327,033	-	-	-	-	1,299	-	-
<b>PAYMENTS TO U. S. TREASURY FOR THE ACCOUNT OF THE CORPS OF ENGINEERS PROJECTS IN EXCESS OF COSTS CHARGED TO POWER OPERATIONS (note 6) . . . . .</b>												
	\$1,779,326,070	\$22,779,514	\$399,871,579	\$ 77,019,321	\$500,370,615	\$106,182,516	\$31,130,791	\$296,696,684	\$65,239,724	\$92,822,807	\$122,607,004	\$110,164,543

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

UNITED STATES OF AMERICA  
COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES (note 1)  
ANALYSIS OF THE TOTAL INVESTMENT OF THE UNITED STATES GOVERNMENT  
AND THE NET INVESTMENT IN THE COMMERCIAL POWER PROGRAM  
FOR THE PERIOD FROM INCEPTION TO JUNE 30, 1955

	Combined	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	The Dalles Dam Project
<u>INVESTMENT OF U. S. GOVERNMENT:</u>											
<u>Congressional appropriations:</u>											
Expended . . . . .	\$1,716,063,001	\$417,258,978	\$ 86,074,221	\$461,047,419	\$102,619,148	\$29,045,838	\$265,233,186	\$62,434,921	\$85,126,750	\$110,811,768	\$ 96,410,772
Unexpended (note 5) . . . . .	60,206,488*	38,048,174*	97,376	3,455,402	198,016	697,142	7,706,881	172,447	883,170	2,933,992	6,013,888
Total . . . . .	1,776,269,489	455,307,152	86,171,597	464,502,821	102,817,164	29,742,980	272,940,067	62,607,368	86,009,920	113,745,760	102,424,660
Allotments of Public Works Administration funds . . . . .	70,005,000	10,750,000	12,200,000	47,055,000	-	-	-	-	-	-	-
Subtotal . . . . .	1,846,274,489	466,057,152	98,371,597	511,557,821	102,817,164	29,742,980	272,940,067	62,607,368	86,009,920	113,745,760	102,424,660
Cost of materials and services furnished by other Federal agencies (net) . . . . .	18,565,568	14,013,171	175,400	3,884,260	479,452	-	-	6,351*	19,871	-	235*
<u>Interest on Federal investment:</u>											
Charged to operations . . . . .	115,549,552	36,814,158	29,647,682	35,156,722	5,392,209	447,979	4,457,603	2,734,358	898,841	-	-
Charged to construction . . . . .	65,571,946	5,437,289	3,597,608	9,693,591	5,911,953	984,608	19,561,994	4,330,438	6,871,246	6,471,805	2,711,414
Charged to future downstream river regulation . . . . .	15,039,591	-	-	13,972,760	769,754	297,077	-	-	-	-	-
<u>Revenues transferred to the continuing fund:</u>											
Expended . . . . .	956,707	956,707	-	-	-	-	-	-	-	-	-
Unexpended . . . . .	500,000	500,000	-	-	-	-	-	-	-	-	-
Total investment of U. S. Government . . . . .	2,062,457,853	523,778,477	131,792,287	574,265,154	115,370,532	31,472,644	296,959,664	69,665,813	93,799,878	120,217,565	105,135,839
<u>Less:</u>											
<u>Amounts allocated to:</u>											
Irrigation . . . . .	306,807,508	-	-	297,344,958	-	-	-	4,426,694	5,035,856	-	-
Flood control . . . . .	89,845,708	-	-	-	22,330,241	181,089	-	21,406,462	45,927,916	-	-
Navigation . . . . .	71,656,014	-	42,690,028	1,032,015	-	140,698	26,793,385	152,485	847,403	-	-
Construction in progress and other assets not allo- cated to purposes . . . . .	225,353,404	-	-	-	-	-	-	-	-	120,217,565	105,135,839
	693,662,634	-	42,690,028	298,376,973	22,330,241	321,787	26,793,385	25,985,641	51,811,175	120,217,565	105,135,839
Investment allocated to commercial power . . . . .	1,368,795,219	523,778,477	89,102,259	275,888,181	93,040,291	31,150,857	270,166,279	43,680,172	41,988,703	-	-
<u>LESS FUNDS FROM COMMERCIAL POWER OPERA- TIONS RETURNED TO U. S. TREASURY FOR (note 7):</u>											
Operation and maintenance expenses . . . . .	96,772,126	65,215,627	10,211,394	18,800,282	765,698	95,913	1,294,766	320,730	67,716	-	-
Interest expense charged to operations . . . . .	101,080,450	36,814,158	19,029,826	35,156,722	4,200,039	429,530	3,486,648	1,638,083	325,444	-	-
Total expense . . . . .	197,852,576	102,029,785	29,241,220	53,957,004	4,965,737	525,443	4,781,414	1,958,813	393,160	-	-
Repayment of capital investment . . . . .	192,188,387	94,849,512	22,991,224	58,802,897	4,359,403	549,617	8,797,362	1,431,187	407,185	-	-
Total funds returned to U. S. Treasury . . . . .	390,040,963	196,879,297	52,232,444	112,759,901	9,325,140	1,075,060	13,578,776	3,390,000	800,345	-	-
Net investment of the U. S. Govern- ment in the commercial power pro- gram (operating projects only) . . . . .	\$ 978,754,256	\$326,899,180	\$ 36,869,815	\$163,128,280	\$ 83,715,151	\$30,075,797	\$256,587,503	\$40,290,172	\$41,188,358	\$ -	\$ -

\*Exclusive of \$500,000 unexpended balance in the continuing fund, this item is included as a part of revenues transferred to the continuing fund.

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

SCHEDULE 6

UNITED STATES OF AMERICA  
DEPARTMENT OF THE INTERIOR  
BONNEVILLE POWER ADMINISTRATION

STATEMENT OF REVENUES AND EXPENSES  
FOR THE FISCAL YEAR ENDED JUNE 30, 1955

<u>OPERATING REVENUES:</u>		
Sales of electric energy . . . . .		\$51,258,723
Less amounts allocated to generating projects (note 6):		
Bonneville Dam Project . . . . .	\$ 3,108,938	
Columbia Basin Project . . . . .	12,347,430	
Hungry Horse Project . . . . .	3,609,000	
Albani Falls Project . . . . .	541,357	
McNary Dam Project . . . . .	5,213,940	
Detroit-Big Cliff Project . . . . .	1,791,648	
Lookout Point-Dexter Project . . . . .	574,638	<u>27,186,951</u>
		24,071,772
Other electric revenues . . . . .	<u>719,332</u>	
Total operating revenues . . . . .		24,791,104
<u>OPERATING EXPENSES (notes 2 and 3):</u>		
Purchased power . . . . .	488,537	
Operation . . . . .	5,392,128	
Maintenance . . . . .	2,024,078	
Depreciation (note 4) . . . . .	8,869,727	
Net loss on sales and abandonment of property (note 11). . . . .	<u>601,385</u>	<u>17,375,855</u>
Net operating revenues . . . . .		7,415,249
<u>INTEREST AND OTHER DEDUCTIONS:</u>		
Interest on Federal investment . . . . .	6,456,032	
Less amount charged to construction . . . . .	739,732*	
Miscellaneous income deductions (net) . . . . .	<u>5,278*</u>	<u>5,711,022</u>
Net revenues for the year . . . . .		<u>\$ 1,704,227</u>

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

SCHEDULE 7

UNITED STATES OF AMERICA  
CORPS OF ENGINEERS--DEPARTMENT OF THE ARMY  
BONNEVILLE DAM PROJECT

STATEMENT OF REVENUES AND EXPENSES  
FOR THE FISCAL YEAR ENDED JUNE 30, 1955

	Total	Amounts allocated to	
		Commercial power	Navigation
<u>OPERATING REVENUES:</u>			
Receipts from sales of electric energy by Bonneville Power Administration allocated to Bonneville Dam Project (note 6) . . . . .	\$3,108,938	\$3,108,938	\$ -
<u>OPERATING EXPENSES (notes 2 and 3):</u>			
Operation:			
Specific power facilities . . . . .	337,512	337,512	-
Specific navigation facilities . . . . .	35,876	-	35,876
Joint facilities . . . . .	42,828	21,414	21,414
Payment for river regulation . . . . .	187,570	187,570	-
Maintenance:			
Specific power facilities . . . . .	233,576	233,576	-
Specific navigation facilities . . . . .	42,341	-	42,341
Joint facilities . . . . .	1,360,928	680,464	680,464
Depreciation (note 4):			
Specific power facilities . . . . .	579,606	579,606	-
Specific navigation facilities . . . . .	41,227	-	41,227
Joint facilities . . . . .	<u>270,478</u>	<u>135,239</u>	<u>135,239</u>
Total operating expenses . . . . .	<u>3,131,942</u>	<u>2,175,381</u>	<u>956,561</u>
Net operating revenues . . . . .	<u>23,004*</u>	<u>933,557</u>	<u>956,561*</u>
<u>INTEREST AND OTHER DEDUCTIONS:</u>			
Interest on Federal investment . . . . .	1,610,909	963,929	646,980
Less amount charged to construction . . . . .	32*	41	73*
Miscellaneous income deductions (net) . . . . .	<u>59,825*</u>	<u>30,413*</u>	<u>29,412*</u>
Net interest and other deductions . . . . .	1,551,052	933,557	617,495
Net expense for the year . . . . .	<u>\$1,574,056</u>	<u>\$ -</u>	<u>\$1,574,056</u>

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

UNITED STATES OF AMERICA  
DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION--COLUMBIA BASIN PROJECT

STATEMENT OF REVENUES AND EXPENSES  
FOR THE FISCAL YEAR ENDED JUNE 30, 1955

	Total	Amounts allocated to		
		Commercial power	Irrigation	Navigation
<b>OPERATING REVENUES (note 9):</b>				
Receipts from sales of electric energy by Bonneville Power Administration allocated to Columbia Basin Project (note 6) . . . . .	\$12,347,430	\$12,347,430	\$ -	\$ -
Payment for river regulation . . . . .	187,570	187,570	-	-
Other electric revenues . . . . .	76,806	76,806	-	-
Irrigation revenues . . . . .	1,034,908	-	1,034,908	-
Total operating revenues . . . . .	13,646,714	12,611,806	1,034,908	-
<b>OPERATING EXPENSES (notes 2 and 3):</b>				
<b>Operation:</b>				
Specific power facilities . . . . .	916,468	894,531	21,937	-
Specific irrigation facilities . . . . .	332,015	-	332,015	-
Joint facilities . . . . .	296,704	164,839	129,517	2,348
<b>Maintenance:</b>				
Specific power facilities . . . . .	583,185	569,225	13,960	-
Specific irrigation facilities . . . . .	394,594	-	394,594	-
Joint facilities . . . . .	310,178	172,325	135,398	2,455
<b>Depreciation (note 4):</b>				
Specific power facilities . . . . .	1,518,084	1,401,124	116,960	-
Joint facilities . . . . .	548,642	548,642	-	-
Less amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 8) . . . . .	216,873*	216,873*	-	-
Total operating expenses . . . . .	4,682,997	3,533,813	1,144,381	4,803
Net operating revenues . . . . .	8,963,717	9,077,993	109,473*	4,803*
<b>INTEREST AND OTHER DEDUCTIONS:</b>				
Interest on Federal investment in commercial power facilities (note 2) . . . . .	4,218,715	4,218,715	-	-
Less amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 8) . . . . .	1,219,397*	1,219,397*	-	-
Miscellaneous income deductions (net) . . . . .	86,119*	41,602*	44,517*	-
Net interest and other deductions . . . . .	2,913,199	2,957,716	44,517*	-
Net revenues for the year . . . . .	6,050,518	6,120,277	64,956*	4,803*
<b>ADJUSTMENTS APPLICABLE TO PRIOR YEARS (net)</b>				
Net revenues for the year after adjustments . . . . .	\$ 5,827,216	\$ 5,981,181	\$ 149,162*	\$ 4,803*
Net revenues after adjustments, distributed to:				
Nonreimbursable navigation expense . . . . .	\$ 4,803*	\$ -	\$ -	\$ 4,803*
Accounts with water users . . . . .	68,489	-	68,489	-
Accumulated net revenues . . . . .	5,763,530	5,981,181	217,651*	-
Total, as above . . . . .	\$ 5,827,216	\$ 5,981,181	\$ 149,162*	\$ 4,803*

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

UNITED STATES OF AMERICA  
DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION--HUNGRY HORSE PROJECT

STATEMENT OF REVENUES AND EXPENSES  
FOR THE FISCAL YEAR ENDED JUNE 30, 1955

	Total	Amounts allocated to	
		Commercial power	Flood control
<b>OPERATING REVENUES (note 9):</b>			
Receipts from sales of electric energy by Bonneville Power Administration allocated to Hungry Horse Project (note 6) . . . . .	\$3,609,000	\$3,609,000	\$ -
Other electric revenues . . . . .	11,621	11,621	-
Total operating revenues . . . . .	3,620,621	3,620,621	-
<b>OPERATING EXPENSES (notes 2 and 3):</b>			
<b>Operation:</b>			
Specific power facilities . . . . .	137,334	137,334	-
Joint facilities . . . . .	99,565	90,825	8,740
<b>Maintenance:</b>			
Specific power facilities . . . . .	66,566	66,566	-
Joint facilities . . . . .	25,469	16,949	8,520
<b>Depreciation (note 4):</b>			
Specific power facilities . . . . .	528,358	528,358	-
Joint facilities . . . . .	541,902	402,744	139,158
Less amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 8) . . . . .	89,336*	89,336*	-
Total operating expenses . . . . .	1,309,858	1,153,440	156,418
Net operating revenues . . . . .	2,310,763	2,467,181	156,418*
<b>INTEREST AND OTHER DEDUCTIONS:</b>			
Interest on Federal investment . . . . .	2,708,361	2,184,726	523,635
Less amount allocated to future downstream river regulation, recoverable from operations of future downstream hydroelectric plants (note 8) . . . . .	336,610*	336,610*	-
Miscellaneous income deductions (net) . . . . .	311*	311*	-
Total interest and other deductions . . . . .	2,371,440	1,847,805	523,635
Net revenues for the year . . . . .	\$ 60,677*	\$ 619,376	\$ 680,053*

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

SCHEDULE 1.

UNITED STATES OF AMERICA  
CORPS OF ENGINEERS--DEPARTMENT OF THE ARMY  
ALBENI FALLS PROJECT

STATEMENT OF REVENUES AND EXPENSES  
FOR THE FISCAL YEAR ENDED JUNE 30, 1955

	Total	Amounts allocated to		
		Commercial power	Flood control	Navigation
<b>OPERATING REVENUES (note 9):</b>				
Receipts from sales of electric energy by Bonneville Power Administration allocated to Albeni Falls Project (note 6) . . . . .	\$541,357	\$541,357	\$ -	\$ -
<b>OPERATING EXPENSES (notes 2 and 3):</b>				
Operation:				
Specific power facilities. . . . .	27,674	27,674	-	-
Joint facilities. . . . .	37,168	36,425	420	323
Maintenance:				
Specific power facilities. . . . .	3,151	3,151	-	-
Joint facilities. . . . .	11,457	11,227	130	100
Depreciation (note 4):				
Specific power facilities. . . . .	40,567	40,567	-	-
Joint facilities. . . . .	143,404	139,632	2,122	1,650
Less amount allocated to future downstream river regulation recoverable from operations of future downstream hydro-electric plants (note 8) . . . . .	60,740*	60,740*	-	-
Total operating expenses . . . . .	202,681	197,936	2,672	2,073
Net operating revenues . . . . .	338,676	343,421	2,672*	2,073*
<b>INTEREST AND OTHER DEDUCTIONS:</b>				
Interest on Federal investment . . . . .	722,070	715,030	3,962	3,078
Less:				
Amount allocated to future downstream river regulation, recoverable from operations of future downstream hydro-electric plants (note 8) . . . . .	117,323*	117,323*	-	-
Amount charged to construction. . . . .	401,841*	401,651*	107*	83*
Miscellaneous income deductions (net). . . . .	60*	60*	-	-
Net interest and other deductions . . . . .	202,846	195,996	3,855	2,995
Net revenues for the year before prior year adjustments. . . . .	135,830	147,425	6,527*	5,068*

The accompanying notes (schedule 14) are an integral part of this statement.

SCHEDULE 11

UNITED STATES OF AMERICA  
CORPS OF ENGINEERS--DEPARTMENT OF THE ARMY  
McNARY DAM PROJECT

STATEMENT OF REVENUES AND EXPENSES  
FOR THE FISCAL YEAR ENDED JUNE 30, 1955

	Total	Amounts allocated to	
		Commercial power	Navigation
<b>OPERATING REVENUES:</b>			
Receipts from sales of electric energy by Bonneville Power Administration allocated to McNary Dam Project (note 6) . . . . .	\$5,213,940	\$5,213,940	\$ -
<b>OPERATING EXPENSES (notes 2 and 3):</b>			
Operation:			
Specific power facilities. . . . .	190,306	190,306	-
Specific navigation facilities . . . . .	41,213	-	41,213
Joint facilities. . . . .	402,374	392,315	10,059
Maintenance:			
Specific power facilities. . . . .	133,985	133,985	-
Specific navigation facilities . . . . .	23,034	-	23,034
Joint facilities. . . . .	167,178	162,998	4,180
Depreciation (note 4):			
Specific power facilities. . . . .	739,334	739,334	-
Specific navigation facilities . . . . .	315,021	-	315,021
Joint facilities. . . . .	742,394	723,834	18,560
Total operating expenses . . . . .	2,754,839	2,342,772	412,067
Net operating revenues . . . . .	2,459,101	2,871,168	412,067*
<b>INTEREST DEDUCTION:</b>			
Interest on Federal investment . . . . .	6,800,878	6,112,006	688,872
Less amount charged to construction . . . . .	3,290,741*	3,240,838*	49,903*
Net interest deduction . . . . .	3,510,137	2,871,168	638,969
Net expense for the year . . . . .	\$1,051,036	\$ -	\$1,051,036

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

ADJUSTMENTS APPLICABLE TO PRIOR YEARS (net). . . . .	155,215*	147,425*	4,386*	3,404*
Net expense for the year after adjustments . . . . .	\$ 19,385	\$ -	\$10,913	\$8,472

\*Deduction

UNITED STATES OF AMERICA  
CORPS OF ENGINEERS--DEPARTMENT OF THE ARMY  
DETROIT-BIG CLIFF PROJECT

STATEMENT OF REVENUES AND EXPENSES  
FOR THE FISCAL YEAR ENDED JUNE 30, 1955

	<u>Total</u>	<u>Amounts allocated to</u>		
		<u>Commercial power</u>	<u>Flood control</u>	<u>Other purposes (note 3)</u>
<u>OPERATING REVENUES:</u>				
Receipts from sales of electric energy by Bonneville Power Administration allocated to Detroit-Big Cliff Project (note 6) . . . . .	\$1,791,648	\$1,791,648	\$ -	\$ -
<u>OPERATING EXPENSES (notes 2 and 3):</u>				
<u>Operation:</u>				
Specific power facilities . . . . .	93,710	93,710	-	-
Joint facilities . . . . .	46,224	28,590	17,634	-
<u>Maintenance:</u>				
Specific power facilities . . . . .	46,322	46,322	-	-
Joint facilities . . . . .	24,724	15,292	9,432	-
<u>Depreciation (note 4):</u>				
Specific power facilities . . . . .	407,639	400,157	-	7,482
Joint facilities . . . . .	437,011	193,465	204,172	39,374
<u>Total operating expenses . . . . .</u>	<u>1,055,630</u>	<u>777,536</u>	<u>231,238</u>	<u>46,856</u>
<u>Net operating revenues . . . . .</u>	<u>736,018</u>	<u>1,014,112</u>	<u>231,238*</u>	<u>46,856*</u>
<u>INTEREST AND OTHER DEDUCTIONS:</u>				
Interest on Federal investment . . . . .	1,640,116	1,020,859	502,879	116,378
Less amount charged to construction . . . . .	6,403*	3,822*	2,144*	437*
Miscellaneous income deductions (net) . . . . .	5,139*	2,925*	1,804*	410*
<u>Net interest and other deductions . . . . .</u>	<u>1,628,574</u>	<u>1,014,112</u>	<u>498,931</u>	<u>115,531</u>
<u>Net expense for the year . . . . .</u>	<u>\$ 892,556</u>	<u>\$ -</u>	<u>\$730,169</u>	<u>\$162,387</u>

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

UNITED STATES OF AMERICA  
CORPS OF ENGINEERS--DEPARTMENT OF THE ARMY  
LOOKOUT POINT-DEXTER PROJECT

STATEMENT OF REVENUES AND EXPENSES  
FOR THE FISCAL YEAR ENDED JUNE 30, 1955

	<u>Total</u>	<u>Amounts allocated to</u>		
		<u>Commercial power</u>	<u>Flood control</u>	<u>Other purposes (note 3)</u>
<u>OPERATING REVENUES:</u>				
Receipts from sales of electric energy by Bonneville Power Administration allocated to Lookout Point-Dexter Project (note 6) . . . . .	\$ 574,638	\$ 574,638	\$ -	\$ -
<u>OPERATING EXPENSES (notes 2 and 3):</u>				
<u>Operation:</u>				
Specific power facilities . . . . .	42,911	42,911	-	-
Joint facilities . . . . .	25,837	10,611	15,226	-
<u>Maintenance:</u>				
Specific power facilities . . . . .	12,709	12,709	-	-
Joint facilities . . . . .	3,616	1,485	2,131	-
<u>Depreciation (note 4):</u>				
Specific power facilities . . . . .	101,989	101,989	-	-
Joint facilities . . . . .	306,436	79,489	201,206	25,741
<u>Total operating expenses . . . . .</u>	<u>493,498</u>	<u>249,194</u>	<u>218,563</u>	<u>25,741</u>
<u>Net operating revenues . . . . .</u>	<u>81,140</u>	<u>325,444</u>	<u>218,563*</u>	<u>25,741*</u>
<u>INTEREST DEDUCTION:</u>				
Interest on Federal investment . . . . .	2,223,765	1,021,920	1,065,503	136,342
Less amount charged to construction . . . . .	1,324,924*	696,476*	557,142*	71,306*
<u>Net interest deduction . . . . .</u>	<u>898,841</u>	<u>325,444</u>	<u>508,361</u>	<u>65,036</u>
<u>Net expense for the year . . . . .</u>	<u>\$ 817,701</u>	<u>\$ -</u>	<u>\$ 726,924</u>	<u>\$ 90,777</u>

\*Deduction

The accompanying notes (schedule 14) are an integral part of this statement.

COLUMBIA RIVER POWER SYSTEM AND RELATED ACTIVITIES

NOTES TO THE FINANCIAL STATEMENTS

ON SCHEDULES 1 TO 13, INCLUSIVE

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

The Columbia River Power System and related activities consists 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 comprise the Columbia River Power System and Related Activities.

<u>Corps of Engineers</u>	<u>Bureau of Reclamation</u>
<u>Projects in Operation</u>	
Bonneville Dam	Columbia Basin
Albeni Falls	Hungry Horse
McNary Dam	
Detroit-Big Cliff	
Lookout Point-Dexter	
<u>Projects under Construction</u>	
Chief Joseph	
The Dalles Dam	

The Lookout Point-Dexter Project is included in the System's power operations for the first time in fiscal year 1955. The Albeni Falls, McNary, and Detroit-Big Cliff Projects were included in these operations for the first time in fiscal year 1954.

The Bonneville Power Administration will also market electric energy excess to project needs from the Chandler hydroelectric plant of the Kennewick Division of the Yakima (Irrigation) Project under construction by the Bureau of Reclamation. Construction costs relating to this project are not included in the statements of combined assets and liabilities. Because of the relatively small amounts involved, the omission is not significant.

2. Cost accounting practices

Bonneville Power Administration and the projects do not bear all costs applicable to their activities of administrative and other services rendered by other Federal agencies. However, the Administration has recorded in its accounts actual or estimated costs for many of these services including amounts for rentals, materials, and other services furnished without charge by the General Services Administration and other Federal agencies, death and disability claims on account of the Administration's employees paid by the Bureau of Employees' Compensation, Department of Labor, and the amounts applicable to the Admin-

istration's operations of the cost of the Civil Service Retirement System. On the other hand, 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. In addition, the Corps of Engineers and the Bureau of Reclamation do not include in costs general administrative expenses of headquarters and regional or divisional offices.

The Administration and the Corps of Engineers have included interest at the rate of 2.5 percent on the net unpaid Federal investment allocated to all purposes with appropriate charges to expense and to property costs (interest during construction). In the accounts of the Bureau of Reclamation interest is recorded at 3 percent on the net investment in commercial power facilities. Under an agreement with Bonneville Power Administration for the purpose of providing data for statements on the results of power operations, memorandum records are also maintained at the Columbia Basin and Hungry Horse Projects for interest on investment. At the Columbia Basin Project such interest is computed at the rate of 2.5 percent on the net unpaid Federal investment allocated to commercial power and at the Hungry Horse Project the interest is computed at the rate of 2.5 percent on the net unpaid investment allocated to all purposes. Interest is not recorded by the Bureau of Reclamation on the Federal investment in irrigation facilities.

Other differences in cost accounting practices are as follows:

1. Expenditures for preliminary surveys and investigations are included in property costs by the Administration and the Bureau of Reclamation but not by the Corps of Engineers.
2. The Administration and the Corps of Engineers include in property costs and operating expenses provisions for accrued annual and sick leave of employees. Such provisions have not been made by the Bureau of Reclamation, but the amounts of wages and salaries paid to employees while on sick or annual leave are charged to property or operating expense accounts.
3. Allocation of joint costs and expenses

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

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

Columbia Basin Project. Property, plant, and equipment costs determined to be jointly useful for power generation and for other purposes, consisting principally of the dam, reservoir, and general service facilities, have been allocated 56 percent to commercial power (including future downstream river regulation) and 44 percent to nonpower purposes after assigning \$1,000,000 to 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 the 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 the purposes of presenting financial statements on the commercial power operation. The Bureau of Reclamation, however, considers that substantially all of such expenses are costs of commercial power operations.

The memorandum of agreement between the Administration and the Bureau provides that all of the expenses of operating and maintaining the Grand Coulee Dam, reservoir, appurtenant works, and the power plant, except the portions of the latter allocated to irrigation works as pumping power, shall be returned from commercial power revenues together with that portion of the construction costs, including the construction costs of the irrigation works not repayable by water users. It is estimated that over the repayment period for the Columbia Basin Project commercial power revenues will return about \$470,000,000 of construction costs allocated to irrigation.

Hungry Horse Project. An allocation of the construction costs of Hungry Horse Project has not been made by the Secretary of the Interior. A tentative allocation has been made by the Bureau of Reclamation of the total estimated construction cost of \$101,500,000 exclusive of interest during construction. That allocation is as follows:

	Direct power	Joint		Total
		Dollars	Percent	
(000 omitted)				
Downstream power:				
Grand Coulee Dam .	\$ -	\$20,014	26.32	\$ 20,014
Bonneville Dam . .	-	5,163	6.79	5,163
Chief Joseph Dam .	-	3,437	4.52	3,437
McNary Dam . . . .	-	9,094	11.96	9,094
Total . . . . .	-	37,708	49.59	37,708
At site power. . . . .	25,454	18,669	24.55	44,123
Total . . . . .	25,454	56,377	74.14	81,831
Flood control. . . . .	-	19,669	25.86	19,669
Total . . . . .	\$25,454	\$76,046	100.00	\$101,500

Construction costs, together with related interest and depreciation expenses allocated to downstream river regulation at the Chief Joseph and McNary Dam Projects are deferred for return from the sale of electric energy to be generated at those projects in future years when the benefits are realized. For the purposes of this report, property costs have been allocated in accordance with the percentages shown in the tabulation above. The allocation of operating expenses to flood control and power for fiscal year 1955 has been based on the nature of the costs incurred, but no part of the operating expenses, except depreciation and interest, has been allocated to future downstream river regulation.

Albeni Falls, Detroit-Big Cliff, and Lookout Point-Dexter Projects. Under the provisions of section 5 to 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 construction costs have been made by the Corps of Engineers and these allocations for the 1955 fiscal year are as follows:

	Percent		
	Albeni Falls	Detroit-Big Cliff	Lookout Point-Dexter
Commercial power:			
At site. . . . .	-	44.18	25.70
Downstream river regulation, . .	97.37	.09	.24
Flood control . . . . .	1.48	46.72	65.66
Navigation. . . . .	1.15	.30	1.21
Irrigation . . . . .	-	7.77	7.19
Municipal water supply . . . . .	-	.94	-
Total . . . . .	100.00	100.00	100.00

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

Depreciation and interest expenses on the joint property costs for these projects have been allocated to purposes on the basis of the above percentages. Operation and maintenance expenses, except depreciation and interest, have been allocated to commercial power, flood control and navigation at the Albeni Falls Project, and to commercial power and flood control only at the other two projects on the basis of studies made by the Corps of Engineers.

McNary Dam Project. The River and Harbor Act of 1945 (59 Stat. 22) authorized this project and provided that the Department of the Interior market the electric energy in accordance with the terms of the Bonneville Project Act. Under the provisions of the Bonneville Project Act (16 U.S.C. 832f), 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 nonpower operations on the same basis.

4. Depreciation policy

Depreciation of the property of Bonneville Power Administration and Albeni Falls, McNary Dam, Detroit-Big Cliff, and Lookout Point-Dexter Projects of the Corps of Engineers and Hungry Horse Project of the Bureau of Reclamation has been computed on the straight-line method. Depreciation of most of the property of Bonneville Dam Project (Corps of Engineers) has been computed on the compound interest method using an interest factor of 2.5 percent. For the purposes of this report depreciation of the property allocated to commercial power at the Columbia Basin Project (Bureau of Reclamation) has also been computed on the compound interest method using an interest factor of 2.5 percent, except the straight-line method is used for depreciating a small amount of general property. The Bureau of Reclamation makes no provision for depreciation of the property of Columbia Basin Project allocated to irrigation and navigation purposes.

SCHEDULE 14

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. Costs of land, land rights, surveys, and clearing are included in the base for computing depreciation, except that the Bonneville Power Administration and Corps of Engineers do not make any charge to depreciation expense for amounts paid to former owners for fee title to lands acquired from them. Costs of land, land rights, surveys, and clearing are not included in the base for computing depreciation at the Hungry Horse Project.

As stated in previous years a uniform depreciation policy, including method and maximum service lives, is under consideration by the Department of the Interior for application by the several power agencies of the Department.

5. Unexpended appropriations

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

<u>Appropriations for</u>	<u>Total</u>	<u>Construction</u>	<u>Operation and maintenance</u>	<u>Continuing fund</u>
Bonneville Power Administration . . . . .	<u>\$38,548,174</u>	<u>\$37,908,735</u>	<u>\$139,439</u>	<u>\$500,000</u>
Corps of Engineers:				
Bonneville Dam Project . . . . .	97,376	19,551	77,825	-
Albeni Falls Project . . . . .	697,142	693,713	3,429	-
McNary Dam Project . . . . .	7,706,881	7,592,210	114,671	-
Detroit-Big Cliff Project . . . . .	172,447	161,208	11,239	-
Chief Joseph Project . . . . .	2,933,992	2,933,992	-	-
The Dalles Dam Project . . . . .	6,013,888	6,013,888	-	-
Lookout Point-Dexter Project . . . . .	883,170	862,942	20,228	-
Total . . . . .	<u>18,504,896</u>	<u>18,277,504</u>	<u>227,392</u>	<u>-</u>
Bureau of Reclamation:				
Columbia Basin Project . . . . .	3,455,402	3,156,106	299,296	-
Hungry Horse Project . . . . .	198,016	133,819	64,197	-
Total . . . . .	<u>3,653,418</u>	<u>3,289,925</u>	<u>363,493</u>	<u>-</u>
Grand total . . . . .	<u>\$60,706,488</u>	<u>\$59,476,164</u>	<u>\$730,324</u>	<u>\$500,000</u>

Funds that have been appropriated for construction remain available until expended. Except for the Corps of Engineers, funds appropriated for operation and maintenance may be obligated only for the year for which the funds are appropriated. The continuing fund is maintained in the United States Treasury for Bonneville Power Administration to defray emergency expenses and to insure continuous operation. The fund was authorized by the Bonneville Project Act, as amended (16 U.S.C. 832j), to be derived from receipts from sale of electric energy.

Under the Public Works Appropriation Act, 1956 (69 Stat. 356), additional funds of \$14,600,000 for construction and \$6,600,000 for operation and maintenance became available to Bonneville Power Administration effective July 1, 1955. Appropriations for the Corps of Engineers are not segregated by proj-

ects. Tentative project allotments have been made for fiscal year 1956 as follows:

<u>Project</u>	<u>Total</u>	<u>Construction</u>	<u>Operation and maintenance</u>
Bonneville Dam . . . . .	\$ 1,371,000	\$ 135,000 <sup>a</sup>	\$1,236,000
Albeni Falls . . . . .	785,400	603,400	182,000
McNary Dam . . . . .	12,537,000	11,369,000	1,168,000
Detroit-Big Cliff . . . . .	1,512,300	1,129,300	383,000
Chief Joseph . . . . .	16,931,000	16,500,000	431,000
The Dalles Dam . . . . .	38,750,000	38,750,000	-
Lookout Point-Dexter . . . . .	871,000	470,000	401,000
Total . . . . .	<u>\$72,757,700</u>	<u>\$68,956,700</u>	<u>\$3,801,000</u>

<sup>a</sup>Allocated for the restoration of Indian fishing grounds at Bonneville, Oregon.

For fiscal year 1956 the Bureau of Reclamation has allotted \$16,101,000 (construction, \$12,500,000, and operation and maintenance, \$3,601,000) to the Columbia Basin Project and \$451,000 for operation and maintenance to the Hungry Horse Project.

6. Allocation of revenue from commercial power operations

The allocation of revenue from commercial power operations to the projects has been determined in accordance with memoranda of agreement between the Bonneville Power Administration and the Corps of Engineers for the Corps-constructed and -operated projects, and the Bureau of Reclamation for the Columbia Basin and Hungry Horse Projects.

Bonneville Dam Project. Under the terms of an agreement between the Corps of Engineers and Bonneville Power Administration, the Administration is required to deposit as miscellaneous receipts in the United States Treasury for the account of Bonneville Dam Project, scheduled amounts of the receipts from the sale of power generated at that project, representing the portion of such receipts properly allocable to the return of the reimbursable power costs of Bonneville Dam Project. These amounts are not dependent upon the quantity of electric energy generated and delivered to the Administration by Bonneville Dam Project from year to year but are designed to return the plant costs of Bonneville Dam Project allocated to power, including necessary replacements, over a 50-year period beginning July 1, 1944, together with interest at 2.5 percent per annum and annual operating and maintenance expenses allocated to power.

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

the project as excess payments to the United States Treasury by the Administration over costs charged to power operations. The amounts in these accounts will be transferred to the income account in subsequent periods in amounts equivalent to the provisions for depreciation that will be charged to the income account in those subsequent periods when the plant costs allocated to power have been repaid and deposits in the United States Treasury by Bonneville Power Administration for the account of the Bonneville Dam Project will be equal only to power-operating expenses, exclusive of provisions for depreciation.

During 1955 Bonneville Power Administration deposited \$3,587,570 in the United States Treasury for the account of Bonneville Dam Project in accordance with the terms of this agreement. Of this amount \$3,108,938, equivalent to operating expenses (including depreciation) and interest on the Federal investment allocated to power, has been treated as current year's revenue and the excess, \$478,632 (\$14,756,370 in total to June 30, 1955), was recorded as excess of payments by Bonneville Power Administration over costs charged to power operations. This excess, together with the amount represented by the provision for depreciation expense, has been applied to the repayment of the capital investment of the Bonneville Dam Project allocated to power.

Of the \$3,587,570 deposited for 1955 fiscal year, \$3,400,000 was covered into the general fund (miscellaneous receipts) and \$187,570 into the reclamation fund in the Treasury. The latter amount constitutes payments for river regulation benefits received from storage operations of the Columbia Basin Project.

Columbia Basin Project. Reclamation laws, as supplemented, and Executive Order 8526, require that payments be made, from time to time, into the reclamation fund in the United States Treasury for the account of Columbia Basin Project from revenues received by Bonneville Power Administration from the sale of electric energy equal to the portion of such revenues properly allocable to the project. Under the terms of the agreement of January 31, 1946, between Bonneville Power Administration and the Bureau of Reclamation, entered into to effectuate these requirements, the Administration is required to make payments which in any year are not dependent upon the quantity of energy generated by the project and delivered to the Administration. These payments are designed to pay into the reclamation fund over a period of years, not in excess of the life of the project, the operation and maintenance expenses of the dam and the power plant; the cost, exclusive of interest during construction, of facilities allocated to power; the portion of the cost, exclusive of interest during construction, of facilities allocated to irrigation which exceeds the repayment ability of the water users (estimated, upon completion of the project, to be about \$470,000,000); and an annual amount equal to 3 percent of the unrepaid cost, exclusive of interest during construction, allocated to present power production. A schedule of estimated payments is provided in the agreement, but provision is made for annual adjustments of the schedule to show the application of actual payments to the return of such amounts. Provision is made also for payments in excess of the annual amounts set out in the schedule or less than such amounts in the event that prior excess payments have been made. The amounts paid into the reclamation fund for the project each year are not in repayment of specific expenses applicable to specific years but represent lump-sum payments against the total amounts provided for in the agreement. Accordingly, the amount payable for the year ended June 30, 1955, under the terms of the agreement has been treated in the accompanying financial statements as current year's revenues.

Hungry Horse Project. A definitive agreement between the Bonneville Power Administration and the Bureau of Reclamation covering the delivery of energy generated at the Hungry Horse Project and the allocation of revenues to

that project has not been executed. An interim memorandum of understanding provided for the Administration to deposit in the Treasury of the United States to the credit of a suspense account, Hungry Horse Project, \$3,609,000 on account of operation of the project for fiscal year 1955. The amount deposited in the Treasury under the interim memorandum of understanding provides for returning the annual operation and maintenance expenses, interest expenses charged to operations, and some repayment of the capital investment. To June 30, 1955, funds from commercial power operations returned to the Treasury in repayment of the capital investment totaled \$4,359,403.

Albeni Falls, McNary Dam, Detroit-Big Cliff, and Lookout Point-Dexter Projects. A definitive agreement between the Bonneville Power Administration and the Corps of Engineers covering the allocation of revenues to the Albeni Falls, McNary Dam, Detroit-Big Cliff and Lookout Point-Dexter Projects has not been executed. An interim agreement provided for the Administration to deposit in the Treasury to the account of the projects the following amounts covering operations for fiscal year 1955.

<u>Project</u>	<u>Amount</u>
Albeni Falls. . . . .	\$ 600,000
McNary Dam . . . . .	9,000,000
Detroit-Big Cliff . . . . .	1,800,000
Lookout Point-Dexter. . .	800,000
Total . . . . .	<u>\$12,200,000</u>

Of the above amount \$8,121,583, equivalent to operating expenses (including depreciation) and interest on the Federal investment allocated to power, has been treated as current year's revenue and the excess, \$4,078,417, was recorded as payments by Bonneville Power Administration in excess of costs charged to power operations. This excess, together with the amount represented by the provision for depreciation expense, has been applied to the repayment of the projects' capital investment allocated to power.

7. Amount and repayment of the investment of the United States Government allocated to commercial power (including future downstream river regulation)

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

Receipts from the sale of electric energy or from miscellaneous sources are not available to the power system for expenditure except to the extent of funds transferred to the Administration's continuing fund. To June 30, 1955, receipts transferred to the continuing fund totaled \$1,456,707, of which \$956,707 had been expended and \$500,000 of unexpended and unobligated cash remained in the fund.

The investment of the United States Government allocated to commercial power (including future downstream river regulation) includes, in addition to the congressional appropriations and the continuing fund: (1) allotments from Pub-

## SCHEDULE 14

lic Works Administration funds, (2) the actual or estimated cost of materials and services furnished by other Federal agencies without charge (including \$7,959,360 for Works Progress Administration expenditures for clearing of rights-of-way, reservoir areas, and similar work), less the value of transfers by the power system to others, and (3) interest at 2.5 percent on the net unpaid balance of the Federal investment.

The investment of the United States Government allocated to commercial power is shown in schedule 5. This schedule shows the total Federal investment in the power system and the status of repayment of that investment.

The capital investment is represented by property, plant, and equipment, materials, supplies, unexpended appropriations and other assets, with interest during construction included in property and plant costs. The remainder of the investment is represented by expenses incurred for operation, maintenance, administration and other costs, and interest expense, other than interest during construction and interest on the capital investment allocated to future downstream river regulation deferred for recovery from the operations of future downstream hydroelectric plants as explained in note 8. Such deferred interest is a part of the Federal investment, but it is included as an item among the assets of the System as a deferred charge against future power operations.

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

### 8. Interest and depreciation charges on the cost of joint facilities allocated to future downstream river regulation

Interest and depreciation charges on the portion of the cost of joint facilities of Columbia Basin, Hungry Horse, and Albeni Falls Projects allocated to future downstream river regulation have been deferred to future periods on the basis that these charges will be recovered from the operations of additional downstream hydroelectric plants now under construction or contemplated. The deferment of these charges is consistent with the allocation of costs of these projects.

The downstream hydroelectric plants related to the allocation for future downstream river regulation include both Federal and non-Federal plants. The one downstream non-Federal plant for which an allocation of the costs of the Columbia Basin Project was made by the Secretary of the Interior in 1945 received river regulation benefits from the project in fiscal year 1955 and no further deferral has been made for depreciation and interest applicable to this project. In fiscal year 1955 the depreciation and interest expenses applicable to

this project have been included in operating expenses. The amounts deferred before fiscal year 1955 applicable to the non-Federal plant are being written off over the remaining estimated life of the project. Revenues, however, have not been accrued in the accounts of Columbia Basin Project for such benefits because a decision has not been rendered by the Federal Power Commission on the amounts payable by the non-Federal plant for river regulation benefits.

Downstream non-Federal plants will benefit also from storage operations of Hungry Horse and Albeni Falls Projects. The Federal Power Commission may determine that such benefits were received in fiscal year 1955 and require payments therefor by the beneficiaries. An allocation of costs of the Hungry Horse and Albeni Falls Projects has not been made to downstream non-Federal plants. Accordingly, no part of the depreciation or interest at the Hungry Horse and Albeni Falls Projects has been deferred for river regulation benefits to non-Federal plants and no revenues have been accrued for such benefits.

### 9. Revenues from downstream non-Federal plants

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, if any, 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 the Federal storage projects; namely, Hungry Horse, Albeni Falls, and Columbia Basin Projects (Grand Coulee Dam) of the Columbia River Power System. During the fiscal year 1955 benefits were received by the non-Federal projects, but no revenues have been accrued in the accounts of the Columbia River Power System for such benefits because the Federal Power Commission has not rendered a decision as to the amounts payable, if any, by the beneficiaries.

### 10. Contingent liabilities

The most important claims against the Government which are related to the activities of the Administration and the projects consist of Indian claims totaling about \$33,000,000. These claims relate principally to fishery losses on account of the construction of the Bonneville Dam and The Dalles Dam Projects. There are other claims, some of which involve relatively substantial amounts. It is not known when or in what amounts final settlements on various pending claims will be made.

### 11. Loss on Sale and abandonment of property

During fiscal year 1955 the balance of the costs, less salvage, principally for rights-of-way, totaling \$443,456 of the abandoned Snohomish-Kitsap underwater cable project in the State of Washington was determined by the Administration to be of no value in alternative projects. The proposed construction of the underwater cable was abandoned during fiscal year 1954 in favor of overland transmission lines around the south end of the Sound, and \$553,010 was written off in that year. Costs of closed preliminary surveys and engineering studies incurred on abandoned projects or on projects that have become inactive due to revision of the construction program, and acquisition cost adjustments, account largely for the remaining \$157,929 written off in fiscal year 1955.

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